"The secret of getting ahead is getting started."

— Mark Twain

# A Study of Ordered Gene Problems Featuring DNA Error Correction and DNA Fragment Assembly with a Variety of Heuristics, Genetic Algorithm Variations, and Dynamic Representations

**James Alexander Hughes**

Department of Computer Science

Supervisor:
Dr. Sheridan Houghten

Collaborators:

Daniel Ashlock (University of Guelph)
Guillermo M. Mallén-Fullerton (Universidad Iberoamericana)
Joseph Alexander Brown (Magna International)

Submitted in partial fulfilment
of the requirements for the degree of

Master of Science

Faculty of Mathematics and Science, Brock University
St. Catharines, Ontario

©James Alexander Hughes 2014

# Abstract

Ordered gene problems are a very common classification of optimization problems. Because of their popularity countless algorithms have been developed in an attempt to find high quality solutions to the problems. It is also common to see many different types of problems reduced to ordered gene style problems as there are many popular heuristics and metaheuristics for them due to their popularity.

Multiple ordered gene problems are studied, namely, the travelling salesman problem, bin packing problem, and graph colouring problem. In addition, two bioinformatics problems not traditionally seen as ordered gene problems are studied: DNA error correction and DNA fragment assembly. These problems are studied with multiple variations and combinations of heuristics and metaheuristics with two distinct types or representations. The majority of the algorithms are built around the Recentering-Restarting Genetic Algorithm.

The algorithm variations were successful on all problems studied, and particularly for the two bioinformatics problems. For DNA Error Correction multiple cases were found with 100% of the codes being corrected. The algorithm variations were also able to beat all other state-of-the-art DNA Fragment Assemblers on 13 out of 16 benchmark problem instances.

# Acknowledgements

Firstly I would like to thank my supervisor, Dr. Sheridan Houghten for her constant encouragement and support. Although many times I would curse her high expectations I know that it was because of this I was able to achieve great things. Dr. Houghten has given me many opportunities I would otherwise not have; she really is a SUPERvisor.

I would also like to thank Dr. Daniel Ashlock (University of Guelph) and señor Guillermo M. Mallén-Fullerton (Universidad Iberoamericana) for their significant help on this work. Without them this work would not have been nearly as successful.

I would like to acknowledge the advisory committee for the time and patience they have put towards my research.

A special thanks goes to the Brock University Computer Science Department. Everyone within the department has given me support throughout my undergraduate and graduate studies. I know that they were a very integral part of my education and without them this work would have been impossible. I would particularly like to thank Cale Fairchild for his continuous help and support. No amount of thanks would compensate for the unbelievable amount of time he has given me.

Thank you to NSERC as this work was partially funded by the Natural Sciences and Engineering Research Council of Canada.

Lastly I would like to thank my friends and family, especially Matea Drljepan. They were there for me well beyond my formal education. Without their ludicrous support, patience, tolerance, time, and acceptance I would not be where I am today.

**Thank you,**
**J. A. H.**

# Contents

# List of Tables

# List of Figures

# List of Algorithms

# Chapter 1

# Introduction

Evolutionary algorithms are popular metaheuristics that attempt to generate competitive candidate solutions to computationally intractable problems. Most evolutionary algorithms involve modifying permutations of elements commonly referred to as *genes*. Many problems exist with the objective of ordering these genes in some way to optimize some criteria. It is important to study these ordered gene style problems as they are a common type of optimization problem. In fact many other types of optimization problems are very easily reduced to these ordered gene problems. Fortunately there are many problems that exist that are inherently of this classification, the best known being the travelling salesman problem [59]. There are also many other problems which can be considered of this classification by developing clever representations. The bin packing problem [55] and vertex colouring variant of the graph colouring problem [64] are two examples of this.

Other problems which are not easily identified as an ordered gene problem can be converted to this classification with the correct tools and approach. DNA error correction can be treated as an ordered gene problem if one uses Side Effect Machines encoded as ordered genes to learn codewords [36]. With the appropriate paradigm one can also convert DNA Fragment Assembly into an ordered gene problem by taking the overlap-layout-consensus approach [101]. Although these problems can be tackled with other approaches and representations, it is beneficial to use the ordered gene technique, as many algorithms, including heuristics and metaheuristics, have already been shown to be effective with this model. Some of these algorithms include greedy algorithms, local search, and evolutionary algorithms.

Many times when studying a particular problem a researcher will use one specific algorithm and tune it to work optimally for the given problem domain. Unfortunately this approach is extremely limiting considering the large search spaces of these in-

tractable problems. Ideally one should study a large variety of algorithms in addition to conducting a *parameter sweep* - a thorough analysis of the available parameters. These algorithms should be exploited in every way possible to learn their strengths and weaknesses. By combining algorithms one can also greatly improve the effectiveness of an algorithm's traversal through the search space.

## 1.1 Problem Statement

There are multiple purposes to this research. One of the major goals is to study the properties of general ordered gene problems, namely the travelling salesman problem, the bin packing problem, and the vertex colouring variation of the graph colouring problem. Multiple types of algorithms (heuristics and metaheuristics) will be applied to these problems to determine how well they work and what advantages and disadvantages they have with respect to the style of problems. This analysis will help determine which approaches are significant.

Two additional bioinformatics problems, DNA Error Correction and DNA Fragment Assembly, are studied in this work to determine the effectiveness of converting these tasks into ordered gene style problems. The approach taken to convert these problems into the appropriate style is discussed in this work. Many of the same algorithms used to study the other ordered gene style problems will be used on these bioinformatics problems.

In earlier research the Recentering-Restarting Genetic Algorithm (RRGA) has been shown to work well on ordered gene problems with very high quality results. This work will use the RRGA on all problems to learn its strengths and how one could exploit its search through the fitness landscape. We also use many other styles of searches such as heuristics such as the nearest neighbour, minimal spanning tree, 2-Opt, and Lin-Kernighan. Ring species and the island model, two popular genetic algorithm variations are also studied in this work. Combinations of all of these strategies will be used to explore the search spaces and to gain an understanding of how one could utilize all benefits each algorithm provides.

This thesis also studies dynamic representations which are constantly changing throughout evolution. In fact, the RRGA inherently encourages dynamic representations. Two different representations which are altered at every restart will be studied. One representation is a direct representation and the other is an indirect transposition representation based on local search operators.

Since this research is not simply studying a particular algorithm but analyzing

the algorithms, representations, and problems, it is ideal to find the best possible result for the particular problem. To do so one would need to do more than a simple parameter sweep on one specific algorithm. This is why this research is trying many combinations of algorithms in addition to large parameter sweeps in an attempt to optimally work through a search space.

Sections of this thesis are heavily influenced by recently published works, specifically, sections presenting the RRGA and the travelling salesman problem are influenced by [76], sections discussing DNA Error Correction are influenced by [75], and sections regarding DNA Fragment Assembly are influenced by [102] and [77].

## 1.2 Organization of Thesis

The remainder of this thesis is organized as follows:

Chapter 2 gives an overview of a collection of literature studied in preparation for this work. This includes information regarding heuristics, genetic algorithm variations, the Recentering-Restarting Genetic Algorithm, the travelling salesman problem, the one dimensional bin packing problem, the graph colouring problem (specifically one dimensional vertex colouring), DNA error correction, and a very thorough look at previous research related to the DNA Fragment Assembly Problem.

Chapter 3 discusses and gives a detailed description of the problems being studied along with the purpose of studying these particular problems: travelling salesman problem (small and large problems), one dimensional bin packing problem, the vertex colouring variation of the graph colouring problem, DNA error correction, and the DNA fragment assembly problem.

Chapter 4 presents the algorithms, and variations of these algorithms being used studied. This includes heuristics such as Nearest Neighbour, Minimal Spanning Trees, 2-Opt, and Lin-Kernighan. This also includes a description of Genetic algorithms and variations of them such as Ring Species, the Island Model, and the Recentering-Restarting Genetic Algorithm. A description of how these algorithms will be utilized and used with one another is detailed in this chapter. In addition the representations and fitness evaluations used by these algorithms for the respective problems is also discussed.

Chapter 5 presents the design of the experiments and the results obtained by the algorithms on all problems studied. In addition to the results, a discussion is presented detailing the interpretation of the results and possible implications. Minor conclusions are also given in this chapter.

Chapter 6 summarizes the research done and gives major conclusions. Possible future work is outlined in this section regarding the problems and algorithms studied.

Appendices are also included in this thesis. These appendices contain tables summarizing results and graphs that present the data from a different point of view. These tables summarize all results obtained by each algorithm on each problem. These appendices are supplementary to this work.

# Chapter 2

# Problem Descriptions

This chapter gives a detailed description of the problems studied, namely the travelling salesman problem (Section 2.1), the bin packing problem (Section 2.2), the graph colouring problem (Section 2.3), DNA error correction (Section 2.4), and the DNA fragment assembly problem (Section 2.5).

## 2.1 Travelling Salesman Problem

The travelling salesman problem (TSP) was introduced in the 1800s by Hamilton and Kirkman, but the problem was not mathematically formalized until the 1930s by Menger [1] [129].

The TSP, a problem closely related to the Hamiltonian-Cycle Problem, is a well known combinatorial optimization problem that is identified as being NP-hard. An instance with $n$ cities has $(n-1)!/2$ possible permutations [59]. This problem is defined as follows: given a set of cities with their relative non-negative distances to one another, find the shortest path such that every city is visited exactly once and the end city is the same as the starting city [45]. In other words, given a complete undirected graph $G = (V, E)$ that has a non negative cost $c(u, v)$ for each edge $\in E$, the goal is to then find a Hamiltonian cycle of $G$ such that the total cost (distance) is minimized [45].

The TSP has become widely used as a benchmark problem for combinatorial optimization algorithms. There exist many approximation algorithms that produce high quality solutions for the TSP including, but not limited to, the nearest neighbour algorithm, a variation of a minimum spanning tree that guarantees a tour whose length is no more than twice the length of the optimal tour, 2-Opt, and Lin-Kernighan. These algorithms will be discussed further in Chapter 4. Along with the approxima-

tion approaches many evolutionary algorithms have been applied to the TSP success. This comes to no surprise as evolutionary algorithms have been applied to many combinatorial optimization problems with significant results.

In 2001 DIMACS held an implementation challenge for the TSP and the website [2] archives many problem instances along with a results page which summarizes the best results obtained by many different types of algorithms. The problem instances are in TSPlib format and can ultimately be obtained from TSPlib [123]. The information gathered throughout this implementation challenge was recorded and published in [69] which can serve as a reference for benchmarks when exploring new optimization techniques.

This problem can be mathematically formalized as follows: given a permutation of cities $c$, minimize the total distance of the tour defined by $c$ where the total distance $D$ is defined as $D = (\sum_{i=0}^{n-1} distance(c_i, c_{i+1})) + distance(c_n, c_0)$.

A simple real world example of the TSP can be seen in Figure 2.1.

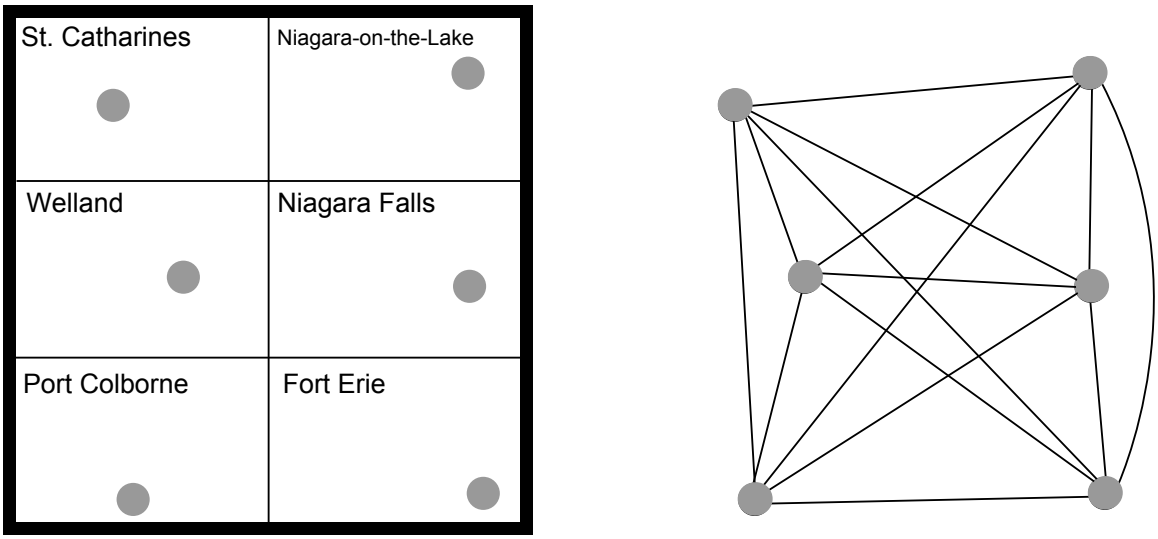



Figure 2.1: A simplified version of the Niagara Region. This example has 6 cities that would result in 60 possible orders in which one could visit each city $(n-1)!/2$.

### 2.1.1 Small City Problems

In addition to these large instances a collection of small problem instances created by Dr. Daniel Ashlock ranging from 10 to 20 cities are being analyzed. These small city problem instances have known optimal solutions obtained with a brute force search. This allows for an in depth analysis as one can compare the results to the known optimal solution. These small instances will allow for an analysis that greatly differs

from the one that can be done on the large problem instances. For more detail on the purpose of the Small City Problem experiments refer to Chapter 6.1.

## 2.2 Bin Packing Problem

The bin packing problem (BPP) can be easily represented with an ordered gene (permutation). Specifically, the BPP is called a grouping ordered gene problem as the genes in the permutation need to be grouped together to calculate the fitness [55]. Unlike the TSP, fitness values for the BPP tend to be very sensitive to all genes that appear before a given gene instead of just the preceding gene.

The BPP is defined as follows: given a set of objects of different sizes, how could one pack them into containers (bins) such that the number of containers is minimized. The BPP is known to be NP-hard. Many heuristics have been created which produce reasonably good results in a relatively short amount of time. One of the popular heuristics for this problem is the *first fit algorithm* which places each object into the first bin in which it would fit. If no bin has sufficient size, then an additional bin is added. This algorithm is no worse than twice the ceiling of the sum of the sizes of the objects [141]. This basic heuristic is particularly noteworthy as it is an ideal algorithm for calculating the fitness values of a permutation of objects.

There are variations of the BPP which increase the number of dimensions that are considered. In this work only the one dimensional BPP is being considered as it is ideal for demonstrating and evaluating algorithms. It is interesting to note that the BPP is a special case of the stock cutting problem [127]. This problem can be mathematically formalized as follows: Given bins of size $V$ and a set of $n$ objects of size $s_1, s_2, ..., s_n$, group the objects into a number of bins $B$ $(G_1, G_2, ..., G_B)$ such that the number of bins $B$ required to pack the objects is minimized but satisfies the condition $\sum_{i \in G_k} s_i \leq V$ for all $k = 1, ..., B$ and every object is used once and only once.

## 2.3 Graph Colouring Problem

The graph colouring problem (GCP), specifically the vertex colouring problem, is very similar to the BPP as it is an ordered gene problem that has its fitness value dependent on all genes before a given gene. Because of this algorithms that work well on the BPP tend to be applied to the GCP [53]. The GCP is identified as being NP-hard.

The problem is defined as follows: given a graph, colour each vertex such that no two adjacent vertices have the same colour. The goal is to minimize the *chromatic number* (the number of colours required). This problem has many practical applications such as determining a physical layout of objects, pattern matching, and scheduling.

In addition to the Vertex Colouring Problem the GCP may refer to Chromatic Colouring (counting the number of ways a graph can be coloured with a set chromatic number), Edge Colouring, and Total Colouring (a combination of vertex and edge colouring).

Similar to the BPP, there are many sophisticated algorithms that can produce optimal solutions for large instances of the GCP. In particular, there is a heuristic very similar to the greedy algorithm used for the BPP: given a set of vertices $v_1, v_2, ..., v_n$ assign the smallest available colour (based on some ordering) to $v_i$ such that none of $v_i$'s neighbours has that colour. If no colour is available add an additional colour.

An example of a GCP Vertex Colouring Problem can be seen in Figure 2.2.

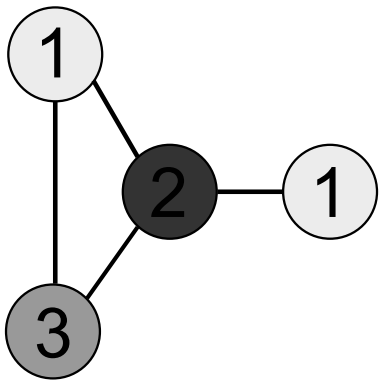



Figure 2.2: A graph with a chromatic number of 3. These colours are uniquely identified with a numerical value.

## 2.4 DNA Error Correction

When any type of information is transmitted or stored there is a chance that errors will be introduced into the data. An ideal situation would be to ensure that no mistakes are introduced during the process but this is unrealistic. To deal with errors introduced in data one can use *error correcting codes* [36].

An *error correcting code* is a collection of unique strings, called codewords, over a given alphabet. The process of error correction involves two important steps: De-

tecting errors in the received word and correcting it by assuming it is similar to a known codeword.

The *Hamming metric* could be used [68] but it is insufficient for DNA data as it can only correct substitution errors, not insertions or deletions. Instead, one could use *Levenshtein distance* [94] as it can correct insertions and deletions in addition to substitutions. This is also referred to as *edit distance* and is important for the study of bioinformatics as substitutions, insertions, and deletions frequently occur when sequencing DNA. Edit (or Levenshtein) distance between two strings is defined as the smallest number of single substitutions, insertions, and/or deletions that can translate one string to another.

An $(n, M, d)_q$ *code* is a code with $M$ words defined on an alphabet of $q$ symbols of length $n$ with pair wise minimum distance between code words of $d$ [21]. Only a small number of additional code words could be obtained by permitting word lengths to vary [126]. Since DNA has four base symbols ($A, T, C$, and $G$) the codes used must be quaternary; one could consider the alphabet to be 0, 1, 2, and 3 to represent A, T, C, and G.

## 2.5 DNA Fragment Assembly Problem

Since its introduction in 1977 Sanger sequencing has been used with great success and has been used in many sequencing projects. The amount of sequencing data available has greatly increased because of Sanger sequencing but unfortunately this approach has some drawbacks. Some of these shortcomings are dependencies on clone libraries for sample preparation (some genomes having regions that are not susceptible to cloning), and low throughput [39]. These drawbacks pushed scientists to produce new high-throughput whole-genome shotgun style methods of sequencing, and ultimately Next Generation Sequencing (NGS) technologies. One of the major benefits of these NGS technologies is that they are highly parallelized and can produce millions of sequences concurrently [70][42].

Initially NGS technologies produced much smaller fragments than traditional Sanger sequencing; these fragments are called *short reads*. Having a larger number of smaller fragments makes the assembly process orders of magnitude more difficult. The success of NGS technologies depends on the ability to assemble these fragments to produce continuous sequences for an entire chromosome.

Throughout the time DNA sequencing has been in existence two major methodologies have been studied: DNA Fragment Assembly, and DNA Sequence Assembly.

Originally DNA Fragment Assembly was the preferable approach as Sanger sequencing produced many reasonably sized reads. As NGS technologies became popular DNA Sequence Assembly became favoured as it excelled with the very high number of relatively small reads that NGS produced. However, as NGS became better and more efficient (as does most technology) the technologies produced longer reads than ever before. This allowed for DNA Fragment Assembly to come in favour once again as it is more appropriate for the current data available and will likely be relevant into the future as NGS progresses.

One of the main strategies for the *DNA fragment assembly problem* is the "overlap-layout-consensus" (OLC) approach which has been used with success in assembling fragments in large eukaryotic genomes [11][136][40].

There are many problems when it comes to reconstructing the original sequence from the fragments. Due to the nature of a four letter alphabet many fragments have overlaps that are a random coincidence. Figure 2.3 demonstrates the 5 possible orientations of an overlap between two fragments. Sequencing machines, although fast, produce errors, which makes it difficult to find actual overlaps. Because of these sequencing errors specialized algorithms are required to determine the most likely overlaps. DNA has many repeated sections making DNA assembly difficult, and with shorter reads the higher the chance of fragmenting these repeats making it even more difficult to assemble properly. In addition, there is a high number of possible overlap combinations of fragments. In fact, it is the factorial of the number of fragments; the goal is to find the best one to obtain a sequence as close as possible to the original [101].

Figure 2.4 demonstrates the problems that arise when dealing with repeating sections. One would notice the repeating "ATT" in the sequence seen in the bottom of Figure 2.4. Consider the three fragments seen on the left of the figure. How do these three fragments align? There are many possible combinations of just these three fragments but all imply something very different. The alignment a) would result in "TATTATTA", b) would produce "ATTATTATTA", c) would be "ATTATTA", and d) would produce "ATTATTATTATTA". All alignments are valid but produce contigs of varying lengths.

A common method for DNA fragment assembly is to produce a permutation of *contigs* (partial sequences derived from fragments) with a very high overlap score. This approach is called overlap-layout-consensus which was very common with Sanger-data [107]. The OLC approach became less popular with the advent of NGS technologies as the read lengths were becoming much shorter and the number of fragments

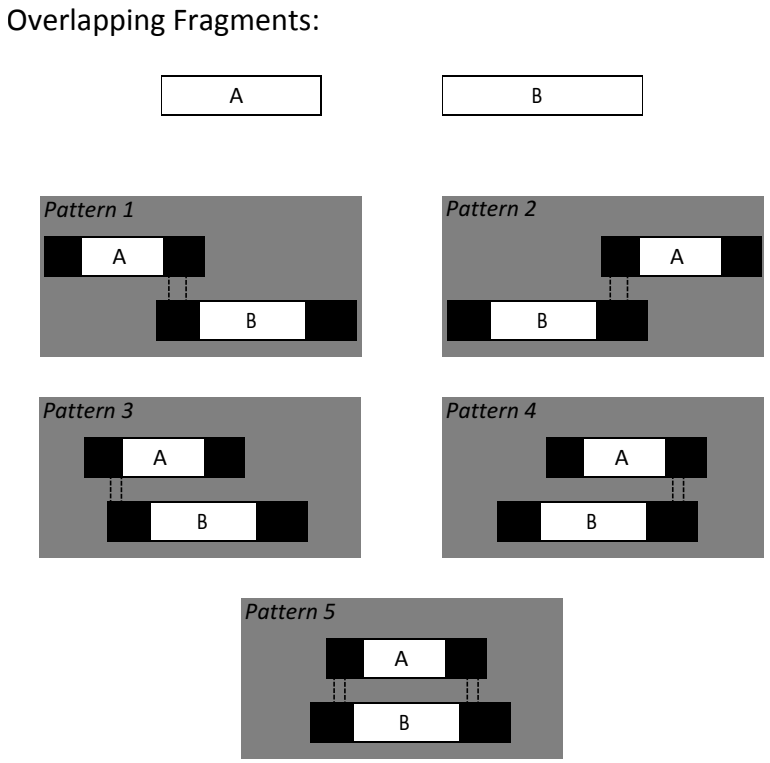



Figure 2.3: The five possible overlap orientations of two overlapping fragments [88]

grew to be too large. This led to the popularity of the De Bruijn graph approach [118] but as NGS technologies advanced the read lengths became much larger [52] meaning the OLC approach could be revisited. The *contigs* have several fragments with high overlap scores and are separated from other *contigs* by low overlap scores. Generally, experienced biologists are required to verify the proposed sequences and make any necessary changes to produce a sequence that is as close as possible to the real sequence.

The DNA fragment assembly problem is one of the last steps involved in DNA sequencing which is part of the Human Genome Project [92]. NGS technologies make several copies of the sequence and divide them into many small pieces. Once these fragments are produced the last step is to finally piece these fragments back together to create the original contiguous sequence called the *contig*. One of the most significant advantages to taking these NGS approaches is the speeds gained by parallelization, high level of automation, and scalability [110].

The *coverage* is defined as the sum of the bases that exist in all of the fragments over the total length of the target DNA sequence [110] (see equation 2.1). With a coverage of 10 [101] it would mean that on average one could expect to find 10 instances of a given base from a unique position from the original sequence within

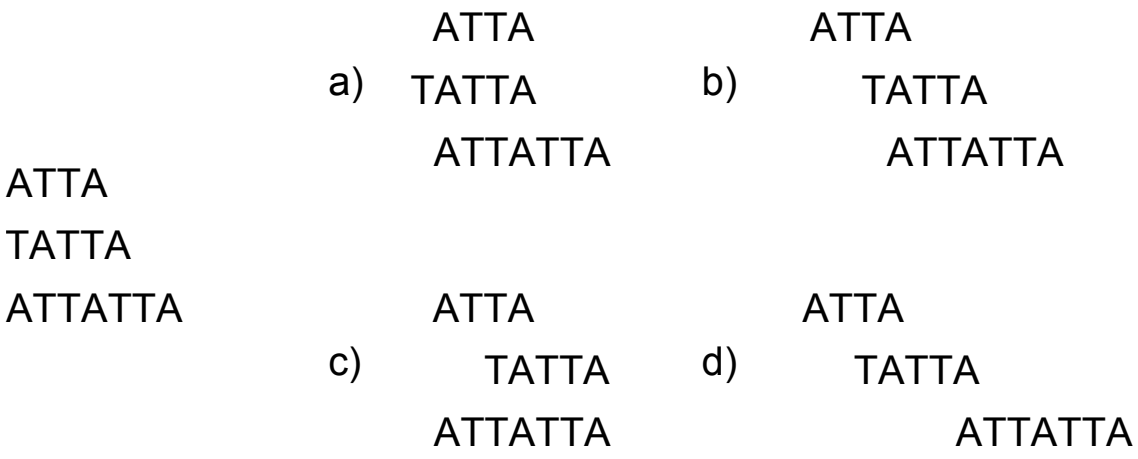



Figure 2.4: Example of problems that arise with repeating sections.

the collection of fragments. A coverage greater than 1 is necessary for the DNA fragment assembly problem as it ensures multiple fragments contain the same base. This implies that there is a good chance fragments will overlap, a requirement to generate an ordering of the fragments.

$$Coverage = \frac{\sum_{i=1}^{\text{num frags}} \text{Fragment Length } i}{\text{target sequence length}} \tag{2.1}$$

The process of assembling these fragments together into a *contig* consists of three steps in the overlap-layout-consensus approach. These steps are:

- **Overlap:** Compare each fragment to every other fragment generated by the sequencing process to calculate the largest match (overlap) between a suffix and prefix of two fragments. This overlap must exceed some predefined threshold to help eliminate non-significant and coincidental overlaps. During the sequencing phase it is not known which of the two (5' or 3') DNA strands each fragment comes from meaning the actual orientation of the fragments is unknown. When calculating this overlap score it is important to consider both orientations of the fragments. Normally one would want to find each fragment combination's largest overlap score with a dynamic programming algorithm applied to semi-global alignments such as Smith-Waterman [130].

- **Layout:** Determine an ordering of the fragments (a permutation) to maximize the overlap scores determined in the overlap phase. This is the most difficult stage of the OLC approach. This NP-hard problem [118] is made more difficult

by the fact that there are errors introduced during the sequencing process (normally 1%-5% will be incorrect) [113]), as well as redundancy, and the fact that the fragment can be in either orientation [65].

- **Consensus:** Determine the most likely DNA sequence based on results from the layout phase. This can be accomplished by applying a simple majority rule [110].

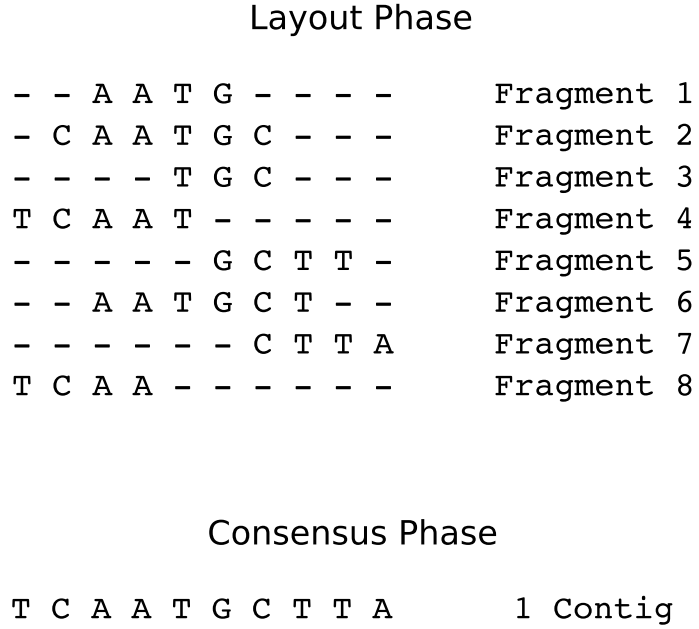



Figure 2.5: Layout and Consensus Phase Visualization [102].

Figure 2.5 presents a visualization of the layout process and the generation of the consensus *contig*. Note that the Consensus Phase is based on the sequenced fragments from the Layout Phase. In this figure a set of 8 fragments overlap perfectly. This layout depicted can be used to easily generate a potential *contig*.

Our focus on the FAP regarding the OLC approach is the layout phase, which is the most difficult part of the whole process. Each fragment must be used once and only once in a potential layout (a Hamiltonian path). The major goal of this work is to maximize the overlap score of a layout (permutation). By maximizing the overlap score a tighter and better quality *contig* can be generated.

# Chapter 3

# Literature Review

This chapter covers important related research reviewed in preparation for this research. Section 3.1 covers heuristics, Section 3.2 covers Genetic Algorithm (GA) variations, and Section 3.3 gives background research performed with the Recentering-Restarting Genetic Algorithm (RRGA). In addition, Sections 3.4, 3.5, and 3.6 cover the travelling salesman problem (TSP), the bin packing problem (BPP), and the graph colouring problem (GCP) respectively. Section 3.7 gives background work conducted on DNA error correcting codes and side effect machines and section 3.8 gives a thorough analysis of research for the DNA fragment assembly problem (FAP).

## 3.1 Heuristics

### 3.1.1 Nearest Neighbour

The nearest neighbour algorithm can be used to generate approximations for ordered gene problems [45]. The idea behind this greedy algorithm is to visit the vertex closest to the current vertex that has yet to be visited. The complexity of this algorithm is $\Theta(n^2)$ and it has been shown to produce a complexity of $\Theta(\log n)$ for travelling salesman problem instances that satisfy the triangle inequality [124]. The nearest neighbour algorithm was used with success as a starting point for local search operations such as 2-OPT, 3-OPT, and the Lin-Kernighan algorithm [82].

### 3.1.2 Minimal Spanning Tree

A minimum spanning tree (MST) is a sub-graph of a network that connects every vertex such that the sum of the weighted edges in the tree is minimized, i.e. its sum

of weighted edges is smaller than or equal to every possible spanning tree for the given graph [45] [78]. A path for an ordered gene problem can be created by simply performing a depth first traversal of the spanning tree and ensuring that no vertex is visited more than once. Unless otherwise required by the problem, the starting vertex can be arbitrary.

The run time complexity for the MST heuristic is $\Theta(v^2)$ - where $v$ is the number of vertices - when using Prim's MST algorithm with an adjacency matrix [120] but can be reduced by using a binary heap or a Fibonacci heap. There is also a guarantee that this approximation algorithm returns a tour whose cost is no more than twice the cost of the optimal tour [45].

### 3.1.3 2-Opt

2-Opt is a simple local search algorithm proposed in 1958 by G.A. Croes [46]. The algorithm for 2-Opt can be seen in Algorithm 8. The first implementation was used for the travelling salesman problem but it can be applied to almost any ordered gene problem by simply altering the fitness function. For example, to make 2-Opt work on the bin packing problem, replace minimizing the distance travelled with minimizing the number of bins required to pack a given set of objects. Figure 3.1 depicts the process of the 2-Opt algorithm. 2-Opt works by dividing the ordered objects in half and reversing the order of one of the halves.

2-Opt can be generalized to $k$-Opt where instead of generating two halves, we generate $k$ sub-sections which are then reordered. Figure 3.2 depicts an example of $k$-Opt with $k = 3$.

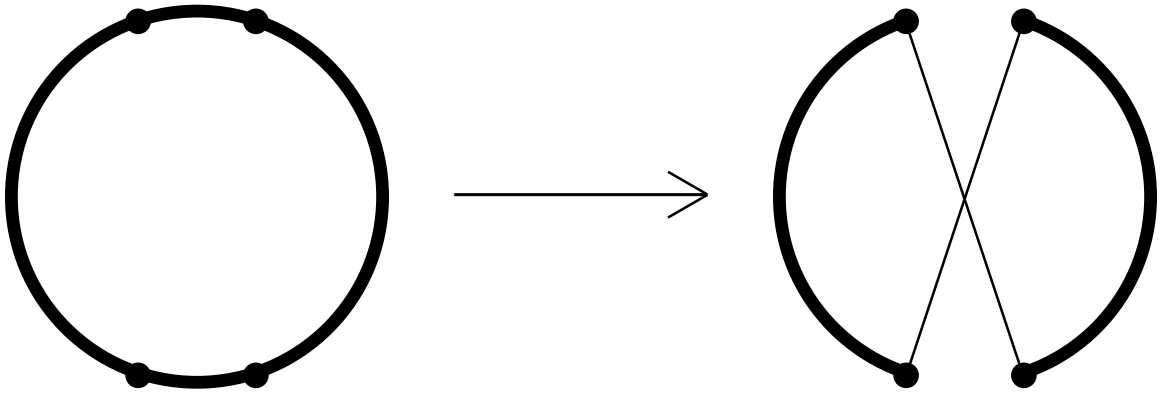


Figure 3.1: Illustration of 2-Opt [71]: the items are divided in half and the order of one of the two halves is reversed

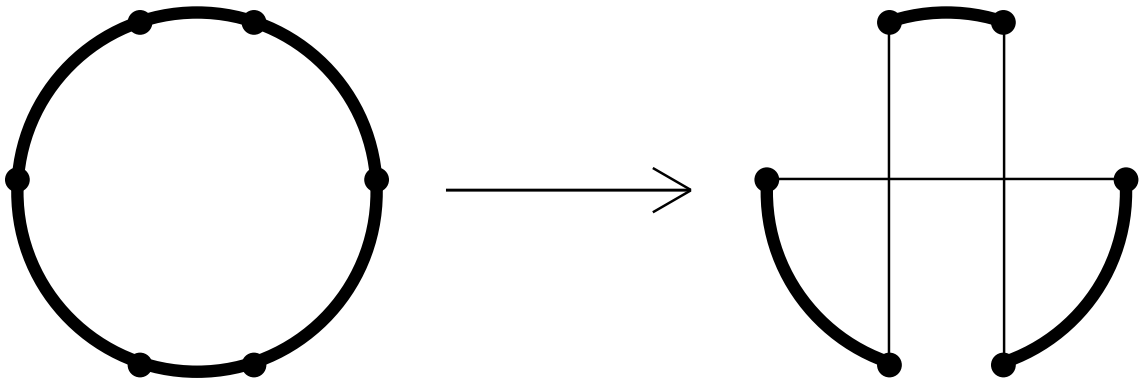


Figure 3.2: Illustration of $k$-Opt where $k = 3$ [71]

### 3.1.4 Lin-Kernighan

The Lin-Kernighan heuristic, developed by Shen Lin and Brian W. Kernighan in 1973, is one of the best heuristics for solving the travelling salesman problem and other ordered gene type problems [99][71]. The basis of the algorithm is similar to that of $k$-Opt in that it exchanges pairs of sub-tours. Lin-Kernighan uses an adaptive approach which determines how many elements need to be switched to find a shorter path (in the case of the travelling salesman problem) at run time.

The Lin-Kernighan algorithm is rather complicated and has many implementations. The implementation that is being used in this thesis is by Helsgaun [71]. This implementation has multiple refinements to improve effectiveness and run times. These refinements include only allowing sequential exchanges requiring that provisional gains must be positive, limiting entries to 5 nearest neighbours, and stopping the search if the current tour is the same as the previous tour. For a detailed description of the algorithm refer to [71].

## 3.2 Genetic Algorithm Variations

### 3.2.1 Island Model

The island model is a popular extension for evolutionary algorithms that has been used many times with great success [137][138][66][57].

The island model is a parallel approach to evolutionary algorithms that evolve multiple sub-populations to ensure genetic diversity by allowing each sub-population

to traverse the search space along its own path. Periodically migrations are allowed between islands which promotes unique offspring by combining genetically different parents.

The island model is very popular due to its great success in run times, convergence speed, and high quality of solutions. The island model was found to be particularly useful for genetic programming due to its ability to reduce bloat, which ultimately yields large speed-ups [49].

### 3.2.2 Ring Species

Daniel Ashlock et al. have studied evolutionary algorithms that made use of ring species (ring evolution) with success [104][20][16][18].

The motivation for using these ring species in evolutionary algorithms is based on natural phenomenon; the differentiation of populations when they expand around geographical barriers [18]. These populations develop slight differences. Fertility rates drop as the distance between two populations increases until some threshold distance is met where the two populations cannot produce offspring.

In [18] two problems were used to study these ring species: robots performing the Tartarus task (pushing blocks towards walls to maximize the number of box sides touching a wall) and a self avoiding walk. The authors found that this method produced extremely significant results on both of the problems used and suggest this method of evolution for future studies in evolutionary computation.

## 3.3 Recentering-Restarting Genetic Algorithm

The Recentering-Restarting Genetic Algorithm (RRGA) was developed by Daniel Ashlock to promote genetic diversity and avoid local optima by providing a means to perform a sequential search through the fitness landscape [17][23][22][75][76]. This work included evolving epidemic networks to match epidemic profiles, prolong epidemic life, and maximize infection rate (all with the aid of diffusion characters [93]), evolving side effect machines for the use of decoding error codes correctly, and evolving permutations for the travelling salesman problem.

This RRGA avoids local optima by simply restarting the GA once convergence on a local optima has occurred. In order for this strategy to work a recentering must occur where the new population is created to be similar to the best member of the population before the restarting occurs but different enough that the search can

continue in other trajectories within the search space. Without the recentering the GA would more than likely find the same local optima that it did before each restart. In all cases where the RRGA was implemented it was able to produce high quality results that outperformed multiple types of GAs which suggests that this strategy should be studied further.

## 3.4 Travelling Salesman Problem

The travelling salesman problem is one of the most popular ordered gene problems and has been studied a great number of times for its implications in theoretical computer science and operations research [82]. Many different approaches have been taken in an attempt to solve TSP instances such as heuristics like 2-Opt [46] and Lin-Kernighan [71], and metaheuristics such as genetic algorithms [76][78][32], Ant Colony Systems [51] [50], and Beehive algorithms [140][103]. In addition to these there are countless other techniques such as those that combine metaheuristics with local search to produce memetic algorithms [82].

Many of the previous works used a simple permutation of the cities which gives a very direct representation for our algorithms [60][78][76]. The total distance of the route specified by the permutation is taken as the fitness with the goal of minimizing this value. See Equation 3.1 for the popular fitness function used for the TSP (Note the sum of the distance between the last and first city).

$$Fitness = (\sum_{i=0}^{n-1} distance(city_i, city_{i+1})) + distance(city_n, city_0) \tag{3.1}$$

## 3.5 Bin Packing Problem

The bin packing problem (BPP) is a very popular, simple to understand, ordered gene problem. Similarly to other combinatorial problems it has been studied vigorously with multiple different approaches including deterministic algorithms and metaheuristics.

### 3.5.1 A Branch-and-Cut-and-Price Algorithm for One-Dimensional Stock Cutting and Two-Dimensional Two-Stage Cutting

G. Belov and G. Scheithauer studied a Branch-and-cut-and-Price (BCP) algorithm for one and two-dimensional problems for the stock cutting problem (the bin packing problem is a special case of the stock cutting problem)[31]. In addition to these descriptions a collection of results for the benchmarks was also presented in this work. This BCP algorithm combines a branch-and-bound with column generation (branch-and-price) approach with a general-purpose Chvátal-Gomory cutting planes [44]. This work is of particular interest due to its detailed description of a collection of bin-packing benchmarks, namely the "hard-28" instances [127][55].

### 3.5.2 A Hybrid Grouping Genetic Algorithm for Bin Packing

An algorithm called the Grouping Genetic Algorithm (GGA) was developed by E. Falkenauer in 1996 [55]. This work discusses multiple crossover and mutation techniques that can be applied to "grouping style" ordered gene problems like the bin packing problem. Falkenauer argues that a representation of a basic permutation of the items to be packed is very redundant. Because of this a candidate solution does not follow one of Radcliffe's six design principles, namely minimal redundancy [122].

For example:

- Chromosome 1: 0123456789
- Chromosome 2: 3210456789

In this situation if chromosome 1 is split up as 0123|45678|9 (bin 1 contains 0123, bin 2 contains 45678, and bin 3 contains 9) it would follow that chromosome 2 is split up as 3210|45678|9 (bin 1 contains 3210, bin 2 contains 45678, and bin 3 contains 9). In this example both chromosomes ultimately mean the same thing as both have elements $0, 1, 2, 3$ in bin 1, elements $4, 5, 6, 7, 8$ in bin 2, and element 9 in bin 3.

To eliminate this redundancy Falkenauer presents a representation that uses groups of elements as a single gene rather than a permutation of the elements to be packed. With this in combination with unique genetic operators Falkenauer was able to achieve optimal or near optimal results on all data sets studied. Falkenauer further suggests that this approach can be applied to many other grouping problems.

## 3.6 Graph Colouring Problem

### 3.6.1 Data Sets

The graph colouring problem is another popular ordered gene problem that has been studied thoroughly. There are multiple variations of this problem including single vertex colouring, edge colouring, and multi-colouring. There is a large set of benchmarks available for these problems, greatly ranging in difficulty. These benchmarks can be found at the website [67] and are widely used [112][111][43][144][64][74][96][105][48][81][38][37]. These benchmark problem instances are classified using the SteinLib classification [91]:

- NP-s: Less than a minute to solve (measured in seconds)
- NP-m: Less than an hour to solve (measured in minutes)
- NP-h: Less than a day to solve (measured in hours)
- NP-d: Less than a week to solve (measured in days)
- NP-w: Very long time to solve the problem (measured in weeks)
- NP-?: Instance is not solved or the time is unknown

The hosted instances were solved with the use of multiple algorithms including: DSATUR [33], GeCOL [67], and the Branch-and-Price algorithm used for stock-cutting [31]. In addition to hosting the benchmarks the website also presents details about these instances including the number of vertices, the number of edges, density, size of maximum clique, chromatic number (if available), upper bounds for the chromatic number, and lower bounds for the chromatic number.

### 3.6.2 Graph Coloring with Adaptive Evolutionary Algorithms

The paper written by Eiben et al. titled *Graph Coloring with Adaptive Evolutionary Algorithms* [53] presents a grouping evolutionary algorithm (from Falkenauer [55]) for vertex colouring. The algorithm for this work is shown in Algorithm 1. This is of particular interest due to the similarities with the approach taken on the bin packing problem seen in [55].

**Algorithm 1** Grouping Genetic Algorithm [53]

```
Initialize population
Evaluate Population
while Stopping criteria is not met do
    Sort population using 2-tournament selection
    Apply Crossover to best N_c individuals
    Replace worst N_c individuals with offspring
    Mutate N_m randomly selected individuals from population
    Apply inversion to N_i randomly selected individuals from population
    Evaluate population
end while
```

### 3.6.3 A New Genetic Graph Coloring Heuristic

Croitoru et al. proposed a genetic algorithm variation for the graph colouring problem in [47]. Although they had success the part of the work that is of particular interest is the means by which they did fitness evaluation. The rule they followed was a basic greedy algorithm: given a permutation of the vertices in the graph assign colour 1 to the first vertex and for each remaining vertex sequentially assign the minimum colour number available that has not currently been assigned to any adjacent vertex. It is important to note that this method of evaluation has been implemented in later research elsewhere.

## 3.7 DNA Error Correction with Side Effect Machines

DNA error correction is a problem with the goal of correcting errors that may be found in *codewords* (decoding) [75]. What makes this problem different from the other problems studied in this work is that it is not traditionally a ordered gene problem. However this work uses Side Effect Machines (SEMs) - defined in Section 5.5.1 - for the purpose of decoding which makes the representation required similar to that of an ordered gene problem. SEMs have been used in many areas of bioinformatics such as polymerase chain reaction primers [24] [19], the "Barcode of Life" project [128], and the classification of retroviruses [27][28].

### 3.7.1 Edit Metric Decoding: A New Hope

The use of side effect machines for the purpose of decoding edit [95] codes was first examined by Brown et al. [35]. A very basic genetic algorithm was used to evolve SEMs. These SEMs receive error patterns to be 'run' through the SEM to produce a vector. Two different methods in which the SEMs were implemented: Single Classifier Machines and Fuzzy Classifiers.

#### Single Classifier Machine

The Single Classifier Machine (SCM), a specifically utilized SEM, produces a classification vector based on the error pattern received by the SCM. This classification vector is then compared via Euclidean distance to the classification of the proper codeword. In this case the codeword with the closest vector is considered the decoded error pattern [35].

#### Fuzzy Classification

Fuzzy classification was done by extending the SCM since SCMs store all the codeword's classification vectors. Fuzzy classification is accomplished by sorting this list of error pattern's classification vectors based on the distance to the correct codeword. This list of codewords is then simply compared to the received pattern using the Levenshtein distance until a distance less than or equal to the correction capacity of the code is found [35].

### 3.7.2 Decoding Algorithms Using Side-Effect Machines

Joseph Brown's Masters Thesis [36] was a major expansion on the work done in [35] and introduced a method in which the complexity of each machine was reduced with the use of a hierarchal classification with the use of locking Side Effect Machines (LSEMs). The LSEMs employed in this work use multiple SEMs to create a tree structure for sub-classifications.

## 3.8 DNA Fragment Assembly Problem

There are may different algorithms that have been used for the different approaches to the Fragment Assembly Problem. These algorithms range from heuristics to metaheuristics (evolutionary algorithms and other bio-inspired computation). Although

this problem has been studied, the field is still wide open due to difficulties with scaling up to real world organisms.

A variety of Genetic Algorithms have been used for the OLC approach in [116][117] [89][56][100][88][114] and [13] along with other very similar algorithms [92][109][108][110]. Ant Colony Optimization (ACO) algorithms were also used with success for this approach in [106][143]. A local search method named PALS produced significant results for this problem [12]. A Beehive algorithm was also proposed for the Fragment Assembly Problem by Firoz et al. [58][121][83]. A Hybrid approach which combined and parallelized differential evolution and particle swarm optimization was implemented by Mallen-Fullerton and Fernandez-Anaya [101].

Other significant strategies which used de Bruijn graphs were proposed in [142][98].

A collection of relevant research is explored and summarized in this section.

### 3.8.1 DNA Sequence Assembly and Genetic Algorithms, New Results and Puzzling Insights

In 1995 Rebecca Parsons proposed a Genetic Algorithm (GA) for the Fragment Assembly Problem [116][117]. Parsons argues that some of the most important aspects to using a GA for this problem are problem representation, genetic operator selection, selection mechanism, and parameter tuning (population size, generations, etc.). Observations made in their previous work used what they called a sorted-order representation and a straightforward representation.

In [116] a straightforward permutation representation was used where each element in the chromosome corresponded to a DNA fragment. A specialized crossover designed for DNA fragment assembly developed by Starkweather et al. named the edge-recombination crossover was used [131]. This crossover emphasizes and preserves adjacency information instead of the order/position of the elements in the permutation and requires a small amount of overhead for an adjacency table. Three mutation operators were used in this work: a basic swap mutation, inversion, and transposition. Inversion and transposition are operated on whole contigs (a collection of fragments) instead of a single element in the permutation. Inversion simply reverses the order of the fragments and transposition moves a contig to a position between two other adjacent contigs. The fitness function used was an Eulerian path approach that simply sums the overlapping scores of the fragments in the order in which they appear in the permutation. The fitness function is shown in Equation 3.2, where $n$ is the number of fragments. Note the similarity to that of equation 3.1 for the fitness of a

TSP problem instance.

$$Fitness = \sum_{i=0}^{n-2} Overlap_{frag_i, frag_{i+1}} \tag{3.2}$$

They had success with small datasets but lacked performance when applied to larger problem instances.

### 3.8.2 A Genetic Algorithm Approach to Solving DNA Fragment Assembly Problem

Shu-Cherng Fang et al. also proposed a GA for the Fragment Assembly Problem that did not take the Eulerain path approach to the problem [56]. There was no requirement that each fragment exists in each candidate solution to this problem. Although this approach still attempts to maximize the overlap scores the candidate solution lengths were strictly maintained as this approach assumes that the length of the target sequence is known.

For fitness evaluation it would also consider the number of bases in a chromosome not covered by a fragment in addition to the overlap scores. The crossover operator analyzed which fragments were not included in both parents and would swap these to produce the fragments and truncate the length of the chromosome if needed. This approach selected the best 1/3 of the population for reproduction.

The authors implemented an additional operator called compression which pieced all of the complete fragments in an individual together to remove the gaps (areas that are not part of an actual overlapping section or a fragment) introduced by the other operators. Refer to Figure 3.3 for an illustration of this process.

The proposed approach was efficient with very small instances of 100 bases.

### 3.8.3 Metaheuristics for the DNA fragment assembly problem

Gabriel Luque and Enrique Alba proposed a GA, cross generational elitist selection Heterogeneous recombination and Cataclysmic mutation (CHCH) algorithm, scattered search, and simulated annealing (a trajectory based method) approaches to this problem [100].

For the genetic algorithm the authors used an order crossover and the edge-recombination crossover which was also used by Parsons [116][117]. The CHC al-

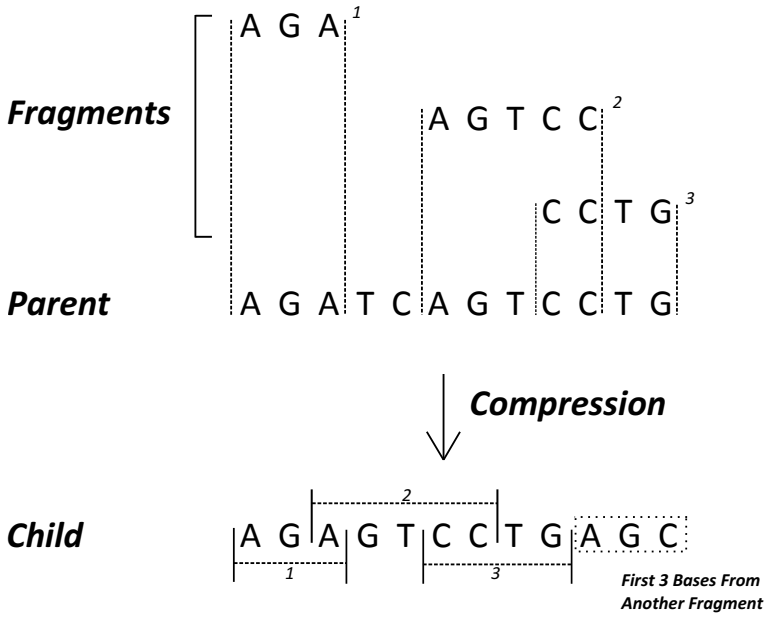



Figure 3.3: Illustration of compression operator [56]

gorithm (which is an extension of a GA) was selected due to its ability to promote diversity by using very destructive crossover operator. This CHC algorithm also will restart if the population remains unchanged by creating a new population with the best individual from the previous population and by mutating copies of the best individual.

The scatter search is a population-based metaheuristic which uses a reference set (generated with some method) for the combination of solutions and the generation of new solutions which were ultimately used to run an improvement procedure.

The authors used two different fitness evaluation formulae. The first is the same formula used by Parsons (see equation 3.2) and the second is as follows:

$$Fitness = \sum_{i=0}^{n-1} \sum_{j=0}^{n-1} |i - j| * Overlap_{frag_i, frag_j} \tag{3.3}$$

This formula pushes highly overlapping fragments together by penalizing solutions which have non-adjacent fragments with strong overlaps. Unlike equation 3.2 which has algorithms attempting to maximize the fitness score, algorithms that use equation 3.3 will need to minimize this score to produce good results.

Simulated annealing obtained the best results and ran orders of magnitude faster than the other approaches. The authors conclude further study into the use of trajectory based methods would be beneficial.

### 3.8.4 A Hybrid Genetic Algorithm for the DNA Fragment Assembly Problem

Enrique Alba and Gabriel Luque also proposed a hybrid approach which took PALS (Problem Aware Local Search) and combined it with a simple GA and had significant results that outperformed the two algorithms on their own [13]. The authors also suggest that the number of contigs is important to consider in addition to the overlapping score of the fragments.

PALS is an algorithm which was also developed by Alba and Luque [12]. It is a local search algorithm which operates on a single permutation and iteratively modifies the permutation in a structured manner with perturbations that reverse sub-sequences [92].

### 3.8.5 DNA Fragment Assembly Using a Grid-Based Genetic Algorithm

Nebro et al. proposed a GA for solving the DNA fragment assembly problem using a computational grid named GrEA in 2007 which performed well [114].

GrEa is a highly parallelized steady-state GA which makes use of a panmitic population (no restrictions on which chromosomes can have genetic operators applied to them) that is based on computing functional evaluations asynchronously. Ideally, this type of GA can carry out as many evaluations as there are processors in the grid.

The authors used two fitness functions, Equations 3.2 and 3.4. Equation 3.4 takes into account the number of contigs in addition to the overlap scores between adjacent fragments.

$$Fitness = (\sum_{i=0}^{n-2} Overlap_{frag_i, frag_{i+1}}) * (1 + \frac{1}{NumberofContigs}) \tag{3.4}$$

### 3.8.6 SAX: a new and efficient assembler for solving DNA Fragment Assembly Problem

Gabriela Minetti et al. used a hybridization of Simulated Annealing and a Genetic Algorithm called SAX [110]. SAX was identified as being a low-level teamwork hybrid algorithm in [134].

The algorithm takes an initial potential solution called $S_0$ which is generated with a greedy approach proposed in [109]. $S_0$ is used to generate two additional solutions

($S_1$ and $S_2$) with inversion mutation which are ultimately used to generate $S_3$ by performing order crossover. If $S_3$ has a better fitness value than $S_0$ then $S_0$ will be replaced by $S_3$. Figure 3.4 illustrates the processes in this algorithm.

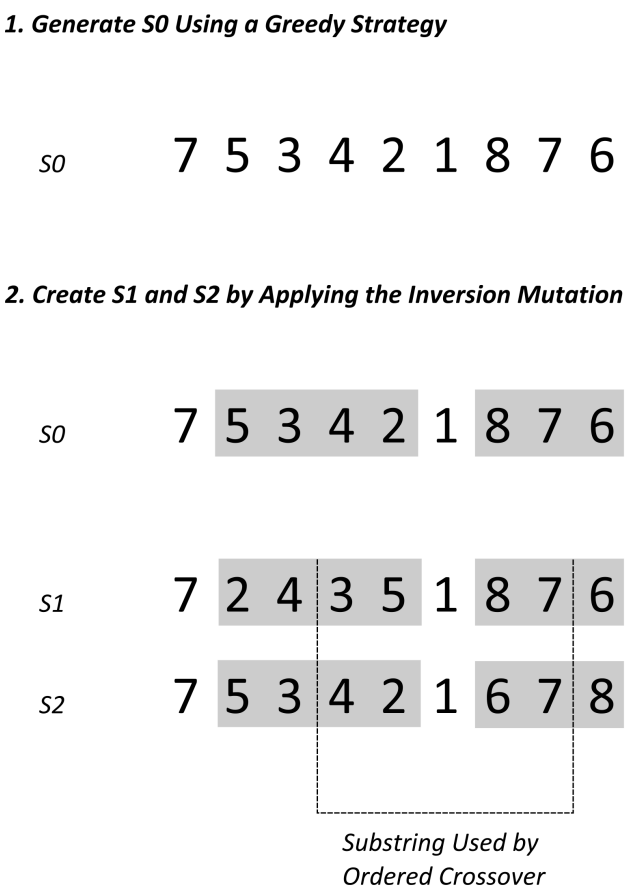



Figure 3.4: Illustration of SAX operation [110]

SAX is shown to extend exploration and increase the structural diversity with the use of inversion mutation along with an increase in exploitation obtained with order crossover. SAX was able to outperform many popular algorithms for the FAP and the authors also suggest this algorithm for a variety of other ordered gene type problems such as the travelling salesman problem.

### 3.8.7 An efficient genome fragment assembling using GA with neighbourhood aware fitness function

In 2012 Satoko Kikuchi and Goutam Chakraborty used a similar GA to the one used by Parsons but also proposed a Chromosome Reduction Step (CRed) and a Chromosome Refinement Step (CRef) [88]. The purpose of the Chromosome Reduction Step is to reduce the search space for the GA by combining a collection of fragments into a contig (if the resulting contig is over a predefined threshold) during the evolutionary process. This allows the GA to run more efficiently.

The Chromosome Refinement Step involves a greedy algorithm which swaps the order of the fragments to position them in a way that corresponds to the original sequence more naturally. An example of this can be seen in figure 2.3. The five overlap orientations possible when two fragments A and B overlap are as follows (see Figure 2.3). Pattern 1: suffix of A overlaps prefix of B. Pattern 2: suffix of A overlaps suffix of B. Pattern 3: prefix of A overlaps prefix of B. Pattern 4: suffix of B overlaps prefix of A. Pattern 5: suffix and prefix of both A and B overlap. If fragments have pattern 4 as the overlap it is clear that the fragments are out of order. This CRef operation would switch these fragments' positions [88].

This proposed GA and the new functions were found to outperform the algorithm used by Parsons.

### 3.8.8 Solving the DNA Fragment Assembly Problem Efficiently Using Iterative Optimization with Evolved Hypermutations

Kubalik et al. developed an evolutionary algorithm called Prototype Optimization with Evolved Implement Steps (POEMS) [92]. This evolutionary approach produces a collection of modifications to the current solution (called a prototype). The best modification is then checked to see if it improves or worsens the current prototype and if it is at least as good it will replace the current prototype for the next set of iterations. The authors also realize that as the prototypes get better and better there is a good chance that these modifications will begin to only worsen the prototype. To combat this issue they implemented a *niching tournament selection* and *niching replacement strategy*. The authors define a niche as a group of modifications that have the same number of alterations to be made to the prototype.

The niching tournament selection takes a random niche and performs a tourna-

ment between a predefined number of modifications within the selected niche. The niching replacement strategy was used to ensure each newly generated modification is only inserted into the population if there is an admissible replacement in the current population. This approach maintains quality and diversity in the population. In other words, the old modification is replaced if and only if the fitness is worse than the new modification and the number of alterations in the old modification is less than or equal to the number of alterations made by the new modification.

POEMS was found to perform very well and generate better results than those obtained by various other state-of-the-art approaches and the authors feel that this can be attributed to the fact that this algorithm efficiently explores a current solution's neighbourhood in each iteration of the algorithm.

### 3.8.9 Bee Algorithms for Solving DNA Fragment Assembly Problem With Noisy and Noiseless Data

Two bee algorithms were proposed by Firoz, Rahman, and Saha in 2012 for the FAP [58] called Artificial Bee Colony (ABC) and Queen-bee Evaluation Based On Genetic Algorithm (QEGA). These bee algorithms are nature-inspired algorithms based on the natural foraging behaviour of honeybees.

The ABC algorithm consists of three types of bees, employee bees, onlookers, and scouts. Onlooker bees wait for employee bees to do a 'waggle' dance which tells them the source of food, employee bees forage food in areas it has already found, and scout bees perform random searches for food. Algorithm 2 contains the pseudocode for the ABC algorithm. For the FAP, each food source represents a permutation of the DNA fragments and the quantity of food is equivalent to the fitness of the permutation.

The QEGA is a special GA designed to quickly find global optima while avoiding premature convergence [121][83]. QEGA differs from a conventional GA in two ways: varying mutations are used and parent chromosomes consist of k/2 copies of queen-bees (fittest parents) and k/2 copies of bees from the previous generation (where k is the population size).

These authors used their algorithms on noiseless and artificially noisy data and observed that they performed well on the noiseless data but poorly on the noisy data.

**Algorithm 2** Artificial Bee Colony Algorithm [85]

```
Initialize potential food sources (permutations of fragments)
while Stopping criteria is not met do
    for all Employee bees do
        Find food source from memory
        Determine a neighbour source
        Evaluate nectar amount
        Dance in hive
    end for
    for all onlooker bees do
        Watch Dance of employee bees
        Select food source and find it
        Finds neighbour source and determine its nectar amount
    end for
    Abandoned food sources are determined and replaced by new food sources which
are found by scouts
    Keep track of current best food source
end while
```

### 3.8.10 DNA Fragment Assembly Using Optimization from Nature Inspired Algorithms to Formal Methods

A parallel differential evolution particle swarm optimization hybrid called DE+PSO was developed by Guillermo M. Mallen-Fullerton and Guillermo Fernandez-Anaya for the FAP in 2013 that produced results comparable to many of the most popular algorithms for this problem [101].

Differential Evolution (DE) is an optimization metaheuristic that maintains a population of candidate solutions and creates new potential solutions by combining existing candidates [132][133]. Algorithm 3 contains the pseudocode for DE.

Particle Swarm Optimization (PSO) is another metaheuristic for optimization inspired by flocking birds and schools of fish [86]. PSO attempts to have particles find a global optimum based on their momentum and are influenced by their best known location along with the best known location found by all particles in the system. Algorithm 4 contains the pseudocode for PSO.

The pseudocode for DE+PSO hybrid algorithm is found in Algorithm 5.

DE+PSO needed to use the Smallest Position Value rule to convert the continuous values obtained by the algorithm to a permutation for the FAP [135][115].

**Algorithm 3** Differential Evolution Algorithm [132][133]

```
Initialize chromosomes randomly
Evaluate fitness of all chromosomes
while Stopping criteria not met do
    for all Chromosomes in population do
        Select 3 distinct additional chromosomes
        Update personal best position
        Calculate donor vector
        Determine trial vector
        Calculate trial vector's fitness
        if Trial vector is better than target vector then
            Replace target vector with trial vector
            Assign appropriate fitness
        end if
    end for
end while
```

**Algorithm 4** Particle Swarm Optimization Algorithm [86]

```
Initialize particles randomly
Initialize velocities to zero
while Stopping criteria not met do
    for all Particles in swarm do
        Evaluate fitness
        Update personal best position
    end for
    Update global best particle
    for all Particles in swarm do
        Calculate new velocity
        Update particle position
    end for
end while
```

**Algorithm 5** Differential Evolution + Partical Swarm Optimization Algorithm [101]

```
Generate random initial populations within each thread in a predefined hyper-box
containing the optimum point
Find global best particle with fitness evaluation function and consider this the best
position for each particle
for all particle i in each thread sub-population AND if stopping criteria is not met
do
    if There is a new global best then
        Copy new best from shared memory to local variables
    end if
    Calculate new velocity and position vectors
    Calculate DE perturbation vector
    Cross perturbation vector with particle i
    if New particle is better than old particle then
        Copy new particle position to be the current particle position
    end if
end for
```

### 3.8.11 De Bruijn Graph Approaches

De Bruijn graphs have been used in multiple cases for de novo assemblies [118]. Daniel Zerbino and Ewan Birney developed a tool called "Velvet" to manipulate de Bruijn graphs for sequence assembly [142] and Yingrui Li et al. discuss two additional tools which use de Bruijn graphs called ABySS and SOAPdenovo [98].

All of these tools use de Bruijn graphs for sequence assembly for very short reads (25-50 bases). These approaches have been successful at removing errors and resolving a large number of repeats. These approaches all use the N50 statistic, a statistic of contig of scaffold lengths - a popular measure for DNA sequence assemblers [107].

# Chapter 4

# Algorithms

This chapter discusses the algorithms used in this thesis. This includes the heuristics, a description of genetic algorithms, and details explaining the set of genetic algorithm variations. In addition, a description of the representations being implemented is also included in this chapter.

## 4.1 Heuristics

### 4.1.1 Nearest Neighbour

The nearest neighbour algorithm is a popular greedy approximation algorithm for the TSP. The idea behind this algorithm is rather simple: start at a random city (vertex) and visit the next closest city (vertex) relative to the salesman's current location such that the new city has not yet been visited. Although this approximation algorithm was originally developed for the TSP it can be applied to other similar problems by changing the distance measure to the appropriate fitness function. This approximation algorithm can quickly generate a relatively short tour but is unlikely be optimal. Additionally, one could generate an instance of the TSP such that the nearest neighbour algorithm would produce the worst tour possible. See Algorithm 6 for the nearest neighbour algorithm's pseudocode.

### 4.1.2 Minimal Spanning Tree

An algorithm based on minimal spanning trees can also be used to generate approximations for the TSP. Normally this approach can yield a solution that is no worse than twice the length of the optimal solution. If the instance follows the triangle in-

**Algorithm 6** Nearest Neighbour Algorithm

```
Graph G = (V, E)
Select u ∈ V for starting location
while There Exists Unvisited Nodes do
    MinCost = ∞
    Nearest = NULL
    for all Unvisited Vertex v do
        if distance(u, v) <MinCost then
            MinCost = distance(u, v)
            Nearest = v
        end if
        u = v
    end for
end while
```

equality and the algorithm exploits this a solution no worse than 1.5 times the length of the optimal tour can be found [41].

A popular method for generating a minimal spanning tree is Prim's minimal spanning tree algorithm. The pseudocode for Prim's algorithm is shown in Algorithm 7. This algorithm selects a vertex to initialize the tree than iteratively adds the next closest vertex not already within the tree until all vertices are apart of the minimal spanning tree.

**Algorithm 7** Prim's Minimal Spanning Tree Algorithm [45]

```
Graph G = (V, E)
Add all V to Queue Q
for all u ∈ V do
    u.Min = ∞
    u.Parent = NULL
end for
Select u ∈ V for starting location
while Q is NOT Empty do
    u = Dequeue(Q)
    for all v ∈ V do
        if v ∈ Q & distance(u, v) <v.Min then
            v.Min = distance(u, v)
            v.Parent = u
        end if
    end for
end while
```

### 4.1.3 2-Opt

Similar to the nearest neighbour approach the 2-Opt algorithm was developed as a heuristic for the TSP but can be applied to many similar problems. The success of 2-Opt has led to the implementation of 3-Opt, K-Opt, and other algorithms including the dynamic approach of Lin-Kernighan. The basic idea behind 2-Opt is to take a particular location within a permutation and reverse the sub-permutation that follows the specified location. This has the effect of crossing the permutation on itself. Figure 3.1 depicts this process. It is important to note that this approach has the ability to create all possible permutations of a string.

2-Opt has been shown to be a very effective heuristic that can generate high quality solutions in a relatively short amount of time. Refer to Algorithm 8 for an implementation of 2-Opt (Note that Algorithm 9 is required in this specific implementation). Algorithm 9 reverses the order of objects following some index within the permutation. Algorithm 8 simply runs Algorithm 9 for all indices until no improvements are made.

**Algorithm 8** 2-Opt: Note, Opt-Swap is also required (Algorithm 9)

```
while Improvements are still found do
    for i = 0 to length of path do
        for j = i to length of path do
            newPath = optSwap(path, i, j)
            if newPath is better than path then
                path = newPath
            end if
        end for
    end for
end while
```

### 4.1.4 Lin-Kernighan

The Lin-Kernighan heuristic (LKH) was developed for the TSP and has been empirically shown to be one of the most effective and efficient algorithms for the particular problem. Similar the Nearest Neighbour and 2-Opt (including variations) algorithms it can be extended to other similar problems. The Lin-Kernighan heuristic is particularly complicated. The LKH involves applying multiple $K$-opts while intelligently determining the value of $K$ for each step.

There have been many variations of the LKH but K. Helsgaun's implementation consistently produces high quality results [71]. The LKH currently holds the record

**Algorithm 9** Opt-Swap: Used in 2-Opt

```
Receive: path, start, stop
Initialize newPath
for i = 0 to start do
    newPath[i] = path[i]
end for
for start to stop do
    newPath[i] = path[stop - (i - start) - 1]
end for
for stop to length of path do
    newPath[i] = path[i]
end for
Return newPath
```

for all instances with a known optimum used in the *DIMACS TSP Implementation Challenge* [2][71].

## 4.2 Genetic Algorithm

*Genetic Algorithms* (GAs) are a form of heuristic search inspired by the natural process of evolution. Although the concept of evolving potential solutions to a problem had already existed, the process was popularized in the 1970s by John Holland [73]. This field was furthered by D. E. Goldberg who thoroughly studied this idea [63].

### 4.2.1 Genetic Algorithm Definitions

Before an explanation of the GAs process, some terminology needs to be presented.

***Chromosomes***, in terms of a Genetic Algorithm, are potential solutions to the given problem. The actual layout of a chromosome depends on the problem and the chosen representation. These chromosomes could be a simple ordered permutation or even an encoding for a Side Effect Machine. Chromosomes are often referred to as "candidate solutions".

***Populations*** are collections of chromosomes (candidate solutions). The number of chromosomes within the population is normally predefined by a system parameter.

***Generations*** are steps in the Genetic Algorithm; namely the "Evaluation and Selection" and "Termination" steps. The main processes within a generation are the fitness evaluation of the whole population, the selection process, and the application of the genetic operators (crossover and mutation).

***Selection*** is the process by which the GA selects the chromosomes that will be subject to the genetic operators. There are multiple selection strategies but one of the more popular approaches is "Tournament Selection".

In tournament selection $n$ random chromosomes are selected from the population and the chromosome with the best fitness is chosen for reproduction. This process is done twice to select two parents for reproduction. When $n$ is much less than the population size, the chance that the best chromosomes are always selected for reproduction is lowered. This ensures that some mediocre chromosomes are selected which allows for more genetic diversity in the population.

***Genetic Operators*** are strongly influenced by the natural process of biological evolution. There are two major types of genetic operators, Crossover and Mutation. These operations allow the GA to try new candidate solutions to be able to traverse through the search space.

***Crossover*** is a genetic operator that happens before a new population is created based on the previous generation. Once two chromosomes are selected by the selection process there is a chance that these two chromosomes will crossover (breed) to generate two new chromosomes. If the two chromosomes do not meet the requirements to crossover they are simply copied to the new population for the next generation. The basic idea is that given two reasonably good chromosomes, there is a chance that mixing these two chromosomes together will produce another good solution. In other words, because a good chromosome will have some useful information within its representation, mixing it with other useful information might produce an even better chromosome by inheriting strengths from the parents. After crossover has been performed the two resulting chromosomes (children) will be placed in the new population. This process focuses on what are already known to be good solutions in hopes that another good or better solution can be found.

There are many different kinds of crossover operations that can be used, and some are more useful than others when considering the representation and search space.

***Mutation*** is a genetic operator that happens after the new population is created. The new population is traversed and each chromosome within the new population has a chance to mutate. In biological evolution mutations may occur in the reproduction processes (whether it is sexual reproduction or mitosis). Normally mutations have negative effects but there is a chance for mutations to produce robust offspring. It is this that the mutation genetic operator tries to simulate. Mutation is a process that takes a chromosome as a starting point and makes changes in an attempt to examine some other areas in the search space that would not be easily accessible based on the

crossover operation alone. Mutation also helps the GA avoid converging on a local optimum.

***Genetic Diversity*** is a measure of how different chromosomes are from one another in terms of the actual chromosome and fitness values. In other words, not all of the chromosomes have the same information. Too little diversity within a population means that the GA may converge on local optima too quickly.

***Convergence*** is a term used to describes the phenomenon of a population collectively coming together on a single solution, normally on a local optimum, and ideally on a global optimum. Generally, once a population has converged no significant improvements are made as the algorithm cannot remove itself from the local optimum, or in the case of a global optimum, no additional improvements can be made..

***Elitism*** in a Genetic Algorithm is the process of copying some number of the best chromosomes to the next population before any genetic operation occurs. This ensures that the best solution is not lost or altered.

***Representation*** is one of the most important parts of a metaheuristic. The representation is how the metaheuristic represents a candidate solution within a chromosome. There are two different classifications of representations: direct and indirect. Direct representations directly translate to solutions. For example, for the TSP, a direct representation would be a permutation of the cities. An indirect representation would be one that would require a translation method to produce a candidate solution. An example of an indirect representation would be a set of transpositions that would be applied to a permutation to obtain a candidate solution. A chromosome that uses a direct representation is referred to as a genotype or a phenotype. An indirect representation is called a genotype and after the translation method it is referred to as a phenotype.

It is very important to study more than one representation when using metaheuristics. Genetic operators can have different effects on the different types of representations and these representations can have vastly different fitness landscapes.

***Fitness Functions*** for metaheuristics determine how 'good' a chromosome (candidate solution) is. A fitness function receives a chromosome (a translation might be required depending on the representation) and evaluates how well the solution fits the criteria. Using the TSP as an example the fitness function would calculate the total distance travelled for given a permutation of cities.

There are four major steps involved in a genetic algorithm: Initialization, Evaluation and Selection, Genetic Operations, and Termination. A GA can normally find a reasonably good solution to a problem after a series of the *Evaluation and Selection*

and *Termination* steps are completed. These reasonably good solutions are considered acceptable as it is generally applied to problems for which the problem space is computationally intractable and would require an unreasonably large computation time to solve the problem with brute force.

Refer to Algorithm 10 for an implementation of a very simple Genetic Algorithm. This algorithm first generates a population then repeatedly evaluates the fitness values, selects the best chromosome for elitism, and applies genetic operators until some stopping criteria is met.

**Algorithm 10** Genetic Algorithm

```
Randomly Generate Population
while Stopping Criteria is Not Met do
    for all Chromosome C in Current Population do
        Evaluate C's Fitness
    end for
    Select best x Chromosomes to Propagate to Next Generation for Elitism
    for all Positions P in Next Population do
        Perform Selection Criteria
        Perform Genetic Operators on Selected Chromosomes
        Place Children Produced Into Next P
    end for
    Next Population Set as Current Population
end while
Select Best Chromosome as Best Solution
```

## 4.3 Genetic Algorithm Variations

A collection of Genetic Algorithm (GA) variations were selected for use in this work: Recentering-Restarting GA (RRGA), Island Model GA (IM), and a GA which uses Ring Species (RS). The RRGA was used on all problems and the IM and RS were used for the Fragment Assembly Problem. These variations were also used in combination for the FAP to better explore the search space to maximize the significance of the results.

### 4.3.1 Ring Species

The motivation for ring species in evolutionary algorithms is based on a natural phenomenon: the differentiation of a population when expanding around geographical barriers [16]. These populations tend to develop differences and fertility rates drop

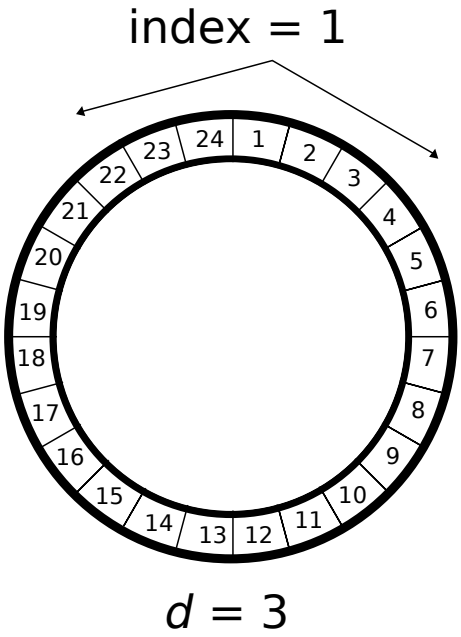



Figure 4.1: Ring Species example where $d = 3$ and the starting index is 1.

as the distance between two populations increases. These fertility rates tend to drop until some threshold distance is met at which the two populations cannot produce offspring.

A simpler variation of ring species can be implemented where the population is treated as a ring (consider the first and last members of the population as adjacent) and mating is only allowed to occur between chromosomes that fall within some predefined distance $d$ of each other. This idea is demonstrated in Figure 4.1 where chromosome 1 can only mate with chromosomes within a distance of 3 (chromosomes 22, 23, 24, 2, 3, and 4).

### 4.3.2 Island Model

A very popular variation of a genetic algorithm is the island model (IM). The island model was developed by Whitley and has been used successfully with many problems and different evolutionary algorithms [137][138]. The IM is popular for many reasons such as its ability to generate high quality solutions and speed.

The island model is a highly parallelized approach that evolves multiple sub-populations concurrently to encourage genetic diversity. With this approach each sub-population is allowed to traverse the search space along its own trajectory. Periodic migrations are allowed between islands which promotes unique offspring by combining very genetically different parents. Figure 4.2 depicts the sub-populations

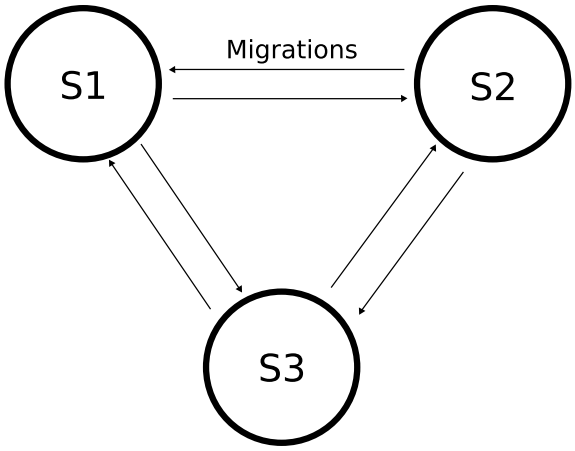



Figure 4.2: Example of 3 sub-populations evolving separately in parallel. Migrations happen periodically between sub-populations to encourage genetic diversity.

and migrations.

### 4.3.3 Recentering-Restarting Genetic Algorithm

The RRGA has been studied in multiple works by D. Ashlock et al. which studying epidemic networks [17], Side Effect Machines for decoding [75], and the travelling salesman problem [76]. In all of these works the RRGA was able to produce significant results. One of its major strengths is its ability to avoid becoming stuck on local optima which is a common problem with many metaheuristics. The RRGA provides a sequential search through the fitness landscape for a global optimum. Local optima are avoided due to the sequential search and the nature of the required dynamic representations discussed in Section 4.4. Figure 4.3 depicts this traversal through the search space. In this example the number of transpositions used for each GA run decreases as better solutions are found meaning the radius of the circles decreases as the algorithm continues throughout evolution.

Before the algorithm can begin a centre must be selected. This centre is a direct representation of a potential solution to the problem. This centre can be randomly selected or through some heuristic. It is ideal to seed the RRGA with a high quality solution as the RRGA excels at traversing the search space when given an already good location within the search space. With high quality seeds the RRGA can improve, or "polish", candidate solutions.

Once the centre is selected the population can be created. Depending on which representation is used, some modifications may be required. In this thesis two different representations are studied, a direct representation and an indirect transposition

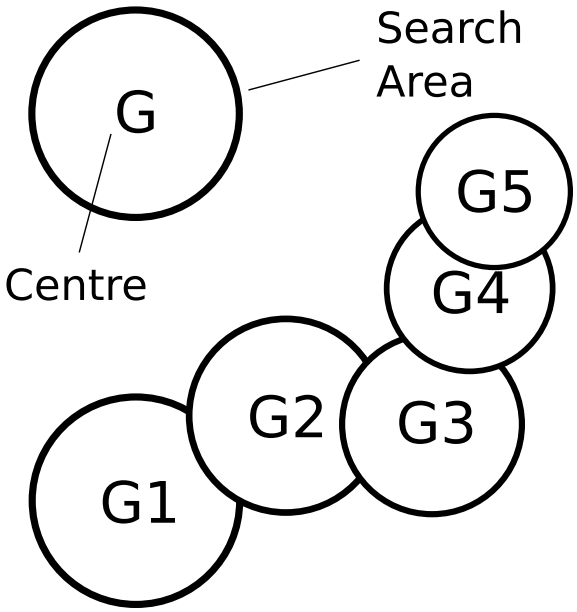
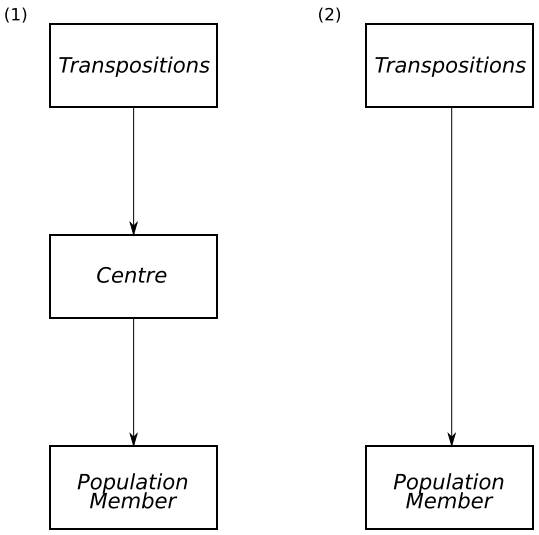



Figure 4.3: Example traversal of search space by RRGA.

Figure 4.4: Depiction of how the population is generated. (1) demonstrates how the direct representation variation's population is generated by applying transpositions to the centre and placing the resulting candidate solution into the population. (2) demonstrates how the indirect transposition representation variation's population is generated by simply placing the transpositions into the population.



based representation (See subsection 4.4). For the direct representation a string of $n$ transpositions are applied to the centre to generate each member of the population. For the indirect representation strings of $n$ transpositions are simply placed into the population to be used as the chromosomes. Figure 4.4 gives a visualization of how the population is generated based on the respective representation.

Seeding a GA with a high quality solution for a problem could result in stagnation as no further learning can be found due to fixating on a local optimum. The RRGA avoids this problem due to the nature in which the population is derived from the centre.

After the population is created a simple GA is run. An additional step is required when using the transposition representation that translates the chromosome into something the fitness function can evaluate. To accomplish this with the transposition representation one needs to take the $n$ transpositions and apply them to the current centre in order to generate a permutation which can be analyzed. Figure 4.5 demonstrates how the translation method is applied. Figure 4.6 depicts in detail the actual translation process. Algorithm 11 presents pseudocode for translation. Algorithm 11 applies all neighbouring transpositions from a candidate solution to a copy of the current centre and returns the resulting permutation.

**Algorithm 11** Translation Method

```
Receive array of transpositions called inTrans
Copy centre to path
for all transpositions t in inTrans do
    Exchange elements t and t + 1 in paths
end for
Return path
```

Once the GA completes a run the current best chromosome is compared to the current centre. If this chromosome has a better fitness value than that of the current centre it will become the new centre and the whole process repeats but with the number of transpositions increased (or decreased). If the best chromosome's fitness does not improve upon the current centre's fitness, the current centre is left unchanged and the process is repeated with the number of transpositions altered in the opposite way to if the centre had been replaced. In other words, if the number of transpositions was increased when the centre was replaced, then the number of transpositions would decrease if the centre was left unchanged, and vice versa. Once these alterations are made the GA will be run again and the whole process will repeat multiple times. By altering the centre and the number of transpositions used the search will be

Figure 4.5: An example of how the transpositions would be applied to the current *centre* to generate a candidate solution. Notice the similarity to part (1) of Figure 4.4 which portrays how the initial population is generated for the direct representation variations of the Recentering-Restarting Genetic Algorithm.

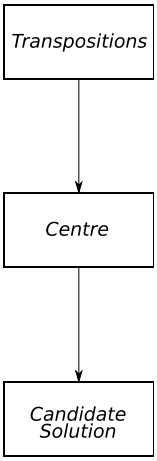
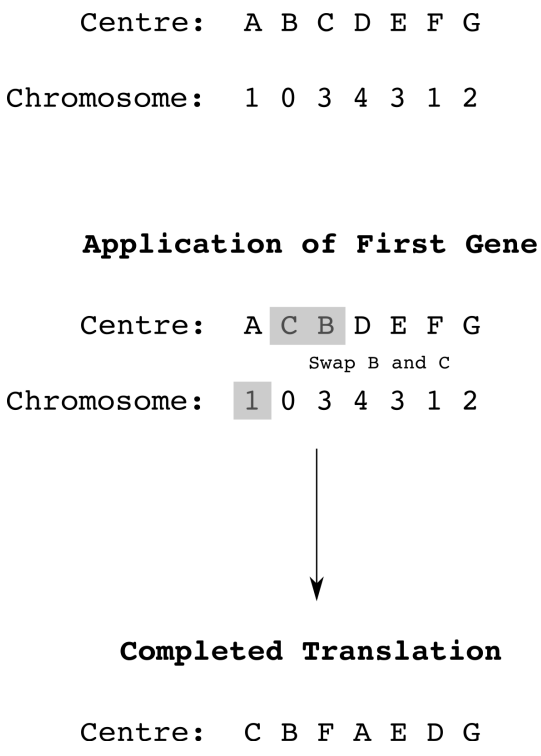



Figure 4.6: Demonstration of the translation algorithm taking a chromosome of neighbouring transpositions and applying them to some centre.



different from its previous run allowing for a very dynamic traversal through the fitness landscape with the intention of finding the global optimum.

The number of restarts that are used for an actual run can be defined two different ways. Either there is a fixed, static number of restarts or the number of restarts is set to be dynamic. For example, one could define the RRGA to restart $x$ times (static restarts), or one could tell the RRGA to restart after $y$ generations of no learning (dynamic).

The number of transpositions defined for the start of the algorithm could be defined one of two ways: a predefined number or a factor of the length of a candidate solution. For the case of the predefined number one would simply set $x$ transpositions at initialization where $x$ is a system parameter. For the factor one would set the factor $y$ as a system parameter and the actual number of transpositions is calculated by $y{*}$*Length Of Solution*. There are pros and cons to both approaches but one of the disadvantages of the fixed approach is how limiting this value is. For example, if two different problem instances have candidate solutions of length $l1$ and $l2$ and the number of transpositions is set to be $v$ then it is unrealistic to expect similar results on the two instances as the ratio of transpositions and solution lengths will be very different. Although this issue is eliminated since the number of transpositions is always changing the factor approach will not have this problem at initialization.

There are two different ways one could define how the number of transpositions will be altered after each basic GA run in the RRGA. The number may be fixed, for example, if there is an improvement then decrease the number of transpositions by 5 and if there is no improvement then increase the transpositions by 10. The problem with this approach is that one needs to be very careful to avoid using only *even* or only *odd* permutations. This requirement comes from the fact that any permutation is either even or odd [30]. The composition of two even permutations always results in an even permutation, the composition of two odd permutations always results in an even permutation, and the composition of an even and an odd permutation always results in an odd permutation [80]. If one were to ignore this fact then not all permutations would be explored by the search algorithm resulting in a detrimental loss in potential high quality results. The alternative to the fixed number approach is to use a percentage paradigm. An example of this would to multiply the number of transpositions by 0.95 on an improvement or by 1.10 when there is no improvement. This approach will result in different compositions of even and odd permutations on every restart which eliminates the concerns of the fixed approach.

A limit is set to how large or how small the number of transpositions can become.

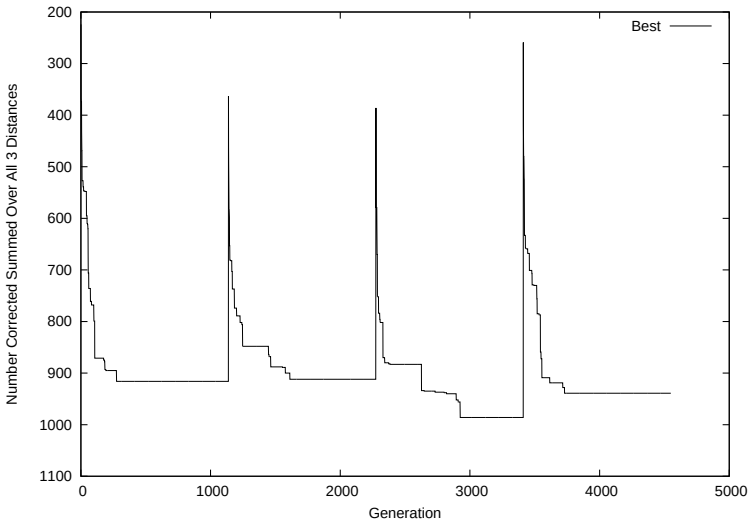



Figure 4.7: Learning curve with recenterings and restarts occurring. High peaks (poor fitness) occur when the algorithm restarts on a new centre because the system has yet to have an opportunity to learn with the new population. Notice how the overall trend of the learning curve is a consistent improvement in fitness.

If this limit is passed then the number of transpositions is reset to the initial value. The limit used is normally set to $1/10th$ and $10*$ the initial value.

Sometimes it may be advantageous to force a recentre after the first GA run to promote distance between the initial seed and the centre to help remove the risk of stagnation on the seed's local optimum.

Figure 4.7 depicts a typical learning curve for the Recentering-Restarting Genetic Algorithm.

The Recentering-Restarting Genetic Algorithm process can be seen in Algorithm 12.

## 4.4 Representation

Although direct representations are frequently used in Genetic Algorithms for their ability to produce quality results it is important to explore and utilize other ideas and representations. Ideally these new representations would have different characteristics while maintaining the qualities provided by a direct representation. Two different types of representations will be used for all variations of the GAs: a direct representation and an indirect transposition based representation.

**Algorithm 12** Recentering-Restarting Genetic Algorithm [75]

```
Assign Random Centre σ
Set Flag
while Stopping Criteria is Not Met do
    if Flag is Set then
        Centre = σ
        Initialize Population Through use of Transpositions
    end if
    Run Genetic Algorithm
    if Solution τ is Better than σ then
        σ = τ
        Set Flag
    else
        Reset Flag
    end if
    Increase/Decrease Number of Transpositions to be Generated
end while
```

### 4.4.1 Direct Representation

Our direct representation is simply an ordered list which represents a solution to the problem. Depending on which problem is being studied this representation will alter slightly. For the TSP a chromosome would be a permutation which represents the order in which one should visit the cities. For the BPP the permutation represents the order the items should be packed into the bins. The GCP's direct representation is the order one should colour the vertices based on the heuristic. For DNA Error Correction the representation is an encoding for a SEM and lastly the chromosome for the DNA FAP is a permutation that represents the order in which the fragments should be assembled.

### 4.4.2 Indirect Transposition Representation

The indirect transposition representation will be an ordered list of transpositions that exchange *neighbouring* elements of the centre. The actual step of applying the transpositions is only applied during the fitness evaluation stage with a translation method. With this representation the chromosome is an ordered list of transpositions and the genetic operators only alter the order of the transpositions and never directly alter an order of the elements. This representation always exchanges neighbouring elements which means that this representation is formed from a set of local search operators. By adjusting the number of transpositions one can easily alter the degree

of locality that the GA searches.

### Defining the Transposition Representation

**Definition 1.** *The **group** $S_n$ is the set of all permutations of an n-element set with the group operation being functional composition of the permutations.*

**Definition 2.** *A **subgroup** of $S_n$ is a closed subset of $S_n$.*

Cayley's theorem [80] in group theory says that all finite groups are equivalent to subgroups of $S_n$. We need to understand the sense in which the term *closure* is used here.

**Definition 3.** *If $A = \{g_1, g_2, ..., g_m\}$ is a set of permutations then the **closure** of $A$ is the result of performing all possible compositions $g_{i_1} \circ g_{i_2} \circ \cdots \circ g_{i_k}$ of members of $A$, repeating any element, $i_k$, any finite number of times in the chain of compositions.*

Now we know what the closure of a set permutation is we may define a generating set.

**Definition 4.** *Suppose that $A$ is a set of permutations and that $B$ is a group. Then it is equivalent to say that $B$ is the closure of $A$ or that $A$ generates $B$.*

When ordering a list of $n$ elements then it may be viewed as the order encoded in a list as a member of $S_n$.

**Definition 5.** *If $\Delta$ is a generating set of $S_n$ then the **linear representation for ordered genes using** $\Delta$ (LROG using $\Delta$) is a string representation over the alphabet $A$. In order to implement this representation a **centre** permutation is required. The centre is the starting point. For a string of generators in $A^m$ the permutation encoded is the composition, in order of the members of the string, of the generators of the string which is then also composed with the centre.*

We will define the *identity permutation* which takes each item to itself as the *trivial centre*. If no centre is specified the identity will be the default centre. If $m$ in Definition 3 is too small then many permutations cannot be generated by the representation. This means that a local search of a part of permutation space can be performed with this representation: it is important not to do this accidentally while imagining you are performing a global search.

A key point in constructing an LROG is to select the generating set $\Delta$ of $S_n$.

**Definition 6.** *A **transposition** is a permutation that exchanges two objects but takes all the others to themselves.*

**Definition 7.** *The **shared point graph** of a set V of transpositions has V as its vertex set with two transpositions considered adjacent if they share a single point in the pair of points they exchange. Figure 4.8 depicts an example of the shared point graph.*

Here we present a well known theorem of group theory [61][79].

**Theorem 1.** *If a set of transpositions has a connected shared point graph and every point is moved by at least one of the transpositions then those transpositions form a generating set of $S_n$.*

**Example** - The following are generating sets of $S_n$:

1. The set of all transpositions generates $S_n$ . This generating set has size $\frac{1}{2}n(n-1)$.
2. Suppose that $a_1, a_2, ..., a_n$ is an ordered list of the numbers $\{1, 2, ..., n\}$. Then the set of transpositions that exchange the pairs $a_i$ , $a_{i+1}$ generate $S_n$. This generating set has size $n - 1$.
3. Suppose that $a_1, a_2, ..., a_n$ is an ordered list of the numbers $\{1, 2, ..., n\}$. The permutation that takes each member of that list to the next member, and takes the last member to the first, together with any one transposition that exchanges $a_i$ , $a_{i+1}$ is a generating set of $S_n$ . This generating set has size 2.

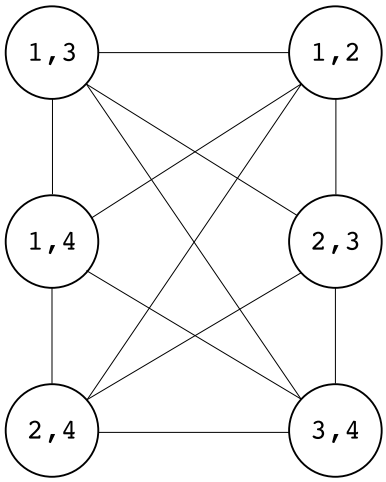
Though any generating string can be used to form an LROG, the focus will be on the second example. Notice *any* ordering of the initial $n$ objects yields its own set of $n - 1$ transpositions that generate all possible permutations (ordered genes).

It is important to note that many different collections of generators can be used to form an *LROG* but the generating set that exchanges neighbouring elements is used in this work. A benefit of this representation is the ability to control the level of locality of the search by adjusting the length of the string of transpositions.

## 4.5 Genetic Operators

The Genetic Operators give the GA the ability to explore other areas of the search space by adding some level of entropy to the algorithm. There are multiple popular types of genetic operations but the most common two are *crossover* and *mutation*.

Figure 4.8: An example of a shared point graph where $n = 4$. This figure depicts the first example from Theorem 1: $size = \frac{1}{2}(4)((4) - 1) = 6$ ($V = \{(1,2),(1,3),(1,4),(2,3),(2,4),(3,4)\}$).




### 4.5.1 Crossovers

Two crossover operators were used in this work, One-Point Crossover (OPC) and Partially Mapped/Matched Crossover (PMC). The necessity of two crossovers is due to the nature of the representations used.

When using a direct representation on ordered gene problems there is usually a requirement that all genes are used and each gene is used once and only once. Because of this requirement PMC was used, as it preserves unique information within the chromosome and it guarantees that there will be no duplicate genes and that each gene is used at least once.

OPC does not guarantee that the requirements will be met but it is ideal for the indirect transposition representation as it is not very destructive. The indirect representation has no such requirement. The indirect transposition representation is very sensitive when it comes to the order of the genes in the chromosome so the less destructive the crossover the better.

#### Partially Mapped/Matched Crossover (PMC)

The PMC is rather complicated compared to OPC. There are two functions required for PMC. The idea is to select two starting locations and proceed with a position exchange between the two parent chromosomes within these two starting locations. Once this is completed the rest of the chromosomes are checked for duplicates. If there are duplicates then cycles between the two chromosomes are checked to determine

which gene should replace the duplicate.

Refer to Algorithms 13 and 14 for PMC. Find Bottom (Algorithm 14) is used to cycle through the two chromosomes to find which gene should replace a duplicate

**Algorithm 13** Partially Mapped/Matched Crossover. Note that the recursive Find Bottom is required for this function (Algorithm 14)

```
Receive Parent Chromosomes P1 and P2 as Input
Generate Random Start Location R1
Generate Random End Location R2
Create temporary Arrays recC1 and recC2 and Place Their Index Into Array
for Each Index i from R1 to R2 do
    recC1[c2[i]] = c1[i]
    recC2[c1[i]] = c2[i]
end for
for Each Index i from 0 to ChromsomeLemgth do
    if i is Between R1 and R2 then
        Swap Genes C1[G] and C2[G]
    else
        tempForSwitch = Find Bottom(recC1, C1[i])
        if tempForSwitch Does Not Equal -1 then
            C1[i] = tempForSqitch
        end if
        tempForSwitch = Find Bottom(recC2, C2[i])
        if tempForSwitch Does Not Equal -1 then
            C2[i] = tempForSqitch
        end if
    end if
end for
```

#### One-Point Crossover (OPC)

One-Point Crossover simply switches all genes between the two chromosomes that follow some starting point within the chromosome. Refer to Algorithm 15 for OPC.

### 4.5.2 Mutation

Only one mutation operator was used in this work, namely one that simply switches the location of two genes within the chromosome. See Algorithm 16 for the mutation used in this work.

**Algorithm 14** Find Bottom

Receive Array *inRec* and int *inNum* as Input
**if** *inRec*[*inNum*] Equals *inNum* **then**
    Return -1
**else**
    *nextLevel* = Find Bottom(*inRec*, *inRec*[*inNum*])
    **if** *nextLevel* Equals -1 **then**
        Return *inRec*[*inNum*]
    **else**
        Return *nextLevel*
    **end if**
**end if**

**Algorithm 15** One-Point Crossover

Receive Parent Chromosomes $C1$ and $C2$ as Input
Randomly Select Starting Location $R$
**for** Each Gene $G$ from $R$ to $LengthofChromosome$ **do**
    Swap Genes $C1[G]$ and $C2[G]$
**end for**

**Algorithm 16** Single Gene Location Switch

Receive Chromosome $C$ as Input
Generate Random Location $R1$
Generate Random Location $R2$
Swap Genes $C[R1]$ and $C[R2]$

## 4.6 Selection

Tournament selection was used in this work. Only one level was used, i.e. two chromosomes are selected and the one that has a higher fitness was chosen as one parent for crossover. This process is done twice to select both parents for whichever crossover is being used.

# Chapter 5

# Experimental Design

This chapter covers the details about the design of the experiments. Section 5.1 covers the travelling salesman problem: small problem instances. Section 5.2 outlines the design of the bin packing problem and Section 5.3 covers the vertex colouring version of the graph colouring problem. Section 5.4 addresses the travelling salesman problem: large problem instances. Sections 5.5 and 5.6 outlines DNA error correction and the DNA fragment assembly problem respectively.

## 5.1 Travelling Salesman Problem: Small Problem Instances

The travelling salesman problem: small problem instances are a collection of 100 small problem instances.

### 5.1.1 Purpose

The purpose of studying these small instances is to determine if there is any consistency as to which algorithm outperforms the others in general. Small problem instances were studied before with only 12 city problem instances [76]. If one algorithm performs well on all instances within a problem space then it would suggest that there might be a best algorithm for a specific problem. If there is inconsistency with respect to which algorithm performs well it would suggest that multiple algorithms would be needed to fully search a problem space. This would correspond to the idea of *No Free Lunch* in search and optimization [139]. Instead of suggesting that no one algorithm outperforms all others on all problems, it would suggest that no one algorithm outperforms all others on all instances within a problem space. Previous

work demonstrated that there was minimal consistency but suggested that the 12 city problems were too simple and biased towards a basic GA while the RRGA never had an opportunity to demonstrate its advantages.

### 5.1.2 Fitness

The Fitness evaluation function used for the small instances is derived from Equation 3.1. The pseudocode for the TSP's fitness function can be seen in Algorithm 17. Algorithm 17 is based on Equation 3.1 which sums the total distance between cities based on some ordering of a permutation plus the distance from the last city to the initial city.

**Algorithm 17** TSP Fitness Algorithm

```
Receive Chromosome C as Input
Initialize length to 0
for Each Index i from 0 to Length Of C - 1 do
    length = length + distance between C[i] and C[i + 1]
end for
length = length + distance between Last and First Index
Return length
```

### 5.1.3 Data Sets

The data sets used for these small instances were randomly generated by Dr. Daniel Ashlock from the University of Guelph. There are 5 sets of 100 problem instances each. These 5 sets are of 12 city, 14 city, 16 city, 18 city, and 20 city problem instances. These instances are small enough that they can be solved relatively quickly through brute force. These instances were randomly generated with no bias towards any one type of algorithmic approach.

### 5.1.4 System Parameters

A total of 8 algorithms were run on the small TSP instances:

- A basic genetic algorithm using the direct representation and a basic genetic algorithm using an indirect transposition representation;
- The RRGA was used with both the direct and indirect representation;
- Two more sets of RRGAs were run:

| **Exp. Set** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **Xover Rate** | 50 | 50 | 80 | 20 | 80 |
| **Max. Xover Size** | 5 | 5 | 5 | 5 | 5 |
| **Mut. Rate** | 50 | 50 | 20 | 80 | 30 |
| **Max. Mut. Size** | 1 | 1 | 1 | 1 | 1 |
| **Generations** | 50 | 50 | 50 | 50 | 50 |
| **Population Size** | 50 | 50 | 50 | 50 | 50 |
| **Tournament Size** | 5 | 4 | 5 | 5 | 5 |

Table 5.1: System parameters for the basic GAs on both representations

- An RRGA seeded with the nearest neighbour heuristic using both the direct and indirect representations;
- An RRGA seeded with a minimal spanning tree heuristic using both the direct and indirect representations

Unlike all other experiments done in this work, the algorithms used for the small TSP problem instances had a variable sized tournament selection algorithm as a means to thoroughly analyze the system parameters, however, as experiments were conducted it was noticed that this variance in tournament size had little to no effect on the results.

The system parameters used for the basic GAs can be seen in Table 5.1. The RRGAs in this work used a static number of restarts and the number of restarts can be seen in the following tables. System parameters used for the unseeded and nearest neighbour seeded RRGAs can be seen in Table 5.2 and the system parameters used for the minimal spanning tree seeded RRGA using the direct representation can be seen in Table 5.3. System parameters used for the minimal spanning tree seeded RRGA using the indirect transposition representation can be seen in Table 5.4. These values were determined empirically. Each set of system parameters was run 30 times on each problem instance to ensure statistical significance.

### 5.1.5 Analysis

In order to determine which algorithm performs the best on which problem instances each algorithm is compared to itself over all system parameters used on that algorithm. Once the best system parameters for the specific algorithm and instance are determined the results are compared to one another to determine which algorithm performed the best. Ties are recorded for both the system parameter and algorithm

| **Exp. Set** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **Xover Rate** | 50 | 50 | 80 | 20 | 80 |
| **Max. Xover Size** | 5 | 5 | 5 | 5 | 5 |
| **Mut. Rate** | 50 | 50 | 20 | 80 | 20 |
| **Max. Mut. Size** | 1 | 1 | 1 | 1 | 1 |
| **Generations** | 50 | 50 | 50 | 50 | 50 |
| **Num. Restarts** | 5 | 5 | 5 | 5 | 5 |
| **Population Size** | 50 | 50 | 50 | 50 | 50 |
| **Transpositions** | 100 | 100 | 100 | 100 | 100 |
| **Transpo. Increase** | 5 | 5 | 5 | 5 | 5 |
| **Transpo. Decrease** | 5 | 5 | 5 | 5 | 5 |
| **Tournament Size** | 5 | 4 | 5 | 5 | 5 |

Table 5.2: System parameters for the unseeded and nearest neighbour seeded RRGAs on both representations

| **Exp. Set** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **Xover Rate** | 50 | 50 | 80 | 20 | 80 |
| **Max. Xover Size** | 5 | 5 | 5 | 5 | 5 |
| **Mut. Rate** | 50 | 50 | 20 | 80 | 20 |
| **Max. Mut. Size** | 1 | 1 | 1 | 1 | 1 |
| **Generations** | 50 | 50 | 50 | 50 | 50 |
| **Num. Restarts** | 5 | 5 | 5 | 5 | 10 |
| **Population Size** | 50 | 50 | 50 | 50 | 50 |
| **Transpositions** | 100 | 100 | 100 | 100 | 50 |
| **Transpo. Increase** | 5 | 5 | 5 | 5 | 5 |
| **Transpo. Decrease** | 5 | 5 | 5 | 5 | 5 |
| **Tournament Size** | 5 | 4 | 5 | 5 | 5 |

Table 5.3: System parameters for the minimal spanning tree seeded RRGA on the direct representations

| **Exp. Set** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **Xover Rate** | 50 | 50 | 80 | 20 | 80 |
| **Max. Xover Size** | 5 | 5 | 5 | 5 | 5 |
| **Mut. Rate** | 50 | 50 | 20 | 80 | 20 |
| **Max. Mut. Size** | 1 | 1 | 1 | 1 | 1 |
| **Generations** | 50 | 50 | 50 | 50 | 50 |
| **Num. Restarts** | 5 | 5 | 5 | 5 | 10 |
| **Population Size** | 50 | 50 | 50 | 50 | 50 |
| **Transpositions** | 100 | 100 | 100 | 100 | 150 |
| **Transpo. Increase** | 5 | 5 | 5 | 5 | 5 |
| **Transpo. Decrease** | 5 | 5 | 5 | 5 | 5 |
| **Tournament Size** | 5 | 4 | 5 | 5 | 5 |

Table 5.4: System parameters for the minimal spanning tree seeded RRGA on the indirect transposition representations

comparisons. Once this analysis is done one can count how many times each algorithm was the best performing. In addition to attempting to determine if there is consistency in algorithm performance there will be a count of how many sets of system parameters found the best result to determine if any set of system parameters consistently outperforms the others.

## 5.2 Bin Packing Problem

The goal of the bin packing problem (BPP) is to pack a certain number of items with varying sizes into the least possible amount of bins. Two different data sets are studied in this work.

### 5.2.1 Purpose

The purpose of studying the BPP in this work is twofold. The first motivation is to analyze the effectiveness of the RRGA and the representations on this type of grouping ordered gene problem. The second reason this problem is being studied is to demonstrate the areas where the RRGA excels over a conventional GA. A focus is being given to the second purpose. It is important to note that there are more ideal representations that have been shown to produce very high quality results with basic GAs. These representations are not being utilized in this work as these representations often achieve optimal or near optimal results which would lack any significant demonstration of the pros and cons of the RRGA.

### 5.2.2 Fitness

The fitness function in this work is based on the first fit heuristic. This first fit heuristic states that one should place the object into the first bin in which there is room for it to fit. If no such bin exists create a new bin and place this object within it. The pseudocode for the BPP's fitness function can be seen in Algorithm 18.

**Algorithm 18** BPP Fitness Algorithm

```
Receive Chromosome C as Input
Create Flag and Set Off
Initialize NumberOfBins to 1
Add a Bin
for Each item i do
    for Each Bin b do
        if i can fit into b then
            Reduce Space Left in b by Size of i
            Set Flag On
            Break
        end if
    end for
    if No Flag Set then
        Increment NumberOfBins
        Add New Bin and Reduce Space Left in New Bin by Size of i
    end if
    Reset Flag to Off
end for
Return NumberOfBins
```

### 5.2.3 Data Sets

Two distinct data sets were used. The first was generated by Falkenauer and was used in studies exploring grouping representations and appropriate genetic operators [55]. This data set contains 20 unique instances and was selected as it supplies a large range of problem instances that have multiple properties making them very inconsistent. This is ideal for thoroughly vetting an algorithm. The second data set is called the "hard28". These 28 data sets were created by Schoenfield [127] and are known for their small size and high level of difficulty [31].

| | |
|---|---|
| **Generations** | 50K / Pop. and 500K / Pop. |
| **Population Size** | 11 and 51 |
| **Crossover Rate** | 80 |
| **Mutation Rate** | 20 and 50 |
| **Number of Mutation Events** | 2 |
| **Restart after $X$ Generations of no Learning** | 0*, 100, and 1000 |
| **Number of Trans.** | 100 |
| **Trans. to Decrease by on Imp.** | 5 |
| **Trans. to Increase by on no Imp.** | 10 |
| **Memetic** | Yes or No |

Table 5.5: System parameters for the bin packing problem. * 0 Signifies no restarts are occurring.

### 5.2.4 System Parameters

The system parameters used can be seen in Table 5.5. Every combination of these system parameters was used when studying this problem. Note that the number of generations is dependent on the population size. This is done to ensure a consistent number of mating events to give a fair analysis between algorithms and sets of system parameters. Notice the different values for the number of generations allowed on the distinct groups of experiments (*50000 / Population Size* for the $u$ instances and *500000 / Population Size* for the $hard28$ instances). This was done due to the varying difficulty of the two sets of data. A memetic variation of the RRGAs was studied which used 2-Opt as a local search done between restarts. These values were determined empirically through preliminary testing of this and similar problems. All experiments were run 30 times to ensure statistical significance.

The dynamic restart paradigm was used for this problem with a fixed number of transpositions being added or removed on a restart.

All GAs were seeded with either the identity permutation or a relatively good solution obtained with 2-Opt. Normally seeding a basic GA with a high quality solution results in stagnation but the RRGA can remove itself from local optima due to the nature of the local search representations.

### 5.2.5 Analysis

All results will be analyzed multiple ways. The mean, max, and standard deviations are recorded for each run and are used to analyze how consistent the results are within the 30 runs. These values are also used to determine which, if any, set of

system parameters performed better. These values are also used to compare the results of the two representations. A paired t-test will be done to determine if there is any statistical difference between the results obtained from the two representations. One thing that will be taken special note of is the effect the seeds will have on the results of the RRGA versus the basic GA. Additionally, the memetic variation will be analyzed to determine if it has any significant impact on the results.

## 5.3 Graph Colouring Problem

The vertex colouring variation of the graph colouring problem (GCP) is similar to the bin packing problem as it is a grouping ordered gene problem. The goal of the GCP is to use a minimal number of colours to colour each vertex such that no adjacent vertex has the same colour.

### 5.3.1 Purpose

The purpose of the GCP is very similar to the BPP; study the effectiveness of the RRGA on this problem and to study the strengths and weaknesses of the algorithm. Just like the BPP the main focus is on the second point. Note that once again the grouping representation and genetic operators discussed by Falkenaure [55] would most likely produce the best quality results. Using this approach would defeat the purpose of this study as it would simply produce near optimal results making it difficult to analyze the effectiveness of the RRGA.

### 5.3.2 Fitness

The fitness function for the vertex colouring variation of the graph colouring problem is based on the heuristic which tries to colour each vertex with the smallest available colouring (based on some ordering) such that none of the adjacent vertices have the same colour. If there is no available colour that fits this criterion then add another colour. The fitness function for the GCP can be seen in Algorithm 19. This algorithm colours vertices with numbers instead of actual colours as they are easy to order.

### 5.3.3 Data Sets

Selecting the data sets for the GCP was a difficult task as there is a wide range of "difficulty". Ultimately the data sets can be found at [67]. The goal was to

**Algorithm 19** Vertex colouring variation of the graph colouring problem's Fitness Algorithm

```
Receive Chromosome C as Input
Initialize NumberOfColours to 1
Initialize CurrentColour to 0
Initialize CurrentNode
for Each Index i in C do
    CurrentNode = C[i]
    CurrentColour = 1
    for Each Index j in C do
        if C[i] is adjacent to C[j] then
            if C[j] is CurrentColour then
                Increment CurrentColour
                Reset j to -1
            end if
        end if
    end for
    if CurrentColour > NumberOfColours then
        NumberOfColours = CurrentColour
    end if
    Set CurrentNode to CurrentColour
end for
Return NumberOfColours
```

| | |
|---|---|
| **Generations** | 500000 / Population Size |
| **Population Size** | 11 and 51 |
| **Crossover Rate** | 80 |
| **Mutation Rate** | 20 and 50 |
| **Number of Mutation Events** | 2 |
| **Restart after $X$ Generations of no Learning** | 0*, 100, and 1000 |
| **Number of Transpositions** | 2x Solution Length |
| **Transpositions to Decrease by on Improvement** | 0.95 (5% decrease) |
| **Transpositions to Increase by on no Improvement** | 1.10 (10% increase) |

Table 5.6: System parameters for the vertex colouring variation of the graph colouring problem. * 0 Signifies no restarts are occurring.

use a group of data sets that were considered highly difficult but would run in a reasonable amount of time. Finding this median was challenging as the time required to solve these problems increased rapidly as the number of nodes and connections increased. Dozens of the most challenging instances were analyzed but in the end 18 were selected. These 18 instances were selected as they would typically complete a run of 30 in less than 20 hours but more than an hour. This was done to ensure a reasonably challenging group of data sets.

### 5.3.4 System Parameters

The system parameters used in this work for the GCP are very similar to those of the BPP as they are similar problems. These values can be seen in Table 5.6.

All combinations of these system parameters were used when studying the GCP in this work. Again, in order to ensure a fair comparison the number of mating events should be constant. This is achieved by making the number of generations inversely proportional to the size of the population. Unlike the BPP no memetic version of this problem was analyzed. The values of the system parameters were determined empirically through preliminary testing of this and similar problems. All experiments were run 30 times to ensure statistical significance.

The dynamic restart paradigm and the factor approach to initializing the number of transpositions was used for the GCP with the percentage alteration of the number of transpositions. The identity permutation and a solution obtained by 2-Opt were used as seeds on all GAs run on this problem.

### 5.3.5 Analysis

The analysis performed on this problem is the same as the one for the BPP less the investigation of the memetic results. This means that the max, mean, and standard deviations were recorded in order to analyze the consistency and effectiveness of the particular experiment on the 30 runs. These values can be used to determine if any one set of system parameters performed better in general and to determine if one of the algorithm or representation variations performed better. The confidence intervals are also recorded to plot the results obtained by the algorithms.

## 5.4 Travelling Salesman Problem: Large Problem Instances

The travelling salesman problem is revisited, studying large problem instances as opposed to a collection of small city problems.

### 5.4.1 Purpose

Similar to the BPP and the GCP the purpose of studying this problem is to demonstrate the effectiveness of the RRGA and the dynamic representations and to demonstrate the strengths of the RRGA with respect to ordered gene problems. In addition to these objectives, another goal is to demonstrate that the Lin-Kernighan heuristic (LKH), although highly effective, will not always obtain optimal results. There are many heuristics that have been created for the TSP but the LKH is being specifically studied as it is being used on the DNA fragment assembly problem since it has been shown to be highly effective on the problem in addition to the TSP.

### 5.4.2 Fitness

The approach used for the fitness evaluation of the large TSP instances is the same as the small TSP instances. Refer to Section 5.1.2 for an explanation of the TSP fitness evaluation approach used in this work.

### 5.4.3 Data Sets

A total of 16 benchmark data sets were selected for the TSP large problem instances. These problem instances were obtained from DIMACS TSP implementation challenge

| **Gens.** | 500K / Pop. Size and 5M / Pop. Size |
|---|---|
| **Population Size** | 11 and 51 |
| **Crossover Rate** | 80 |
| **Mutation Rate** | 20 and 50 |
| **Number of Mutation Events** | 2 |
| **Restart after $X$ Gens. of no Learn** | 0*, 100, and 1000 |
| **Number of Trans.** | 2x Solution Length |
| **Trans. to Decrease by on Imp.** | 0.95 (5% decrease) |
| **Trans. to Increase by on no Imp.** | 1.10 (10% increase) |
| **Island Model Specific Parameters** | |
| **Number of Islands** | 10 |
| **Number of Gens. Between Migration** | 1000 |
| **Number to Migrate During Migration** | 2 |
| **Ring Species Specific Parameters** | |
| **Max Distance to Mate** | 2 |

Table 5.7: System parameters for the Large TSP instances. * 0 Signifies no restarts are occurring.

[2] but can ultimately be obtained by TSPLIB [123]. Similar to the GCP instances selected these 16 were chosen for their difficulty and for not being too large that the computation time would be unrealistically large. All of these benchmarks selected have between 1000 and 2000 cities. These 16 benchmarks also have a large collection of very competitive results along with suspected optimum which can be used to analyze the quality of the results obtained by the RRGA.

Another reason for selecting these particular instances is because the reported results show that the LKH algorithm does not find the suspected optimal solution [2].

### 5.4.4 System Parameters

Once again, the system parameters used for the large TSP instances are very similar to those of the BPP and GCP. Three variations of RRGAs are used studying this problem: RRGA, RRGA using the Island Model (RRGA+IM), and RRGA using Ring Species (RRGA+RS). There are some algorithm specific system parameters. These system parameters can be seen in Table 5.7.

The dynamic restart approach, factor approach to initializing the number of transpositions, and the percentage alteration of transpositions were used for the large TSP instances in this work. In addition, three seeds were used for this problem: identity permutation, 2-Opt solution, and LKH solution.

All combinations of these system parameters were used to fully analyze the system parameters. The number of generations is dependent on the population size which is done to ensure a consistent number of mating events to give a fair analysis between algorithms and sets of system parameters. These values were determined empirically through preliminary testing of this and similar problems. All experiments were run 30 times to ensure statistical significance.

### 5.4.5 Analysis

The analysis of these large TSP instances is very similar to those of the BPP and GCP. The max, mean, and standard deviation are calculated to perform an analysis of the results relative to one another. The confidence intervals are also recorded to plot the results for a visualization of the distribution of the results. Paired t-tests are also done to determine if any one of the algorithm combinations is statistically better than the others. An attempt to determine if any LKH seeds can be improved upon with the RRGA was done in hope of demonstrating that the LKH does not always achieve the optimal results.

The results are compared to other algorithms' results and the suspected optimal solutions that are available at [2]. The suspected optimal solutions were determined using the Concorde TSP Solver [3].

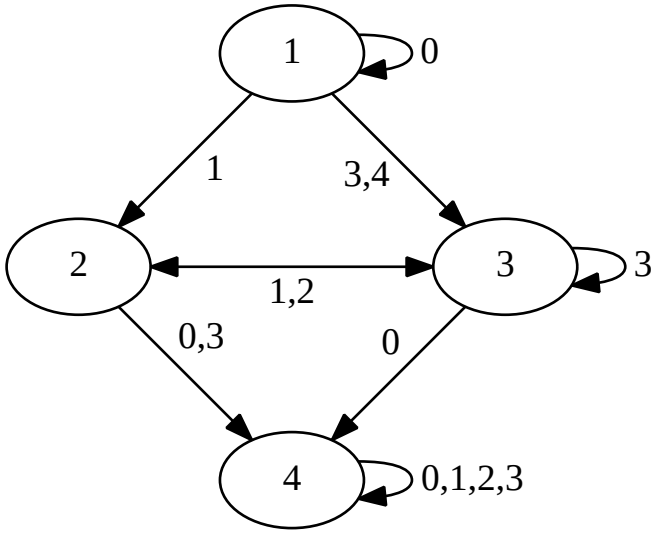
Unlike the previous experiments, the number of generations used was varied. This was done to determine the effect of the number of generations on the RRGA variations.

Lastly, 2-Opt will be used as a post optimization technique to determine how well a combination of heuristic and metaheuristics will perform. These results will be compared to the results obtained with no post optimization technique.

## 5.5 DNA Error Correction

Quaternary (related to DNA) error-correcting codes defined over the edit metric can be used as labels to track the origin of sequence data. When used as these labels there are typically additional restrictions motivated by biology. Some of these requirements might be the required GC content and avoiding certain unrealistic patterns. As a result such codes can not be expected to have a regular structure, making decoding a particularly challenging problem and forcing a requirement for high quality decoders.

Before the purpose of this work is discussed Side Effect Machines need to be presented.




| received pattern | $c_1$ | $c_2$ | $c_3$ | $c_4$ |
|---|---|---|---|---|
| 00331120121 | 2 | 2 | 3 | 4 |
| 11121011121 | 0 | 3 | 2 | 6 |
| 01233123131 | 1 | 3 | 5 | 2 |

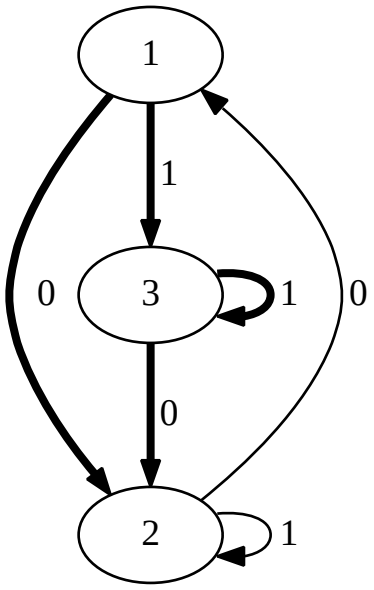
Figure 5.1: Example four state SEM with examples of output vectors [75]

### 5.5.1 Side Effect Machines

Side Effect Machines (SEMs) are an extension of Finite State Machines that associate a side effect with a state or transition. A common side effect for SEMs would be to increment values within a vector associated with each state to count the number of times each state is visited.

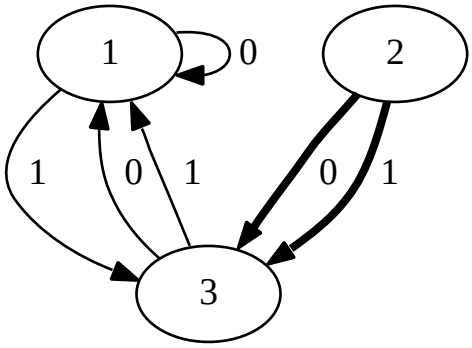
The side effect associated with each state is a count of the number of times each state is visited when a received string is run through the machine. The count vector is always initialized to zero and the predefined first state is used as the starting location. When a string is run through the SEM it is read one symbol at a time, transitioning between the states based upon the read symbol. When a state is visited a counter will increment by one within the vector.

Figure 5.1 shows a SEM with four states. Note that the SEM always begins on a set state which in this case will be state 1. The numerical signature, also known as a *classification vector*, is $(c_1, c_2, c_3, c_4)$ where $c_i$, $1 \leq i \leq 4$, holds the number of times state $i$ was visited. For example, an input of 00331120121 gives a path through the states of 11332324444. This path yields a classifying vector $c = (2, 2, 3, 4)$, since states 1 and 2 are each visited 2 times, state 3 is visited 3 times, and state 4 is visited 4 times. Note that in this example state 4 is a sink.



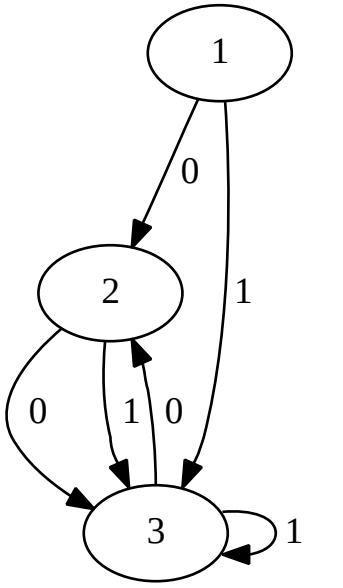

| state | 0 | 1 |
|---|---|---|
| 1 | **2** | **3** |
| 2 | 2 | 1 |
| 3 | **2** | **3** |

(a) parent one




| state | 0 | 1 |
|---|---|---|
| 1 | 1 | 3 |
| 2 | **3** | **3** |
| 3 | 1 | 1 |

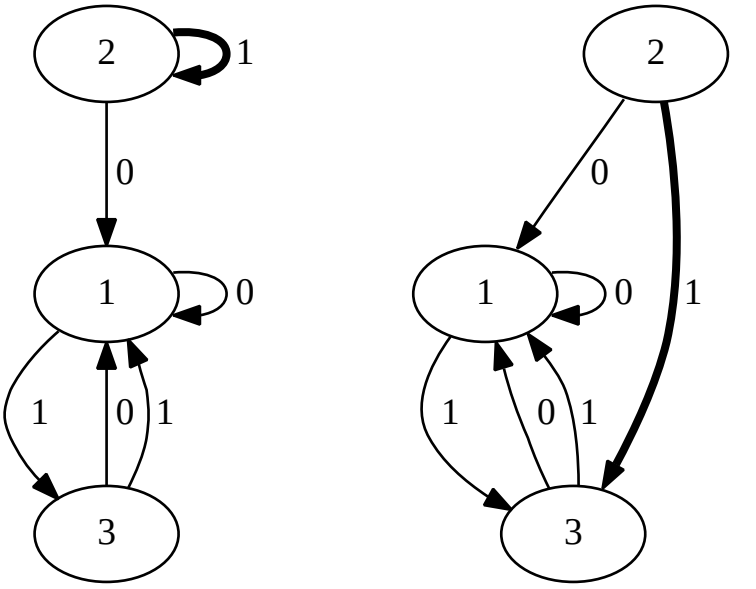
(b) parent two




| state | 0 | 1 |
|---|---|---|
| 1 | 2 | 3 |
| 2 | 3 | 3 |
| 3 | 2 | 3 |

(c) child

Figure 5.2: Crossover of a 3 state binary SEM — crossover point is the second state, the selected edges are bold. [75]




| state | 0 | 1 |
|---|---|---|
| 1 | 1 | 3 |
| 2 | 1 | **2** |
| 3 | 1 | 1 |

(a) before mutation

| state | 0 | 1 |
|---|---|---|
| 1 | 1 | 3 |
| 2 | 1 | **3** |
| 3 | 1 | 1 |

(b) after mutation

Figure 5.3: Mutation in a 3 state binary SEM — mutation occurs in bold edge [75]

A SEM of $S$ states accepting a language $\Sigma$ is represented by a state transition structure of size $S \times |\Sigma|$. The genetic operators used for DNA error correction are not the same as the other genetic operators used in all other experiments. Two point crossover will be the crossover genetic operation used. Figure 5.2 demonstrates the two point crossover. The operation is defined as a selection of two state numbers and exchanging states between the two points (this is done inclusively). The crossover used for the indirect representation is again two point crossover. The mutation demonstrated in Figure 5.3, selects a random transition in the machine and changes the transition randomly. This type of mutation is commonly used as a very exploratory genetic operator.

The direct representation used for the centres defines a fixed number of states for each machine (note that this representation allows for a state to be disconnected). Figure 5.3 shows an example where both the initial machine and its mutation have no paths into State 2. A type of mutation called *null mutation* is used which makes no changes to the functionality of the machine or the fitness values. Although no functionality is being changed the mutation still has the ability to move the current location of the search within the search space. If a second mutation connects State 2 back into the machine then Figure 5.3(a) and Figure 5.3(b) would show machines with different behaviours. Isomorphic changes to the SEMs can also be generated (though the initial state must stay the same). Neither of these issues are necessarily harmful and could potentially be helpful as not all states in large machines may be necessary for a good fitness value.

### Single Classifier Machine

The SEM can be considered as a *Single Classifier Machine* (SCM). Once a SEM is created codewords are run through it and the generated vectors are stored. This stored information creates a mapping from the classifying vector back to the codeword. The SEM, along with mapping vectors back to codewords, forms the *SCM decoder*.

The process of using SCMs to decode error patterns involves the production of the error code's classifying vector by running it through the SEM and comparing it to a codeword's classifying vector with Euclidean distance. SEMs are a probabilistic classifier meaning that not all decodings will be 100% accurate. Verification of corrections can be done by calculating the edit distance of the error pattern to the codeword. It is guaranteed that the correct decoding was produced if the edit distance is within the maximum number of errors a code can correct ($(d-1)/2$ for a code of minimum edit distance $d$). This guarantee can be made but at the additional cost of run time.

A negative verification would have an error response such as 'unable to decode'.

#### Fuzzy Classifiers

Since SCMs already store each codeword's classifying vector a SCM can be extended to make fuzzy classifications. In the direct classification the codeword with the closest classification vector based on Euclidean distance is chosen. For the fuzzy classification vectors of all possible codewords are sorted into a non-decreasing list based on Euclidean distances. This list is then compared to the error pattern's resulting vector until a classification vector is found that is less than or equal to $(d-1)/2$. This will result in a correct decoding.

A tolerance value for the Euclidean distance searched by the fuzzy classification can be made to restrict the number of classification vector comparisons. This allows for faster run times but could potentially yield results of 'unable to decode'. This tolerance is the maximum radius of a hypersphere around the error pattern's classifying vector within which one looks for valid codewords [36][75]. This allows for a search of all codewords such that the Euclidean distance from the classifying vector is less than the selected radius (tolerance). One could have a radius of infinity resulting in exploring all possible codewords but this would result in longer run times. The goal is to ensure a correct decoding early in the list to reduce run time.

### 5.5.2 Purpose

We will generate SEMs (either SCMs or through fuzzy classification) that can be effectively used for DNA error correction. These SEMs will be evolved with either a basic GA or the RRGA. Previous work successfully decoded up to 93.86% of error vectors [35]. It would be ideal to surpass this result with the RRGA. If this can be achieved it would demonstrate the strengths of the RRGA when being applied to a problem that differs from the ordered gene problems that are being studied.

### 5.5.3 Fitness

When evolution occurs in the GAs an encoding of a SEM is evolved when using the direct representation and a set of transpositions is evolved which will need to be applied to some centre to become an encoding of a SEM. This encoding is used to evaluate the fitness of the SEM.

Error patterns are passed to a SEM which produces its classification vector. These classification vectors are compared to the classification vector of the actual correct

| | |
|---|---|
| **Gens.** | 50K / Pop. Size |
| **Population Size** | 11, 25, 51, and 101 |
| **Crossover Rate** | 90 |
| **Mutation Rate** | 10 and 30 (some experiments) |
| **Number of Mutation Events** | 1, 2, 7, and 12 |
| **Number of Restarts** | 1, 4, and 15 (Direct Rep.), 30 (Trans. Rep.) |
| **Number of Trans.** | 100 |
| **Trans. to Decrease by on Imp.** | 20 (Direct Rep.) and 7 (Trans. Rep.) |
| **Trans. to Increase by on no Imp.** | 30 (Direct Rep.) and 7 (Trans. Rep) |
| **Number of SEM States** | 2, 3, 4, 6, 12, and 18 |

Table 5.8: System parameters for DNA error correction

codeword. The goal is to minimize the Euclidean distance between these two classification vectors for all error patterns and their codewords. The fitness function used for the evaluation of the SEM can be seen in Algorithm 20. A correct classification is achieved when an error pattern's classification vector is closest to its codeword's classification vector, i.e. it is not closer to any other codeword's classification vector.

### 5.5.4 Data Sets

Three separate codes are used in the experimental analysis. One is of the form $(12, 55, 7)_4$; a quaternary code of length 12 with a minimum edit distance of 7 containing 55 codewords. The other two are $(12, 60, 7)_4$ codes; quaternary codes of length 12 with a minimum distance 7 containing 60 codewords. Errors of distances 1, 2, and 3 are examined such that the errors are a combination of insertions, deletions, and substitutions. These codes were obtained from previous work and allow for a comparison between the results [35].

Two sets of $n$ error patterns of these distances are created for each codeword. One of these two sets will be used as the training set while the other will be used strictly for verification to ensure that the system is not simply memorizing values.

### 5.5.5 System Parameters

These system parameters can be seen in Table 5.8.

Every combination of system parameters (with few exceptions) were executed. Once again the number of mating events was kept constant by making the number of generations inversely proportional to the population size. This is done for a fair comparison between results of different system parameters. This experiment used a

**Algorithm 20** DNA Error Correction Problem's Fitness Algorithm

```
Receive Chromosome SEM as Input
Initialize ClassificationVector Vector
Initialize CurCodeWord Vector
Initialize CurPattern Vector
Initialize ShouldBeDist Integer
Initialize Fitness Integer
for Each Coreword CW do
    for Each Error Pattern EP do
        Reset SEM
        for Each Value v in CW do
            Run v Through SEM
        end for
        Receive ClassificationVector From SEM
        Reset SEM
        for Each Value e in EP do
            Run e Through SEM
        end for
        Receive CurPattern From SEM
        Calculate Dist. Between CurPattern and ClassificationVector
        for Each Codeword i do
            if i and CW are equal then
                Skip
            end if
            Reset SEM
            for Each Value e in i do
                Run e Through SEM
            end for
            Receive CurCodeword From SEM
            if Dist. Between CurPattern and CurCodeword ≤ ShouldBeDist then
                Decrement Fitness
                Break
            end if
        end for
        Increment Fitness
    end for
end for
Return Fitness
```

static number of restarts and a fixed number of transpositions being added or removed on a restart. There were different values given for the number of restarts for the two representations as preliminary tests showed that the transposition representation performed much better with more restarts and the direct representation performed better with less restarts. As previously mentioned different genetic operators are used when working with the SEMs.

Some experiments were given different values such as a higher mutation rate for the basic GA or more generations. This was done as an exploration of the system parameters and the obtainable results.

Two distinct sets of experiments were performed when studying DNA error correction: using machines with 4, 6, 12, and 18 states with a fuzzy tolerance of 3 and using machines with 2, 3, and 4 states with a fuzzy tolerance of 2. The second set was conducted after the first was completed to pursue observations made in the first set.

All values were determined empirically through preliminary tests and each of these combinations of system settings was executed 30 times to ensure statistical significance.

### 5.5.6 Analysis

The results will be analyzed in two distinct ways: with SCMs and with fuzzy classifications. It should be expected that the fuzzy classification will greatly outperform the SCM as the SCM is less powerful. The algorithms are run on the training set and then the verification set is used to determine if the GAs actually generated high quality SEMs. The sweep of system parameters is being done to ensure that each algorithm is given enough opportunity to perform well. The results will be compared to one another to determine which algorithm performs the best and to determine the effect of the number of SEM states on the results. Results obtained are compared to the results done in a similar, previous work, as it used the same data [35].

## 5.6 DNA Fragment Assembly

The DNA fragment assembly problem (FAP) is a major component of the DNA sequencing process that is identified as being NP-hard. A variety of approaches to this problem have been used, including overlap-layout-consensus, de Bruijn graphs, and greedy graph based algorithms. The overlap-layout-consensus approach is one of

the more popular strategies which has been studied on a collection of heuristics and metaheuristics.

Parsons observed that the DNA fragment assembly problem resembled the travelling salesman problem (TSP) but argued that it could not be easily translated for a variety of reasons. Mallén-Fullerton and Fernandez-Anaya managed to overcome the obstacles posed by Parsons with significant results [101]. A minimal number adjustments are required to alter a DNA fragment assembly problem instance to work with popular TSP algorithms.

### 5.6.1 Purpose

The focus of this work using the OLC approach is the most challenging part, namely the layout phase. Each fragment from the problem instance must be used once and only once in a potential layout (permutation). The major goal is to maximize the overlap score of a layout to generate a tighter and better quality contig.

In addition to actually generating high quality contigs for real world data the effectiveness of the algorithms used will also be analyzed.

Lastly, this study is being done to determine how effective TSP heuristics are when applied to the DNA fragment assembly problem.

### 5.6.2 Fitness

Because the data sets used in this work are presented in TSPLIB format the fitness evaluation algorithm is extremely similar to the one used for the small and large TSP instances. The evaluation method can be seen in Algorithm 21. Note that the only difference between this algorithm and the one seen for the TSP is that this algorithm does not require the last step of adding the score between the last and first elements. This fitness function is based on Equation 3.2.

**Algorithm 21** DNA Fragment Assembly Fitness Algorithm

Receive Chromosome $C$ as Input
Initialize $OverlapScore$ to 0
**for** Each Index $i$ from 0 to $LengthofC - 1$ **do**
    $OverlapScore = OverlapScore +$ distance between $C[i]$ and $C[i+1]$
**end for**
Return $OverlapScore$

Two additional fitness evaluation methods (Equations 3.3 and 3.4) were analyzed

but preliminary testing suggested that they lacked in performance and were not fully explored.

### 5.6.3 Data Sets

The data sets selected for this work are a collection of sixteen popular benchmarks which have been used previously in a variety of works. Table 5.9 summarizes details about these data sets and Table 5.10 contains a collection of results obtained by popular metaheuristics on the corresponding data sets [102].

$x60189$, $m15421$, $j02459$, and $bx842596$ were generated by dividing them into overlapping fragments using a tool called GenFrag 2.1 [54] which is a UNIX/C application. GenFrag accepts a nucleotide sequence as input and generates a set of overlapping fragments based on some predefined parameters. This tool is useful for testing fragment assemblers. Note that GenFrag 2.1 may produce slightly different output due to different random numbers being used, so it cannot be guaranteed that exactly the same results will be produced every time.

The ACIN sequences have a very wide range of instances. These sequences were fragmented using a different application called the DNAgen [110]. These sequences were selected for their varying difficulty levels.

An additional collection of fourteen data sets called the $f$-series is also studied. Little information is known about these instances and their original genome and coverage is unknown. These instances are also studied for a more complete analysis.

For various reasons, such as the random numbers in GenFrag, these instances had little consistency with respect to the actual values within the data sets. This led for the necessity of creating a standard set of benchmarks. This was achieved by creating overlap matrices based on the fragments generated by the sequencing technology.

This used the Smith-Waterman algorithm, a dynamic programming local sequence alignment algorithm [130]. The settings most used for this algorithm are 1 for a match, -3 for a mismatch, and -2 for a gap. Because the proper orientation is unknown Smith-Waterman must be executed for every combination of fragments in both orientations (regular and reverse compliment). Once the maximum score is found by the Smith-Waterman algorithm the actual length of the overlap needs to be calculated. These overlap lengths are then collected and placed into a matrix of overlap scores so one can easily look up the length of the overlap between any two fragments. This whole process is simple to implement but is very time consuming.

The process of generating the benchmarks was very difficult and used a clever

| Benchmark | Coverage | Mean Frag. Len. | Num. Frags. | Original Seq. Len. |
|---|---|---|---|---|
| GenFrag Instances | | | | |
| x60189 4 | 4 | 395 | 39 | 3835 |
| x60189 5 | 5 | 286 | 48 | |
| x60189 6 | 6 | 343 | 66 | |
| x60189 7 | 7 | 387 | 68 | |
| m15421 5 | 5 | 398 | 127 | 10089 |
| m15421 6 | 6 | 350 | 173 | |
| m15421 7 | 7 | 383 | 177 | |
| j02459 7 | 7 | 405 | 352 | 20000 |
| bx842596 4 | 4 | 708 | 442 | 77292 |
| bx842596 7 | 7 | 703 | 773 | |
| DNAgen Instances | | | | |
| acin1 | 26 | 182 | 307 | 2170 |
| acin2 | 3 | 1002 | 451 | 147200 |
| acin3 | 3 | 1001 | 601 | 200741 |
| acin5 | 2 | 1003 | 751 | 329958 |
| acin7 | 2 | 1003 | 901 | 426840 |
| acin9 | 7 | 1003 | 1049 | 156305 |
| $f$-series | | | | |
| f25_305 | | 25 | 307 | |
| f25_400 | | 25 | 400 | |
| f25_500 | | 27 | 500 | |
| f50_315 | | 50 | 315 | |
| f50_412 | | 50 | 412 | |
| f50_498 | | 50 | 498 | |
| f100_307 | | 100 | 307 | |
| f100_415 | | 100 | 415 | |
| f100_512 | | 100 | 512 | |
| f508_354 | | 508 | 354 | |
| f635_350 | | 635 | 350 | |
| f737_355 | | 737 | 355 | |
| f1343_354 | | 1343 | 354 | |
| f1577_354 | | 1577 | 354 | |

Table 5.9: Summary of small benchmark data sets along with the known information about the $f$-series data sets. More details about these data sets can be found in [102] [4]

| Benchmark | LKH [71] | PPSO+DE [101] | QEGA [83][121] | SA [58] | PALS [108] | SAX [108][110] | POEMS [92] |
|---|---|---|---|---|---|---|---|
| Sixteen Popular Instances | | | | | | | |
| x60189 4 | 11478 | 11478 | 11478 | 11478 | 11478 | 11478 | 11478 |
| x60189 5 | 14161 | 13642 | 14027 | 14027 | 14021 | 14027 | |
| x60189 6 | 18301 | 18301 | 18266 | 18301 | 18301 | 18301 | |
| x60189 7 | 21271 | 20921 | 21208 | 21271 | 21210 | 21268 | 21261 |
| m15421 5 | 38746 | 38686 | 38578 | 38583 | 38526 | 38726 | 38610 |
| m15421 6 | 48052 | 47669 | 47882 | 48048 | 48048 | 48048 | |
| m15421 7 | 55171 | 54891 | 55020 | 55048 | 55067 | 55072 | 55092 |
| j02459 7 | 116700 | 114381 | 116222 | 116257 | 115320 | 115301 | 116542 |
| bx842596 4 | 227920 | 224797 | 227252 | 226538 | 225782 | 223029 | 227233 |
| bx842596 4 | 445422 | 429338 | 443600 | 436739 | 438215 | 417680 | 444634 |
| acin1 | 47618 | 47264 | 47115 | 46955 | 46876 | 46865 | |
| acin2 | 151553 | 147429 | 144133 | 144705 | 144634 | 144567 | |
| acin3 | 167877 | 163965 | 156138 | 156630 | 156776 | 155789 | |
| acin5 | 163906 | 161511 | 144541 | 146607 | 146591 | 145880 | |
| acin7 | 180966 | 180052 | 155322 | 157984 | 158004 | 157032 | |
| acin9 | 344107 | 335522 | 322768 | 324559 | 325930 | 314354 | |

Table 5.10: Results for the commonly used sixteen benchmark data sets [101]. This table assumes the results were obtained with the use of the same scoring matrices.

algorithm to eliminate useless and redundant overlaps. For the full details about how these benchmark data sets were generated please refer to [102].

The scoring matrices are presented in TSPLIB format and can be easily used by algorithms to maximize the overlap score. Table 5.10 shows a collection of results for these sixteen benchmark data sets. These algorithms all have very high overlap scores.

If an algorithm were to have success with relatively small benchmarks it would be beneficial to test that algorithm on much larger, scaled up instances, such as real world problems. In the case of the DNA fragment assembly problem one could simply take living organism sequences to create these large scaled up instances. Although the small benchmarks can supply a proof of concept, large, real world data can explore the potential of proposed strategies. Because of this two additional instances was selected which is much larger than all other instances, namely one based on staphylococcus aureus COL (COL) and staphylococcus aureus MW2 (MW2). The COL data set has long reads and contains $18,021$ fragments which was derived from an original $50,036$ fragments by eliminating non-related and redundant fragments. The MW2 data set is made up of a 3.86 million bases but after redundancy is eliminated one is left with 2.66 million unique reads with a raw coverage of about 48 [72]. Since this instance is so large it is broken down into sub problems. The smallest sub problem ($22,447$ bases) is studied as it is the most manageable with current resources. These instances were generated in a similar way to the smaller instances but with a more rigorous approach to eliminating redundant information [102].

It is important to note that these benchmarks are built upon existing benchmarks

| | |
|---|---|
| **Gens.** | 100M / Pop. Size and 1M / Pop. Size* |
| **Population Size** | 11, 51, and 101* |
| **Crossover Rate** | 80 |
| **Mutation Rate** | 20 and 50 |
| **Number of Mutation Events** | 5 |
| **Number of Restarts** | 0, 5, 10, and 20 |
| **Number of Trans.** | 100 and 2x Solution Length** |
| **Restart after $X$ Gens. of no Learn**** | 0***, 100, and 1000 |
| **Trans. to Decrease by on Imp.** | 5 and 0.95 (5% decrease)** |
| **Trans. to Increase by on no Imp.** | 10 and 1.10 (10% increase)** |
| **Island Model Specific Parameters** | |
| **Number of Islands** | 10 |
| **Number of Gens. Between Migration** | 500, 5000, and 1000** |
| **Number to Migrate During Migration** | 2 |
| **Ring Species Specific Parameters** | |
| **Max Distance to Mate** | 2 |

Table 5.11: System parameters for the set of DNA fragment assembly problem experiments. * Large Instances Only. ** Second, Third, and Fourth set of experiments. *** 0 Signifies no restarts are occurring.

and were not created with any bias towards a particular algorithm or classification of algorithms.

### 5.6.4 System Parameters

Many different sets of these experiments were conducted. A collection of Genetic Algorithm (GA) variations were selected for use: Recentering-Restarting GA (RRGA), RRGA with Island Model (RRGA+IM), and a RRGA which uses Ring Species (RRGA+RS). These variations were also used in combination to better explore the search space to maximize the significance of the results. Note that these combinations also consider a basic GA with the Island Model and Ring Species. The system parameters used can be seen in Table 5.11.

These values were determined empirically through preliminary tests and each of these combinations of system settings was executed 30 times to ensure statistical significance. All combinations of system parameters (in their respective experiments) were executed.

A memetic variation of the algorithm using 2-Opt as a local search after each restart was briefly studied although preliminary results showed no benefit with a substantial increase in run-time. However one could still consider the system loosely

memetic as there are cycles of local search and metaheuristics (discussed below). The indirect transposition representation is built upon local search principles.

Many sets of experiments were done with respect to the DNA fragment assembly problem. The first used the static restart paradigm and with a fixed value by which to alter the number of transpositions. This first batch was seeded with either the identity permutation, a 2-Opt solution, or an LKH solution. This first patch also features experiments using 2-Opt as post optimization. The first batch can be described as follows: *metaheuristic*, *heuristic* $\rightarrow$ *metaheuristic*, and *heuristic* $\rightarrow$ *metaheuristic* $\rightarrow$ *heuristic*.

The second batch used a dynamic number of restarts, factor approach to initializing the number of transpositions, and used the percentage approach to change the number of transpositions. This second batch was seeded with either the identity permutation or a 2-Opt solution. Once again, post optimization was used with 2-Opt. This set of experiments also studies the effects of forcing a recentering after the first restart regardless of whether or not the best chromosome after the GA run is actually better than the current centre. The second batch can be described as follows: *metaheuristic*, *heuristic* $\rightarrow$ *metaheuristic*, and *heuristic* $\rightarrow$ *metaheuristic* $\rightarrow$ *heuristic*.

The third batch was a repeat of the second batch of experiments except in this case the metaheuristics were run again after the post optimization followed by an additional 2-Opt post optimization. The third batch can be described as follows: *heuristic* $\rightarrow$ *metaheuristic* $\rightarrow$ *heuristic* $\rightarrow$ *metaheuristic* and *heuristic* $\rightarrow$ *metaheuristic* $\rightarrow$ *heuristic* $\rightarrow$ *metaheuristic* $\rightarrow$ *heuristic*.

The fourth and last set was the same as the third but the representation was switched for the second metaheuristic run. For example, if the first time the metaheuristic ran with the direct representation then the second run would use the indirect transposition representation. The fourth batch can be described as follows: *heuristic* $\rightarrow$ *metaheuristic* $\rightarrow$ *heuristic* $\rightarrow$ *metaheuristic (representation)* and *heuristic* $\rightarrow$ *metaheuristic* $\rightarrow$ *heuristic* $\rightarrow$ *metaheuristic (representation)* $\rightarrow$ *heuristic*.

### 5.6.5 Analysis

The ultimate goal is to produce an algorithm that can generate the best possible configurations of the fragments to best match the real, original sequence. This means that the results obtained are compared to the results obtained by the most competitive results seen in Table 5.10. It is important to take special note of the LKH results as it has been suggested that this algorithm can obtain the optimal in many relatively

small problem instances [101].

In addition the algorithm combinations and representations are compared to one another to determine if there is a trend in which algorithm performs the best. The system parameter results are also analyzed to determine how effective a given set of system parameters are and if they have a large impact on the final results.

# Chapter 6

# Analysis and Discussion

This chapter contains a summary of the results obtained by the experiments along with a brief analysis of these values. A collection of all results for each experiment can be found in the Appendices.

## 6.1 Travelling Salesman Problem: Small Problem Instances

Table 6.1 gives a summary of how many times each algorithm was the best, or tied for the best performing on each set of cities. Note that the total number for each set of cites can exceed 100 as these values include ties.

A more complete detailed set tables of the results for these small TSP instances can be seen in Section A.1. These tables are broken down first by the number of cities in the problem instances and then into two by grouping the first with instances 0 through 49 and the second with instances 50 through 99. There are a total of 10 tables since there are 5 sets of instances (12, 14, 16, 18, and 20 city instances) and each set is broken into two tables. In these tables, each set of system parameters that achieved or tied the best result are recorded. For example, in Table A.1 one can see that the basic GA with the direct representation obtained the best result with all four sets of system parameters for instance 0 but the RRGA with a direct representation using the minimal spanning tree seed only obtained the best result with the first, second, and fourth sets of system parameters. One can also see that the basic GA using the indirect representation did not obtain the best result with any set of system parameters on instance 2.

When referring to Table 6.1 it can be observed that all variations of the algorithm

Total Count of Times Being Best Performing (Including Ties)

| Number of Cities | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
|---|---|---|---|---|---|---|---|---|
| 12 | 100 | 76 | 100 | 85 | 100 | 79 | 79 | 99 |
| 14 | 99 | 13 | 82 | 22 | 75 | 13 | 18 | 77 |
| 16 | 95 | 1 | 21 | 2 | 18 | 2 | 3 | 28 |
| 18 | 88 | 0 | 3 | 0 | 4 | 0 | 0 | 11 |
| 20 | 87 | 0 | 5 | 0 | 2 | 0 | 0 | 6 |

Table 6.1: Summary of Algorithm Performance on the TSP Small Problem Instances

performed very well on the 12 city instances. One thing to take particular note of is how the indirect representation did not perform as well as the direct representation except on the runs seeded with the minimal spanning tree solution. An explanation for this could be that the indirect representation is better at polishing an already good solution. This is reasonable since the minimal spanning tree seed is better quality (in general) than the other seeds used and the indirect representation is built on local search principles. A very similar trend can be seen with the other number of city instances although the values drop rapidly.

Table 6.1 also shows that the basic GA with a direct representation tends to dominate as the number of cities increase. This trend seems unreasonable as the RRGA has been shown to greatly outperform basic GAs in many cases [78][75][76][17][23].

This study is not identical to, but still very similar to the study of small TSP instances done in [78][76] which demonstrated that the basic GA tends to perform very well on these small instances. A reason for this could be the nature of the RRGA and how it periodically start over; a very destructive process. It is unlikely that the RRGA variations had the opportunity to generate high quality solutions before restarts occurred. This allows one to reason that the basic GA has a major advantage in these small search spaces with a minimal number of generations as it does not have this destructive step.

An interesting note relates to the hypothesis in [78] and [76] that the trend of the basic GA performing the best would be eliminated as the number of cities was increased from 12. This was not the case and the opposite happened. It is speculated that there is still some turning point where this trend is reversed and the RRGA would begin to outperform the basic GA. Another reasonable approach would be to increase the number of generations the algorithms are given. This would allow the RRGA variations to have a fair chance in competing with the basic GAs.

Total Count of Times Being Best Performing (Including Ties)

| Number of Cities | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
|---|---|---|---|---|---|---|---|---|
| 12 | 100 | 99 | 100 | 100 | 100 | 100 | 100 | 100 |
| 14 | 100 | 72 | 100 | 100 | 100 | 100 | 100 | 100 |
| 16 | 98 | 12 | 99 | 97 | 99 | 92 | 87 | 99 |
| 18 | 89 | 0 | 93 | 48 | 89 | 30 | 28 | 81 |
| 20 | 66 | 0 | 69 | 15 | 53 | 7 | 5 | 50 |

Table 6.2: Summary of Algorithm Performance on the TSP Small Problem Instances with Additional Generations

### 6.1.1 Increased Number of Generations

Because it was assumed that the RRGA variations were not given enough time to excel at the problem instances the experiments were conducted again exactly the same way but with the generations increased by a factor of 10. Table 6.2 gives a summary of how many times each algorithm was the best or tied the best performing on each set of cities. The complete detailed set of tables for the results for these small TSP instances can be seen in Section A.1.1.

One can see that this is a much more fair comparison because the results show how the RRGA variations are given a fair chance to compete. For example, consider the performance of the direct RRGA on the 20 city problems between the two tables. Before the addition of more generations the direct RRGA was only able to produce the best result 5 times while the basic GA got the best solution 87 times. After the addition of more generations the direct RRGA achieved the best result 69 times which was an increase of more than a factor of 10. This improvement was not gained by giving the basic GA a disadvantage, but rather, it was gained due to the elimination of the disadvantage from the RRGA variations.

All tables presenting the results clearly demonstrate that no one algorithm always dominates. As the number of cities increases there becomes a clear trends as to which algorithm performs best but by no means does one completely take over. Similar to the previous results, the number of system parameters which achieved the best results were very chaotic and many combinations produced very competitive solutions.

If one were to increase the number of generations again it would be expected that the RRGAs would suddenly have an unfair advantage, that is, the RRGA variations excel at avoiding local optima and converging early.

## 6.2 Bin Packing Problem

The complete set of tables for all system parameter combinations on all problem instances can be found in Section A.2 and Table 6.3 provides a summary of the best results. The results for the $u$ problem instances can be found in Section A.2.1 and the results for the hard28 problem instances can be found in Section A.2.2. These data sets were described in Section 5.2. All tables found in Section A.2 are presented in a way such that each combination of system parameters are represented. The best value achieved, average result over 30, and the standard deviation are all presented in these tables for each experiment. The best value achieved is also presented as a percentage off of the optimal solution. The tables are also broken down by the number of no learning generations to allow before a restart: $\infty$ (meaning basic GA), 1000, and 100. The optimal value for the specific instance is included in the description of each table.

Plots that summarize the results can be seen in Section B.1 with the $u$ problem instances' plots in Section B.1.1 and the hard28 problem instances' plots in Section B.1.2. These plots give a visual comparison of the performances of the two representations with bars representing the 95% confidence interval. These plots show the comparison for each set of restarts which allows one to see how well each variation of the algorithm works when comparing the representations and how well they work relative to one another based on the number of restarts.

The overall results of the RRGA variations on the BPP instances are good. There are multiple cases where the algorithms obtained the optimal on the hard28 instances and overall the majority of the results were extremely close to optimal. In almost all cases the best result found was seeded with 2-Opt.

When doing a quick analysis one can see that the direct representation tends to perform better on the BPP. Paired t-tests with 95% confidence were performed to compare both representations for each set of system parameters. For the $u$ instances there was a lot of inconsistency; some were statistically different where many were not. The hard28 problem instances' results had inconsistencies but much less and in general the direct representation outperformed the indirect representation. When comparing only the best results of the one representation to the best of the other it becomes even more clear that on both the $u$ and hard28 instances the direct representation performs the best.

There are some small differences in the results when analyzing the effectiveness of the memetic variation of the algorithm but in general there is no statistical difference.

Areas where the memetic variation of the algorithms excelled was when there were a high number of restarts. This would be expected since the number of local searches executed was related to the number of restarts. A particularly good example of this can be seen in Table A.104.

When studying the plots one can see that as the likelihood of more restarts occurring increased, so did the quality of the solutions. Many of the plots demonstrate this trend but there are some cases where too many restarts did not benefit performance. In all cases some number of restarts provided an increase in performance or at the very least a tie with the basic GA. This trend appears to be amplified when considering the indirect representation.

In many runs it appears that as the likelihood of more restarts occurring increased the standard deviation and the range of the 95% confidence interval decreased. This suggests that there is a correlation between the number of restarts and the consistency of all results.

An interesting trend that can be observed on the hard28 instances is that the basic GA performs better when starting with the random seed as opposed to the 2-Opt seed. This seems unusual as 2-Opt produces such a good starting point. An explanation for this phenomenon is that the 2-Opt solution starts the GA at a local optimum from which the basic GA cannot escape. This problem appears to disappear as restarts are introduced. Many of the results obtained using restarts tie or surpass the results obtained when starting with a random seed. These trends can be seen in many tables in Section A.2.2.

These results demonstrate the quality of the results obtained by the RRGA. In addition, these results show how effective the restarts are at avoiding stagnation on a local optimum.

## 6.3 Graph Colouring Problem

The complete set of results for all experiments conducted with regards to the GCP can be seen in the tables in Section A.3 and Table 6.4 provides a summary of the best results. All tables found in Section A.3 are displayed such that each combination of system parameters are represented. The best (lowest) chromatic number achieved, average result over 30, and the standard deviation are all presented in these tables. The tables are also broken down by the number of no learning generations to allow before a restart: $\infty$ (meaning basic GA), 10000, 1000, and 100. The description of each table includes the lower bound for the appropriate problem instance. Note that

| Data Set | Theo. Opt. | Best Direct | Avg. Direct | Best Trans. | Avg. Trans. |
|---|---|---|---|---|---|
| u1000_00 | 399 | 412 | 413.8 | 412 | 414.2 |
| u1000_01 | 406 | 419 | 421 | 420 | 421.1 |
| u1000_02 | 411 | 425 | 426 | 425 | 426.4 |
| u1000_03 | 411 | 425 | 426.7 | 425 | 426.8 |
| u1000_04 | 397 | 410 | 412 | 411 | 412.3 |
| u1000_05 | 399 | 412 | 413.4 | 412 | 413.1 |
| u1000_06 | 395 | 407 | 408.1 | 408 | 408.8 |
| u1000_07 | 404 | 417 | 418.3 | 418 | 419 |
| u1000_08 | 399 | 411 | 413.1 | 412 | 413.4 |
| u1000_09 | 397 | 411 | 411.6 | 410 | 411.5 |
| u1000_10 | 400 | 413 | 414.1 | 413 | 414.7 |
| u1000_11 | 401 | 415 | 416.3 | 415 | 416.7 |
| u1000_12 | 393 | 405 | 406.2 | 405 | 406.4 |
| u1000_13 | 396 | 408 | 409.4 | 408 | 409.5 |
| u1000_14 | 394 | 408 | 409.5 | 408 | 409.7 |
| u1000_15 | 402 | 416 | 417.4 | 416 | 417.6 |
| u1000_16 | 404 | 417 | 417.8 | 417 | 418 |
| u1000_17 | 404 | 417 | 418.5 | 418 | 418.8 |
| u1000_18 | 399 | 412 | 413.3 | 412 | 413.4 |
| u1000_19 | 400 | 413 | 413.9 | 413 | 414.5 |
| h1 | 62 | 62 | 62 | 62 | 62 |
| h2 | 60 | 61 | 61 | 61 | 61 |
| h3 | 59 | 60 | 60 | 60 | 60 |
| h4 | 62 | 63 | 63 | 63 | 63 |
| h5 | 58 | 59 | 59 | 59 | 59 |
| h6 | 64 | 65 | 65 | 65 | 65 |
| h7 | 62 | 63 | 63 | 63 | 63 |
| h8 | 63 | 64 | 64 | 64 | 64 |
| h9 | 67 | 68 | 68 | 68 | 68 |
| h10 | 64 | 65 | 65 | 65 | 65 |
| h11 | 67 | 68 | 68 | 68 | 68 |
| h12 | 68 | 69 | 69 | 69 | 69 |
| h13 | 71 | 72 | 72 | 72 | 72 |
| h14 | 72 | 73 | 73 | 73 | 73 |
| h15 | 76 | 76 | 76 | 76 | 76 |
| h16 | 71 | 72 | 72 | 72 | 72 |
| h17 | 72 | 75 | 75 | 75 | 75 |
| h18 | 76 | 76 | 76 | 76 | 76 |
| h19 | 71 | 77 | 77 | 77 | 77 |
| h20 | 74 | 74 | 74 | 74 | 74 |
| h21 | 76 | 73 | 73 | 73 | 73 |
| h22 | 77 | 72 | 72 | 72 | 72 |
| h23 | 75 | 76 | 76 | 76 | 76 |
| h24 | 84 | 84 | 84 | 84 | 84 |
| h25 | 80 | 81 | 81 | 81 | 81 |
| h26 | 80 | 81 | 81 | 81 | 81 |
| h27 | 83 | 84 | 84 | 84 | 84 |
| h28 | 81 | 82 | 82 | 82 | 82 |

Table 6.3: Summary of Best and Best Average Results After Post Optimization for BPP instances.

these lower bounds more than likely exceeded the optimal (i.e. have a lower chromatic number) and should not be assumed to be the best possible solution.

The plots that summarize the best results can be found in Section B.2. These plots compare the results obtained from the two different representations and the number of restarts used. These plots are of the means along with vertical bars that represent the 95% confidence interval. These plots are helpful as they are an easy way to compare the results of the best performing versions of the algorithms.

Overall the algorithm was able to obtain strong results, however it is difficult to determine how well these algorithms performed as many of the experiments are run on experiments with no known optimal solution. It is expected that results obtained by using the grouping representation and the accompanying genetic operators [53] would be of higher quality but the purpose of studying the GCP in this work is to study the qualities and behaviours of the RRGA.

Many of the observations made when analyzing the BPP can be made when analyzing the GCP. Overall the direct representation appears to be the better performing by a very small margin. The difference between the results from the two representations on the GCP appears to be smaller than the difference between the results of the representations on the BPP. Paired t-tests with 95% confidence were done to compare both representations for each set of system parameters. In many of the cases there was no statistical difference between these results.

In almost every plot seen in Section B.2 one can see how the restarts affect the quality of the results. As the likelihood of the number of restarts occurring increases so does the quality of the results obtained. In many of these cases these differences are statistically significant and there is minimal to no overlap between confidence intervals. This trend appears to be amplified when observing the results of the indirect transposition representation. Similar to the BPP there are cases where too many restarts does not benefit the quality of results. Even though the transposition representation does not perform as well as the direct representation the actual difference between these results is very small.

Although it appears that as the number of restarts increases the results become better an interesting observation that can be made is that the number of restarts affects the standard deviation. The effect of restarts on the standard deviation is very chaotic meaning that the actual results are likely to be different. This bodes well for the genetic diversity of the populations however the standard deviations are very small.

Unlike the BPP the use of 2-Opt as the starting seed did not appear to put the

| Data Set | Chromatic Opt. | Best Number | Avg. Direct | Best Trans. | Avg. Trans. |
|---|---|---|---|---|---|
| DSJC125.1 | 5 | 6 | 6 | 6 | 6 |
| DSJC125.5 | 17 | 19 | 20.1 | 19 | 20.1 |
| DSJC125.9 | 44 | 44 | 45.6 | 44 | 45.6 |
| DSJC250.1 | 8* | 10 | 10.8 | 10 | 10.8 |
| DSJC250.5 | 28* | 35 | 36.2 | 35 | 36.2 |
| DSJC250.9 | 72 | 80 | 82.1 | 80 | 82.1 |
| DSJC500.1 | 12* | 17 | 17 | 17 | 17 |
| DSJC500.5 | 47* | 64 | 65.3 | 64 | 65.3 |
| DSJC1000.1 | 20* | 28 | 28.8 | 28 | 28.8 |
| flat300_28_0 | 28 | 39 | 40.6 | 39 | 40.6 |
| queen10_10 | 11 | 12 | 12.4 | 12 | 12.4 |
| queen11_11 | 11 | 13 | 13.9 | 13 | 13.9 |
| queen12_12 | 12 | 14 | 15 | 14 | 15 |
| queen13_13 | 13 | 16 | 16.4 | 16 | 16.4 |
| queen14_14 | 14 | 17 | 17.9 | 17 | 17.9 |
| queen15_15 | 15 | 18 | 19 | 18 | 19 |
| r250.5 | 65 | 67 | 68.2 | 67 | 68.2 |

Table 6.4: Summary of Best and Best Average Results After Post Optimization for GCP instances. * Upper Bound.

algorithm in a local optimum it could not escape. This could imply that the GCP search space is challenging or possibly that the fitness landscape is non-chaotic. There are some instances where the same trend was observed on the BPP instances with 2-Opt getting stuck without restarts, but in general this is not the case for the GCP.

The results seen on the GCP demonstrate that the Recentering-Restarting Genetic Algorithm variants surpass the quality of results obtainable by a vanilla Genetic Algorithm. These results also demonstrate how well an increased number of restarts positively affect the performance of the indirect transposition representation.

## 6.4 Travelling Salesman Problem: Large Problem Instances

The tabulated results for all experiments conducted on the travelling salesman problem Large Problem Instances can be seen in Section A.4 and Tables 6.5 and 6.6 provides a summary of the best results. There are two distinct groups of tables in this section. The first group of tables show that results obtained with no form of post optimization and can be found in Section A.4.1. The second group of tables can be found in Section B.3.2 and are of results obtained with the use of 2-Opt as post optimization. All tables are presented such that every combination of system parameters used are displayed. The distance of the best path (smallest distance) and the average result over the 30 runs conducted for each system parameter are shown

in these tables. The tables are broken down into groups of columns which display the number of no learning generations allowed before a restart: $\infty$ (meaning basic GA), 10000, 1000, and 100. The description of each table includes the suspected optimal solution for the respective problem instance. Unlike the experiments conducted on the BPP and GCP the mutation rate was made constant and a variable number of generations was used in an attempt to explore search spaces with a different approach.

Plots summarizing the best results can be seen in Section B.3. There are three separate groups of plots in this section. The first group of plots compare the results when no post optimization was performed and can be found in Section B.3.1. The second group of plots are found in Section B.3.2 and are a comparison of the results after post optimization was done. These two first groups of plots compare the results obtained from the two different representations and the number of restarts used. These plots are of the mean values along with vertical bars that represent the 95% confidence interval. Section B.3.3 contains the third group of plots which simply show a comparison of all algorithms before and after any post optimization. Unlike the first two sets of plots which have the exact value of the path obtained, the third set has the percentage above the suspected optimal. These plots can only be used to compare the general trends of the algorithms and not specific results as their ranges are too large.

The LKH algorithm was used as one of the seeds for these experiments to demonstrate how good the LKH algorithm is at these ordered gene problems, but experiments using this as the seed were halted. Unlike the results shown in DIMACS TSP Implementation Challenge results page, the LKH algorithm does in fact achieve the optimal on all problem instances selected. This is unusual as part of the reason these instances were selected was because the LKH was not supposed to be able to find the optimal. As one would expect, when these values were used as seeds no learning occurred.

Unlike the BPP and GCP results, the effect the initial seed has on the results for these large TSP instances is substantial. 2-Opt has an extremely large benefit on every result seen in the tables in Section A.4.1 which show the results with no post optimization. Surprisingly this trend is reversed when 2-Opt was used as post optimization, i.e. using a random initial seed produces better final results when 2-Opt is used as a post optimization technique.

When observing the tables and plots (specifically the plots comparing the effects of post optimization in Section B.3.3) it is clear that post optimization substantially improves results.

When considering the best performing results obtained one can observe that they are close to their respective optimal and comparable to results obtained by many other competitive ordered gene algorithms. This is true when considering both the results with no post optimization and those with post optimization.

It is difficult to draw any conclusions about how the number of generations affect the results. Oddly it appears that the number of generations actually hurts the results when restarts are involved.

Unlike the BPP and GCP results the standard deviation is not presented although they were analyzed. The reason for their omission is because in most cases the value of the standard deviation was 0. In most of the few cases where this value was not 0 the standard deviations were relatively small, however there were outlying cases where this is not the case. This also led to small confidence intervals.

When no post optimization was done it is clear that the effect the restarts have on the overall results is minimal. Unlike the BPP and GCP results the transposition representation results tend to outperform the direct representation. This is reasonable as the transposition representation should perform well in these large and chaotic search spaces since it is built upon local search operations. Additionally it is difficult to say which version of the RRGA actually performed best as the results are so similar with the majority of cases having no statistically significant differences (although in multiple cases the RRGA with the transposition representation and the RRGA+RS with the transposition representation perform better than others). Note that this trend is not consistently seen on all instances. In a number of cases it can be observed that the RRGA with the performance of the transposition representation deteriorating as the likelihood for more restarts increases.

The plots seen in Section B.3.2 show that the results that were post optimized are substantially more consistent than those that had no post optimization. An interesting thing to note is how large the confidence interval for the RRGA with the transposition representation is when 100 generations of no learning were allowed before a restart. This trend can also be seen in some cases where 1000 generations of no learning were allowed before a restart. Similar to the no post optimization results there is little consistency as to which variation of the algorithm works best but when one does perform better there is a statistically significant difference.

The fact that no one variation of the algorithm dominates on all large TSP instances, let alone one instance, corresponds to the discussion in Section 6.1 regarding the small TSP instances which suggests that no one algorithm can dominate on all instances within a problem domain.

| Data Set Name | Suspected Opt. | Best Direct RRGA | Avg. Direct RRGA | Best Direct RRGA+RS | Avg. Direct RRGA+RS | Best Direct RRGA+IM | Avg. Direct RRGA+IM |
|---|---|---|---|---|---|---|---|
| d1291 | 50801 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| d1655 | 62128 | 69235 | 70594 | 70594 | 70594 | 69559 | 70594 |
| dsj1000 | 18659688 | 20384354 | 20883123.2 | 20309097 | 20866084.4 | 20335251 | 20890961.8 |
| fl1400 | 20127 | 20939 | 21672 | 20850 | 21672 | 21044 | 21672 |
| fl1577 | 22249 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| nrw1379 | 56638 | 62228 | 62317 | 62083 | 62317 | 62170 | 62317 |
| pcb1173 | 56892 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| pr1002 | 259045 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| rl1304 | 252948 | 277989 | 287163 | 282632 | 287163 | 277583 | 287163 |
| rl1323 | 270199 | 295860 | 307723.4 | 299083 | 307805 | 296089 | 307805 |
| rl1889 | 316536 | 349719 | 361240.3 | 349152 | 361827.5 | **348189** | 361092.2 |
| u1060 | 224094 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| u1432 | 152970 | 169575 | 169575 | 169575 | 169575 | 169575 | **169575** |
| u1817 | 57201 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| vm1084 | 239297 | **257655** | 269165 | 260765 | 268455 | 262160 | 269407.3 |
| vm1748 | 336556 | 367356 | 378619.5 | 370201 | 379006.9 | 368218 | 377854.4 |

Table 6.5: Summary of Best and Best Average Results After Post Optimization for TSP Instances Using Direct Representation. Bold entries are best performing. Bold entries carry into Table 6.6.

| Data Set Name | Suspected Opt. | Best Trans. RRGA | Avg. Trans. RRGA | Best Trans. RRGA+RS | Avg. Trans. RRGA+RS | Best Trans. RRGA+IM | Avg. Trans. RRGA+IM |
|---|---|---|---|---|---|---|---|
| d1291 | 50801 | **55005** | **57020.2** | 55683 | 57164 | 55163 | 57226.2 |
| d1655 | 62128 | **68522** | **69464.8** | 69068 | 70390.9 | 68938 | 70481.8 |
| dsj1000 | 18659688 | **20270323** | **20575104.8** | 20390987 | 20856183.6 | 20366489 | 20868276.8 |
| fl1400 | 20127 | 20864 | **21524.7** | **20831** | 21672 | 20885 | 21665.2 |
| fl1577 | 22249 | **23254** | **23568.2** | 23964 | 23964 | 23753 | 23940.8 |
| nrw1379 | 56638 | **61587** | **62155.6** | 61905 | 62317 | 62011 | 62317 |
| pcb1173 | 56892 | 62264 | 63631.4 | **62096** | **63496.8** | 62428 | 63583.4 |
| pr1002 | 259045 | **280255** | **284600.7** | 280826 | 284844 | 280271 | 284844 |
| rl1304 | 252948 | **273670** | **280076.9** | 276012 | 287163 | 274838 | 287066.2 |
| rl1323 | 270199 | 294922 | **301065.3** | 297374 | 307805 | **294536** | 306510.7 |
| rl1889 | 316536 | 349806 | 355775.6 | 348947 | 360834 | 348719 | **360070.2** |
| u1060 | 224094 | **242114** | **246192** | 245609 | 247701.5 | 244570 | 247921 |
| u1432 | 152970 | **167730** | 169773.4 | 168591 | **169575** | 167974 | **169575** |
| u1817 | 57201 | **63819** | **64617.8** | 65378 | 65378 | 64758 | 65350.7 |
| vm1084 | 239297 | 259815 | **266687.2** | 260550 | 268797.4 | 258388 | 267986.6 |
| vm1748 | 336556 | **366519** | **372609.5** | 369669 | 378293.1 | 370116 | 379045.5 |

Table 6.6: Summary of Best and Best Average Results After Post Optimization for TSP Instances Using Indirect Representation. Bold entries are best performing. Bold entries carry from Table 6.5.

The effectiveness of the seeds and post optimization seen on these results suggests that it is greatly beneficial to combine heuristics and metaheuristics. This is not surprising as memetic algorithms have been shown to perform well on many problems. The memetic variation of the algorithm studied on the BPP did not perform well but these loosely memetic, or high level combination of heuristics and metaheuristics do perform very well.

## 6.5 DNA Error Correction

Results for all distinct experiments can be found in Section A.5 with the results for the first, second, and third code found in Sections A.5.1, A.5.2, and A.5.3 respectively. The results are broken down based on the system parameters and are divided into

columns based on the number of restarts used. Unlike the other experiments the data was split up into a training and testing data set as this is more of a machine learning problem. These tables also show the results for the distance 1, 2 and 3 error patterns.

Section B.4 shows plots that summarize the results of the first distinct set of experiments (the 4, 6, 12, and 18 state side effect machines). No plots are included for the second set of experiments as they are less significant. These results allow one to compare the relative performance of each set of experiments performed based on the number of restarts. These plots are of the mean values with vertical bars that represent the 95% confidence interval. The accuracy values in these plots are the sum of results over all three distances.

For each distance $n * M$ error patterns were tested for each distance (where $n$ is the length of the codeword and $M$ is the number of codewords within the code). This means that for a $(12, 55, 7)_4$ code a perfect classification would be $12 * 55 = 660$ corrected codewords for each distance and for a $(12, 60, 7)_4$ code a perfect classification would be $12 * 60 = 720$ corrected codewords for each distance.

### 6.5.1 First Set of Experiments

Over all experiments there is a high overlap between the training and verification sets' 95% confidence interval. This demonstrates that the SEMs are learning the attributes and qualities that make up the mapping from error pattern to codeword through classification vectors and not simply memorizing the training set.

When it comes to the experimental settings that produced the best results for each of the three experiment sets on each of the codes, there were some small trends in system settings but none were significant enough to show any strong relationships with high-quality results.

#### Direct SCM Analysis

Similar to a trend that was observed in [35], SCM using SEMs with a higher number of states consistently outperform SEMs with a smaller number of states when the direct representation was used. The biggest change observed can be seen between SEMs of 6 states and SEMs of 12 states. This suggests that the representation of the space is only fully explored when a large SEM space is allowed. SEMs with a smaller number of states would require a high mutation rate to fully explore the SEM space, resulting in poor performance due to the power of selection pressure being removed.

Mann-Whitney U tests were performed to determine if there was any statistically

significant trend between the results obtained for the three experiment sets. The results between the basic GA and the Recentering-Restarting GA were very inconsistent with some being statistically better, some statistically worse, and many having no statistical difference at all. There were consistencies observed with statistical significance where the direct representation outperformed the indirect transposition representation for the direct SCM analysis.

**Fuzzy SCM Analysis**

Similarly to the direct SCM analysis many of the same trends can be observed that were noted in previous work. The fuzzy classification with a tolerance of 3 was able to produce consistently better results over the direct SCM analysis. As expected the standard deviation of the results was much greater than the direct SCM analysis.

Several interesting new trends were observed in this work with respect to the results obtained with the transposition representation on the fuzzy analysis.

The first trend that can be observed is the poor performance of the transposition representation for SEMs with a small number of states when doing a direct SCM analysis. The performance does improve as the number of states increases but not by a large enough amount to compete with the results obtained using the direct representation.

The next trend that can be observed is that the results for the fuzzy analysis improve as the number of states in the SEMs decreases, with the best fuzzy classifying SEMs achieving excellent results. On the $(12, 55, 7)_4$ code with 6 states the best machine was able to correct 99.697% of the errors of distance 1 in the training set and on the two $(12, 60, 7)_4$ codes there were multiple instances where 100% of the errors of distance 1 were able to be corrected in the training set.

It was this trend that led to the experiments of the Recentering-Restarting GA with the transposition representation being performed on SEMs with only 4 states. This resulted in more instances of 100% of the errors of distance 1 in the training set being corrected, as well as some instances of 100% of the errors of distance 2 being corrected in the training set and 100% of the distance 1 errors in the verification set being corrected. The best performing SEM was able to correct 100% of distance 1 and 2 errors and 98.47% of the distance 3 errors. This is an overall performance of 99.49% accuracy over all three distances for the training set. For that same SEM the overall performance was 99.54% accuracy over all three distances for the verification set which is actually a slightly higher value than the results obtained from the training set. These values are an improvement over the results obtained in the previous work

which obtained a best accuracy of 93.86% [35].

These results suggest that the transposition representation has a strong ability to generalize errors. This effect seems to be amplified when using the indirect representation in combination with SEMs with a low number of states. A reason for this phenomenon could be that the transposition representation does not permit too thorough an exploration of the problem space, thereby preventing the SEM from becoming overzealous and greedily classifying to the nearest classification vector. This representation appears to let the machine group like codewords together, with a lower number of states improving upon this even further.

### 6.5.2 Second Set of Experiments

Similar to the first experimental set it is very difficult to distinguish any trends when it comes to the experimental settings that produced the best results between any of the codes and the number of restarts. There are some small isolated trends that can be observed between the tables (such as 15 restarts appeared to perform the best on the $(12, 55, 7)_4$ code with 2 states) but overall nothing significant.

The few major trends that were observed are discussed below.

#### Direct SCM Analysis

The results obtained validate results found in the first experimental set which showed that as the number of states increases the performance of the direct analysis on the SEMs increases. In this work the machines that had 4 states performed better than those which had only 3 states and much better than those which had 2. The biggest difference in the results can be observed between SEMs that have 2 and SEMs that have 3 states. This helps to confirm previous conclusions that suggest that the search space is only fully explored with SEMs with a higher number of states.

Note that the results obtained for the direct analysis in this second set is much worse than the results obtained in the first set as far fewer states were studied in this work.

Mann-Whitney U tests and paired t-tests were performed on the results obtained with the $(12, 55, 7)_4$ code which showed no significant trends with respect to any statistically significant difference in the results between the experiments and their settings. No further statistical tests were performed on any of the other codes as the same chaotic results are observed in all results.

**Fuzzy SCM Analysis**

The fuzzy analysis with a tolerance of 2 was able to produce much better results than the same experiment with the direct analysis. A tolerance of 2 results in a much more difficult classification.

Similar to the first set of experiments, it is observed that the results for the fuzzy analysis improved as the number of states decreases which is the opposite of what was observed with the direct analysis. Many of the mean results for the machines with 2 states for distance 1 errors were able to correct roughly 90% of the error codes. The mean results for SEMs with 3 states were able to correct roughly 80% of the error codes. Lastly the mean results for SEMs with 4 states were able to correct roughly 74% of the error codes.

This suggests that these small SEMs evolved with the RRGA using the indirect transposition representation have a strong ability to generalize the codewords. It appears that the high number of restarts with this representation does not allow the SEM to become too specialized at correcting error codes greedily.

In the first set of experiments the tolerance for the fuzzy analysis was set to 3 and in this set the tolerance was set to 2. The results obtained were also worse in comparison to previous works when it came to the fuzzy analysis due to the tolerance being lowered. This phenomenon was expected as fewer classification vectors would be considered for the fuzzy analysis. A possible explanation for the success of the fuzzy analysis on the SEMs with a small number of states could be due to the Euclidean distance between the classification vectors decreasing as the number of states decreases.

## 6.6 DNA Fragment Assembly

A collection of the tabulated results for all experiments conducted for the DNA fragment assembly problem can be seen in Section A.6. Information included in these plots include the system parameters along with the best value achieved, average result over 30 runs, and standard deviation. These tables are separated into subsections based on the set of experiments to which they belong. For each of the results there are two sets of tables, those that contain results with no post optimization and those that are of results that have been post optimized. In multiple cases there are a set of these tables that do and do not have a forced recentre after the first restart. These tables will be discussed in their respective sections. The description of each table

includes the suspected optimal solution for the respective problem instance.

Summary tables are included in this chapter which give a high level overview of the results for their particular set of experiments. The information contained in these tables are dependent on whether or not they belong to the first, second, third, or fourth set of experiments.

Plots summarizing the best results are found in Section B.5. Similar to the tables in Section A.6 these plots are of results before and after post optimization and in some cases with and without a forced recentre after the first restart. Plots are also included comparing the results between distinct sets of experiments. Refer to specific sections for details on which plots are included for each set of experiments conducted.

Results obtained by the LKH [71] on the less popular $f$-series benchmarks are included in Table 6.7. Unlike the original popular 16 benchmarks where the result are compared to the best results obtained by state of the art algorithms for the DNA fragment assembly problem, results for these $f$-series instances are compared to the LKH results (suspected optimal).

The LKH [71] was used as a seed for experiments but it was quickly observed that no improvements were being made on any problem instance when the algorithm variations were run. This corresponds to the observations made in [101] which suggests that the Lin-Kernighan algorithm in fact produces the optimal solution for the relatively small problem instances. Because of this phenomenon the algorithms using the LKH as a seed were not further explored as it would not demonstrate any benefit or significance. For the large problem instance the LKH will be used as the initial seed and will be represented in this work. This is due to the much larger search space of the real world instances and the ability of these local search algorithms to find high quality solutions.

A memetic variation of each algorithm was studied that used 2-opt on the best member of the population before it was compared to the centre but preliminary results demonstrated that this method significantly slowed down evolution with no real benefit to the quality of solutions.

### 6.6.1 First Set of Results

This first set of experiments used the static restart approach with the fixed alteration of transpositions on a recentre.

All results for the first set of experiments are available in Section A.6.1. Section A.6.1 contains the results that have not had any post optimization and Section A.6.1

| Name | LKH Results [71] |
|---|---|
| f25 305 | 596 |
| f25 400 | 777 |
| f25 500 | 921 |
| f50 315 | 1581 |
| f50 412 | 1573 |
| f50 498 | 1570 |
| f100 307 | 2793 |
| f100 415 | 2860 |
| f100 512 | 2732 |
| f508 354 | 18112 |
| f635 350 | 22498 |
| f737 355 | 25218 |
| f1343 354 | 49042 |
| f1577 354 | 57373 |
| COL | 8345841 |
| MW2 | 663208 |

Table 6.7: Results obtained by LKH for the $f$-series data sets and the Large Problem Instances COL and MW2

contain the results that have had 2-Opt applied as a post optimization technique. There are multiple tables for each problem instance where each table corresponds to a particular algorithm variation. All tables are presented such that every combination of system parameters used are available. The tables are broken down into groups of columns which display each set of number of restarts used: 0 (basic GA), 5, 10, and 20.

Plots summarizing the best results for the first set of results can be found in Section B.5.1, specifically Section B.5.1 contains the plots before any post optimization was performed, Section B.5.1 contains results after post optimization, and Section B.5.1 contains results comparing the results of pre and post optimization. Sections B.5.1 and B.5.1 are of the mean values along with vertical bars that represent the 95% confidence interval. All plots give a visualization of results and allows for trends to easily be observed and each plot shows the results of all algorithm variations on a given problem instance.

Multiple sets of experiments were performed on the first set of experiments: RRGA, RRGA+IM, and RRGA+RS. All of these combinations of GA variations will also be used with the two different types of representations except for the RRGA+IM which will not be used with the transposition representation due to complications

arising from the lengths of the transpositions and the separate subpopulations.

As previously mentioned, two versions of the basic RRGA+IM were implemented, one where 500 generations were allowed between migrations, and the other, where 5000 generations were allowed between migrations.

### No Post Optimization

Table 6.8 summarizes the best results obtained by each algorithm before post optimization on all problem instances. **Bold** entries represent the best performing algorithm's result on each data set and ***Italicized Bold*** entries are results that outperformed or tied all algorithms presented in Table 5.10. Comparisons for the $f$-series data set are made to Table 6.7. Note that there are multiple instances where more than one algorithm's results on a given data set outperformed all other algorithms presented in Table 5.10. These results show that some variation of the algorithm studied beat or tied the best result obtained by one of the state of the art algorithms used for the DNA fragment assembly problem on 6/16 of the original popular benchmarks. In addition, results in Table 6.8 show that some variation of the algorithm studied tied the suspected optimal on 3/14 of the $f$-series instances. Although only 6/16 beat all other algorithms, these results are extremely competitive close to one another.

A major trend that can be observed in Table 6.9 is that the RRGA+IM variation using the direct representation tends to dominate. Another observation to be made is the strong performance of the transposition representation on the large problem instances from the $f$-series. This does not correspond to the results obtained in almost all other problem spaces studied but seems reasonable due to the nature of the representation being built upon local search operators. All things considered, all variations of the algorithm are able to produce strong candidates for all problem instances.

When analyzing the tables seen in Section A.6.1 there is no consistency with respect to the effect of the system parameters on the end results. The one major observation that can be made about the parameters used for these experiments is the effect of the initial seed. Not only did the experiments seeded with 2-Opt perform much better than those with a random starting location, but the standard deviation of the results is much lower for those experiments seeded with 2-Opt. This trend is seen in all tables and is by a very large margin (sometimes more than 100 times smaller). Note the poor values of the average results in these tables.

Each plot summarizes the average result of all algorithms on a specific problem

| Data Set Name | Dir. RRGA Max | Dir. RRGA Avg | Dir. RRGA+RS Max | Dir. RRGA+RS Avg | Dir. RRGA+IM Max | Dir. RRGA+IM Avg | Trans RRGA Max | Trans RRGA Avg | Trans RRGA+RS Max | Trans RRGA+RS Avg |
|---|---|---|---|---|---|---|---|---|---|---|
| acin1 | 47344 | 15761.43 | 47374 | 15760.17 | ***47413*** | **15793.07** | 47341 | 15773.1 | 47361 | 15775.3 |
| acin2 | 150842 | 50184.07 | 150762 | 50125.07 | ***150982*** | 50316.33 | 150951 | **50316.47** | 150951 | 50316.4 |
| acin3 | 166011 | 55245.13 | 165951 | 55224.07 | ***166326*** | **55408.1** | 166172 | 55390.67 | 166172 | 55390.67 |
| acin5 | 162131 | 53918 | 161980 | 53932.4 | ***162332*** | **54109.73** | 162329 | 54109.67 | 162331 | **54109.73** |
| acin7 | 179094 | 59635.6 | 179084 | 59638.5 | **179375** | **59791.67** | **179375** | 59791.2 | **179375** | 59791.27 |
| acin9 | 341874 | 113831.47 | 341927 | 113846.23 | ***342208*** | 114068.13 | **342208** | 114068.8 | **342208** | **114068.87** |
| bx842596_4 | 225238 | 74963.2 | 225238 | 74646.2 | **225266** | **75083.67** | 225034 | 74908.83 | 224998 | 74848.2 |
| bx842596_7 | 437834 | 145842.37 | 437820 | 145857.03 | **437857** | **145914.4** | 437741 | 145874.8 | 437697 | 145856.9 |
| j02459_7 | 115364 | 38403.57 | **115490** | 38407.1 | 115425 | **38440.9** | 115186 | 38317.67 | 115182 | 38321 |
| m15421_5 | 38435 | 12802.87 | 38435 | 12806.13 | **38439** | **12812.67** | 38434 | 12803.77 | 38434 | 12804.17 |
| m15421_6 | **47403** | **15801** | **47403** | 15797.9 | **47403** | **15801** | **47403** | 15781.87 | **47403** | 15771.4 |
| m15421_7 | 54750 | 18239.8 | 54747 | 18220.53 | **54766** | **18250.23** | 54751 | 18248.23 | 54751 | 18247.93 |
| x60189_4 | 11394 | 3718.03 | **11411** | 3723.03 | 11410 | **3755.33** | 11305 | 3710.17 | **11141** | 3704 |
| x60189_5 | 14038 | 4619.6 | 14005 | 4636.17 | ***14077*** | **4640.13** | 13883 | 4616.57 | 13878 | 4621.2 |
| x60189_6 | **18017** | 6005.67 | **18017** | 6005.67 | **18017** | 6005.67 | **18017** | 6005.67 | **18017** | 6005.67 |
| x60189_7 | 21057 | 6968.43 | 21057 | 6953.3 | **21059** | **7010** | 20829 | 6943 | 20829 | 6943 |
| f25_305 | ***596*** | 197.97 | ***596*** | 197.8 | ***596*** | **198.5** | 595 | 198.27 | 595 | 198.23 |
| f25_400 | ***777*** | 257.87 | ***777*** | 258.17 | ***777*** | **258.53** | 772 | 256.43 | 772 | 256.43 |
| f25_500 | ***921*** | 305.4 | ***921*** | 304.9 | ***921*** | **306.2** | 918 | 305.37 | 918 | 305.4 |
| f50_315 | **1569** | 518.07 | 1565 | 517.83 | 1567 | **520.97** | 1565 | 520.27 | 1565 | 520.07 |
| f50_412 | 1558 | 513.73 | 1558 | 514.13 | **1561** | **517.83** | 1555 | 512.7 | 1555 | 512.47 |
| f50_498 | 1548 | 512.17 | 1549 | 513.87 | **1551** | **516.2** | 1549 | 516.03 | 1549 | 516.03 |
| f100_307 | **2762** | 905.57 | **2762** | 904.9 | **2762** | **920.67** | **2762** | **920.67** | **2762** | **920.67** |
| f100_415 | 2796 | 918.4 | **2804** | 917.97 | **2804** | **934.67** | **2804** | **934.67** | **2804** | **934.67** |
| f100_512 | 2679 | 883.6 | 2684 | 884.8 | **2700** | **899.27** | 2696 | 898.37 | 2696 | 898.4 |
| f508_354 | 17754 | 5886.47 | 17743 | 5887.33 | **17766** | **5922** | **17766** | **5922** | **17766** | **5922** |
| f635_350 | 21993 | 7307.83 | 22012 | 7298.63 | **22021** | **7340.33** | **22021** | **7340.33** | **22021** | **7340.33** |
| f737_355 | 24392 | 8094.57 | 24379 | 8097.1 | **24431** | **8143.13** | **24431** | 8143.07 | **24431** | **8143.13** |
| f1343_354 | 47335 | 15738.87 | 47315 | 15721.17 | **47363** | 15781.8 | **47363** | 15782.47 | **47363** | **15783.33** |
| f1577_354 | 55555 | 18488.7 | 55533 | 18474.3 | **55582** | **18527.27** | **55582** | 18526.7 | **55582** | 18526.33 |
| COL | **8345841** | - | **8345841** | - | **8345841** | - | **8345841** | - | **8345841** | - |

Table 6.8: A collection of the best results and best average best results obtained by each algorithm on all data sets with no post optimization

instance. An interesting trend that can be seen in most plots in Section B.5.1 is that the addition of restarts benefits the results. There are some cases where the addition of restarts actually hurts the direct RRGA and direct RRGA+RS versions of the algorithm, i.e. as the number of restarts increases the quality of the results decreases. Another observable trend is that if the results are improving the 95% confidence interval decreases but if the results are not improving the 95% confidence interval increases. This suggests among other things, that when the results are good the algorithms are probably converging onto a local optima which could be a very negative thing.

For the COL data set the LKH was used for the pre-optimization due to the large size of the problem and because it was assumed that 2-opt would not achieve a strong enough starting location (which is the case). Observe that there were no improvements made by the metaheuristic over the results of Lin-Kernighan. This further suggests that the LKH is able to find the optimal solution for this instance which was an observation made in [101].

### Post Optimization

As experiments were being performed it was observed that obtained results were outperforming all of the best metaheuristics on 6/16 of the problem instances . This

led to applying the post optimization technique of 2-Opt to the results to further improve them for the small problem instances (as seen in previous sections studying other problem spaces). Due to the size and run times required no post-optimization was run on the large problem instance (although one would expect no real improvements as it is expected that LKH may already be obtaining the optimal).

Table 6.9 contains the best and the best average results for each combination of GA techniques on each of the problem instances studied in this work. **Bold** entries represent the best performing algorithm's result on each data set and ***Italicized Bold*** entries are results that outperformed or tied all algorithms presented in Table 5.10. Comparisons for the $f$-series data set are made to Table 6.7. Note that there are multiple instances where more than one algorithm's results on a given data set outperformed all other algorithms presented in Table 5.10. Table 5.10 is a brief summary and does not contain a complete analysis.

The first observation to be made is that at least one of the algorithm variations were able to outperform all of the other best metaheuristics previously used on 10/16 of the previously studied benchmark data sets and tied the suspected optimal on 5/14 of the $f$-series instances. In addition, the results are very close to the best values when these algorithms did not beat the best performing. In multiple cases more than one of the studied algorithms were able to produce higher quality results. There were also multiple cases where an algorithm variation studied was able to tie the results obtained by the LKH which is suspected to be optimal [101].

When considering the system parameters used for each algorithm variation it is observed that there is little consistency with respect to how they actually affected the results of the algorithms. When trying to determine which of the algorithms studied performed best there is a little more consistency, however the results are still unpredictable making it very difficult to conclude which performs best. In nearly all cases the addition of recentering and restarting to the GA variations made a considerable positive impact on the results which demonstrates how effective the RRGA is.

It can also be observed that for the majority of the data sets all algorithm variations were able to obtain high quality results very close to one another. Paired t-tests with 95% confidence were performed for each pair of algorithms on each data set to determine if there was any statistical difference between these results. Unsurprisingly the results of these tests were inconsistent and showed some statistically differences.

It is interesting to note that the data sets with a relatively small number of fragments (such as the x60189 and the f-series instances) the simple RRGA with the

direct representation appears to have some consistency in that it produces the best results. In addition one can also see trends with the RRGA+IM producing good results on the larger instances yet having consistently good average results on the smaller instances. The transposition representation variations of the algorithms were able to achieve the best *average* results on almost all of the data sets with a relatively large number of fragments.

When considering the tables in Section A.6.1, many similar trends that were observed when no post optimization was performed can be made. In the majority of cases using 2-Opt as a starting seed resulted in better solutions but the difference between these results and those that had a random starting seed is minimal. Similarly, the standard deviations are smaller for those that had the 2-Opt starting seed but once again this difference is much smaller than the differences observed when no post optimization was performed.

An analysis of the plots in Section B.5.1 is fairly difficult as the results are chaotic, however some important observations can be made. In general the addition of some amount of restarts does improve the results of the best performing algorithms. Unlike the plots in Section B.5.1 of the results with no post optimization, the transposition representation variations of these algorithms perform worse than those that used the direct representation. Once again, as the results improve the 95% confidence intervals decrease but if the results do not improve then the 95% confidence interval appears to increase.

When comparing the results of those that used no post optimization to those that used post optimization (Refer to Section B.5.1) it is very clear that 2-Opt as post optimization is extremely beneficial. This comes as no surprise as it was similarly effective on the large TSP instances.

In most cases, such as real world problems, it would be ideal to use another algorithm such as the LKH which has been shown to produce very high quality results. This option was not used as it would defeat the purpose of post optimization on these instances since the LKH is suspected to find the optimal on these benchmarks [101]. If one were using these algorithms on instances where this was not the case, such as much larger problem instances, it would be ideal to use high quality heuristics. If metaheuristics are able to obtain high quality solutions, heuristics used for post-optimization would take minimal time compared to the time required if they were run from some random permutation. This becomes particularly useful when considering the exponential increase in runtime required for larger problem instances.

| Data Set Name | Dir. RRGA | | Dir. RRGA+RS | | Dir. RRGA+IM | | Trans RRGA | | Trans RRGA+RS | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Max | Avg | Max | Avg | Max | Avg | Max | Avg | Max | Avg |
| acin1 | 47436 | 47284.77 | ***47450*** | 47287.7 | 47437 | 47320.83 | 47400 | **47329.83** | 47408 | 47328.3 |
| acin2 | ***151285*** | 151088.67 | 151253 | 151086.07 | 151243 | 151078.47 | 151194 | **151101.43** | 151223 | 151099.5 |
| acin3 | 167035 | 166455.4 | 166882 | 166466.9 | ***167214*** | 166582.33 | 167202 | 166694.67 | 167144 | **166779.17** |
| acin5 | 163061 | 162730.13 | 163066 | 162762.03 | 163027 | 162720.77 | ***163130*** | **162771.03** | 163038 | 162766.37 |
| acin7 | 179835 | **179578.17** | **179932** | 179543.03 | 179886 | 179540.8 | 179888 | 179541.43 | 179820 | 179536.23 |
| acin9 | 342936 | 342522.9 | 342949 | 342474.73 | 342965 | 342486.07 | ***342995*** | **342548.17** | 342860 | 342531.07 |
| bx842596_4 | 227151 | 225900 | 227090 | **226011.7** | **227171** | 225101.33 | 226639 | 225343.93 | 227068 | 225410.87 |
| bx842596_7 | 441893 | 438941.1 | 441867 | **438697.57** | **442100** | 438276.1 | 441686 | 437711.73 | 440757 | 437661.3 |
| j02459_7 | 116198 | 115489.17 | 116110 | **115579.87** | **116336** | 114923.13 | 116029 | 115315.6 | 115943 | 115292.9 |
| m15421_5 | **38675** | 38404.17 | 38668 | 38397.4 | 38667 | 38331.47 | 38658 | **38410.43** | 38655 | 38410.23 |
| m15421_6 | 48034 | 47634.97 | 48048 | 47642.7 | ***48052*** | 47550.93 | 47916 | **47554.33** | 47875 | 47530.6 |
| m15421_7 | ***55094*** | 54693.57 | 55020 | 54698.2 | 54986 | 54507.53 | 54897 | **54743.37** | 54888 | **54743.37** |
| x60189_4 | ***11478*** | 11262.5 | ***11478*** | 11236.7 | ***11478*** | **11313.37** | ***11478*** | 11195.53 | ***11478*** | 11228.5 |
| x60189_5 | ***14161*** | 13963.27 | ***14161*** | 13966.7 | ***14161*** | 13959.83 | 14133 | 13950.83 | 14127 | **13968.3** |
| x60189_6 | ***18301*** | 18016.93 | ***18301*** | 18010.97 | 18184 | 17958.5 | 18184 | ***18017*** | 18184 | **18017** |
| x60189_7 | 21228 | 20987.3 | **21257** | 20964.43 | 21218 | **20997.8** | 21218 | 20904.2 | 21210 | 20928.67 |
| f25_305 | ***596*** | 592.7 | ***596*** | 593.33 | ***596*** | **594.87** | ***596*** | 594.23 | ***596*** | 594.37 |
| f25_400 | ***777*** | 773.27 | ***777*** | 773.3 | ***777*** | **775.1** | ***777*** | 769.27 | ***777*** | 769.8 |
| f25_500 | ***921*** | 915.73 | ***921*** | 916.07 | ***921*** | **918.73** | ***921*** | 916.23 | ***921*** | 916 |
| f50_315 | ***1581*** | 1561.87 | 1579 | 1562.2 | 1580 | 1560.43 | 1576 | 1562.3 | 1579 | **1563.7** |
| f50_412 | 1571 | 1557.4 | **1572** | 1556.07 | 1569 | **1559.53** | 1568 | 1552.77 | 1570 | 1549.37 |
| f50_498 | 1568 | **1554.63** | 1568 | 1554.27 | ***1570*** | 1554.5 | 1566 | 1551.3 | 1568 | 1551.67 |
| f100_307 | **2784** | 2758.4 | 2779 | 2760.37 | 2781 | 2763.43 | 2778 | 2763.73 | 2779 | **2764.37** |
| f100_415 | **2848** | 2820.27 | **2848** | 2818.87 | 2842 | **2820.93** | 2844 | 2813.8 | 2842 | 2812.63 |
| f100_512 | 2717 | 2694.77 | **2718** | 2696.07 | 2713 | **2696.93** | 2713 | 2696.8 | 2711 | 2695.57 |
| f508_354 | 17887 | 17779.37 | **17888** | 17778.63 | 17872 | **17795.13** | 17853 | 17778.43 | 17868 | 17780.43 |
| f635_350 | 22155 | 22048.43 | **22164** | 22046.47 | 22145 | **22065.67** | 22142 | 22048.33 | 22101 | 22047.67 |
| f737_355 | **24744** | 24555.7 | 24703 | 24557.63 | 24706 | **24564.33** | 24704 | 24536.2 | 24725 | 24531.7 |
| f1343_354 | **47928** | 47632.03 | 47922 | 47632.8 | 47877 | **47641.43** | 47841 | 47638.13 | 47879 | 47636.6 |
| f1577_354 | **55998** | 55671 | 55958 | 55665.73 | 55942 | 55684.77 | 55894 | **55704.33** | 55943 | 55703.77 |

Table 6.9: A collection of the best results and best average best results obtained by each algorithm on all data sets with post optimization

### 6.6.2 Second Set of Results

The second set of experiments used a different paradigm than the first. Instead of using the fixed number of restarts this set of experiments implemented the dynamic approach which allowed some number of generations of no learning to occur before a restart. This second set of experiments also applied the factor approach (2x the number of fragments) to the initial number of transpositions with the percentage approach to alter the number of transpositions on a recentre.

The second set of experiments conducted used a variation of the algorithms which forced a recentre to occur on the first restart. For more details on these results refer to Section 6.6.2.

Results for the second set of experiments can be found in Section A.6.1. Section A.6.2 contains the results that have not had any post optimization and Section A.6.2 contains the results that have had 2-Opt applied as a post optimization technique. Section A.6.2 contains results when there was a forced recentre on the first restart and Section A.6.2 contains post optimized results when there was a forced recentre on the first restart. There are multiple tables for each problem instance where each table corresponds to a particular algorithm variation. Every table is presented such that all combinations of system parameters used are available. The tables are broken down into groups of columns which display each set of number of restarts used: 0

(basic GA), 5, 10, and 20.

Plots summarizing the best results for the second set of results can be found in Section B.5.2, specifically Section B.5.2 contains the plots before any post optimization was performed, Section B.5.2 contains results after post optimization, Section B.5.2 contains plots before any post optimization with a forced initial recentre, and Section B.5.2 contains plots with post optimization and a forced recentre on the first restart. Section B.5.2 contains plots comparing the effect of no forced recentre and a forced recenter. All plots except for the forced restart comparison plots are of the mean values along with vertical bars that represent the 95% confidence interval. All plots give a visualization of results, allowing for trends to easily be observed and each plot shows the results of all algorithm variations on a given problem instance.

Multiple sets of experiments were performed on the second set of experiments: RRGA, RRGA+IM, and RRGA+RS. All of these combinations of GA variations will also be used with the two different types of representations. Unlike the first set of experiments the transposition representation variation of the RRGA using the Island Model was implemented.

Unlike the first set of experiments, only 1000 generations were allowed before migration in the RRGA+IM variations.

No analysis is done on the results obtained that have no post optimization as these results are less significant and post optimization consistently performs much better.

The best average result for each algorithm variation on each problem instance was not included in the summary tables in this section. For a complete set of the average results on all instances on all sets of system parameters refer to Section A.6.2.

### No Forced Recentre

Table 6.10 presents a summary of the best results obtained by each algorithm after post optimization. **Bold** entries represent the best performing algorithm's result on each data set and ***Italicized Bold*** entries are results that outperformed or tied all algorithms presented in Table 5.10. Comparisons for the $f$-series data set are made to Table 6.7. There are multiple instances where for a given data set ,more than one algorithm outperformed all other algorithms presented in Table 5.10. These results show that at least one variation of the studied algorithms was able to outperform the current best performing DNA fragment assembly problem algorithm on 10/16 problem instances. In addition, this batch was able to tie the suspected optimal on 4/14 of the $f$-series problem instances. Similarly to the first set of experiments all results were very close to one another which suggests that all algorithm variations

studied are effective.

When studying Table 6.10 one can see that no one algorithm dominates on all problem instances, however it is interesting to note how well the transposition representation variations of the algorithms perform on the original 16 benchmark instances compared to the direct representation. The results for the $f$-series instances are inconsistent with respect to the best performing algorithm but all results are within 1% of one another. In almost all cases the algorithms are able to produce results less than 1% away from the suspected optimal.

Once again, when analyzing tables containing results with post optimization and no forced restart (see Section A.6.2) it is clear that there is little to no consistency with respect to how the system parameters affect the results. Since post optimization was used with these experiments the initial seed had a minimal affect on the final results. Similar to results seen in previous experiments, it appears that as the likelihood of more restarts increased, the standard deviation decreased. Overall the results are very close to one another across the system parameters and the algorithm variations.

Each plot summarizes the average result of all algorithms on a specific problem instance. In general, many of the previous observations made when analyzing the plots can be made when studying the plots in Section B.5.2. It appears that as the likelihood of restarts increases, the confidence interval deceases. A noteworthy observation is that the addition of restarts would help some versions of the algorithm on average (normally the basic with RRGA with both representations) while it would hurt the other versions of the algorithms on average (these plots contain the mean values, not the maximum). It also appears that the confidence intervals on this second set of experiments have a much larger range. In almost all cases the best mean value was obtained by a version of the algorithms that used some number of restarts. All variations of the algorithm performed well with no one algorithm always outperforming the others.

### Large Problem Instances With Dynamic Approach

Two large, real world problem instances were studied for the second set of experiments, namely the COL data set and the MW2 data set. Unlike the first set of experiments which used LKH as the initial seed, there was no initial seed for this second of experiments. This was due to the fact that no learning occurred in the first set of experiments (as the LKH was suspected to already be optimal) which does not help demonstrate the strengths or weaknesses of a given algorithm.

Tables of results for each data set and algorithm combination can be found in

Section A.6.2 and their plots can be seen in Section B.5.2. Although the obtained results are not close to the suspected optimal, one can see how well some variations of the algorithms work compared to the others. When referring to the plots one can see that half of the algorithm's results are comparable while the transposition representation RRGA and the transposition representation RRGA+RS substantially outperformed the others. This can be seen on both of the large instances. These trends can be seen in both plots but is not explicitly found in other plots concerning the DNA fragment assembly problem, where it may be found in some cases but not in general. On the MW2 instance the transposition representation RRGA+IM version was able to perform better than the three direct representation variations but was not able to produce such strong results as the two other versions of the algorithm using the indirect transposition representation.

### Comparison of First and Second Set of Experimental Results

Section B.5.2 contains plots which show comparisons between the results for the first (static number of restarts with the fixed transposition alteration paradigm) and second (dynamic number of restarts with the percentage transposition alteration paradigm) set of experiment. With a superficial look at the results one might be inclined to say that the dynamic approach produced much better results but after further analysis it is very difficult to determine which set of experiments worked better as all results are high quality, with most results within less than half a percent of each other.

One should consider that it is difficult to compare these experimental sets based simply on the number of restarts as these values are not the same between the first and second set of experimental results due to the nature of the dynamic restarting approach.

### Forced Recentre

Table 6.10 summarizes the best results obtained by each algorithm with a forced recentre after the first restart and after post optimization. **Bold** entries represent the best performing algorithm's result on each data set and ***Italicized Bold*** entries are results that outperformed or tied all algorithms presented in Table 5.10. Comparisons for the $f$-series data set are made to Table 6.7. There are multiple instances where the results for more than one algorithm on a given data set outperformed all other algorithms presented in Table 5.10. These results show that at least one variation

| Data Set Name | Dir. RRGA Max | Dir. RRGA+RS Max | Dir. RRGA+IM Max | Trans RRGA Max | Trans RRGA+RS Max | Trans RRGA+IM Max |
|---|---|---|---|---|---|---|
| acin1 | 47356 | 47354 | 47436 | ***47443*** | 47429 | 47407 |
| acin2 | 151295 | 151269 | 151267 | ***151322*** | 151293 | 151299 |
| acin3 | 166980 | 167015 | 167029 | 167351 | 167395 | ***167413*** |
| acin5 | 163171 | 163167 | 163150 | 163168 | ***163182*** | 163143 |
| acin7 | 179936 | 179920 | 179958 | **179975** | 179949 | 179959 |
| acin9 | 343130 | 343111 | 343140 | 343171 | 343163 | ***343208*** |
| bx842596_4 | 227269 | 227383 | 227184 | 227133 | ***227570*** | 227229 |
| bx842596_7 | **442381** | 441393 | 441532 | 442079 | 441685 | 441429 |
| j02459_7 | 116124 | 116139 | 116239 | 116327 | **116438** | 116333 |
| m15421_5 | 38638 | 38664 | 38655 | **38681** | 38658 | 38636 |
| m15421_6 | 48034 | **48043** | **48043** | 47939 | 47986 | 47973 |
| m15421_7 | 55100 | ***55112*** | 55002 | 54960 | 54939 | 54959 |
| x60189_4 | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** |
| x60189_5 | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** | 14133 |
| x60189_6 | 18216 | 18275 | ***18301*** | 18184 | 18292 | ***18301*** |
| x60189_7 | 21196 | 21233 | **21260** | 21212 | 21212 | 21218 |
| f25_305 | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** |
| f25_400 | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** |
| f25_500 | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** |
| f50_315 | 1578 | **1580** | 1576 | 1578 | 1578 | 1578 |
| f50_412 | 1571 | 1570 | **1572** | 1569 | 1569 | 1570 |
| f50_498 | 1568 | 1565 | ***1570*** | 1568 | 1566 | 1565 |
| f100_307 | 2771 | 2774 | 2771 | **2780** | 2773 | 2773 |
| f100_415 | 2844 | 2840 | **2845** | **2845** | 2838 | 2842 |
| f100_512 | **2718** | 2713 | 2714 | 2716 | **2718** | 2713 |
| f508_354 | 17889 | **17925** | 17906 | 17921 | 17921 | 17899 |
| f635_350 | 22193 | 22183 | 22203 | 22175 | 22168 | **22220** |
| f737_355 | 24795 | 24800 | 24797 | **24808** | 24788 | 24796 |
| f1343_354 | 48057 | **48098** | 48035 | 48090 | 48081 | 48092 |
| f1577_354 | **56205** | 56172 | 56195 | 56182 | 56147 | 56159 |

Table 6.10: Summary of Results After Post Optimization and No Forced Recentre

of the studied algorithms was able to outperform the current best performing DNA fragment assembly problem algorithm on 11/16 problem instances. In addition, this batch was able to tie the suspected optimal on 5/14 of the $f$-series problem instances. Once again, all results are very competitive and are within a very small distance of the best result obtained by the best performing algorithm.

Table 6.11 shows that no one algorithm dominates on all problem instances. This trend appears to be consistent throughout all summary tables. Unlike previous tables, almost all of the best results on the original 16 benchmarks came from a variation of the RRGA using the indirect transposition representation. The results for the $f$-series instances are inconsistent with the most consistency coming from the RRGA with ring species using the direct representation. Although some results are better than others all algorithms performed well with very competitive candidate solutions and in many cases more than one variation of the RRGA was able to outperform the previous best result.

Tables in Section A.6.2 demonstrate how inconsistent the results are with respect to the system parameter used. Unlike the previous set of experiments which did not force a recentre these results seem to be partial to the versions of the algorithm which were seeded with 2-Opt even with post optimization, however this trend cannot be seen in all tables. A surprising and very interesting observation that can be seen is that unlike all previous tables, as the likelihood of restarts increases, so does the

standard deviation. This suggests that there is a large spread in the results being produced. This large deviation could be very beneficial as the genetic diversity is likely to be higher. Overall the results are very close to one another across the system parameters and the algorithm variations.

Each plot summarizes the average result of all algorithms on a specific problem instance. Similar to the experiments with no forced recentre, the plots in Section B.5.2 show that on average, no one algorithm always outperforms the others and all results are very competitive. Overall there are minimal trends seen with the likelihood of restarts and the quality of results. There are isolated cases of trends in which the number of restarts affects the results on a specific algorithm on particular problem instances but these are few and far between. Unlike previous results, the 95% confidence intervals do not change with respect to the increase in likelihood of restarts occurring. In almost all cases the best mean value was obtained by a version of the algorithms that used some number of restarts.

#### Comparison of No Forced and Forced Recentre Experimental Results

When comparing the results seen in Tables 6.10 and 6.11 it is clear that forcing a recentre on the first restart has a strong impact on the overall results.

When analyzing the plots seen in Section B.5.2 it can be seen that all results are competitive and very close to one another. The easiest observation that can be made is that in almost all cases the best performing algorithm was one which used the forced recentre. This phenomenon is not surprising as one would expect that forcing an initial restart will jump start the benefit of the RRGA at avoiding local optima.

### 6.6.3 Third Set of Results

The third set of experiments was identical to the second set with the addition of another round of RRGA variations and post optimization. One could consider the addition of another round of metaheuristics and post optimization. Ultimately the results in this section will be of similar form to the following: $heuristic \rightarrow metaheuristic \rightarrow heuristic \rightarrow metaheuristic$ and $heuristic \rightarrow metaheuristic \rightarrow heuristic \rightarrow metaheuristic \rightarrow heuristic$. The reason for this implementation is to explore the effectiveness of the RRGA variations at avoiding a strong local optimum and to determine if additional learning is worth while after a strong convergence.

In this section the experiments that are finished with the metaheuristic are considered the ones with "no post optimization" and the experiments finished with the

| Data Set Name | Dir. RRGA Max | Dir. RRGA+RS Max | Dir. RRGA+IM Max | Trans RRGA Max | Trans RRGA+RS Max | Trans RRGA+IM Max |
|---|---|---|---|---|---|---|
| acin1 | 47429 | 47403 | 47436 | ***47443*** | 47429 | 47409 |
| acin2 | 151295 | 151299 | ***151329*** | 151322 | 151305 | 151299 |
| acin3 | 166980 | 167015 | 167140 | 167351 | 167395 | ***167413*** |
| acin5 | 163171 | 163167 | 163186 | 163182 | ***163232*** | 163193 |
| acin7 | 179969 | 179966 | 179958 | 180040 | ***180087*** | 180043 |
| acin9 | 343152 | 343137 | 343165 | ***343279*** | 343208 | 343220 |
| bx842596_4 | 227269 | 227383 | 227235 | 227133 | ***227570*** | 227229 |
| bx842596_7 | 442381 | **442480** | 441922 | 442079 | 441685 | 441429 |
| j02459_7 | 116172 | 116298 | 116401 | 116391 | **116438** | 116308 |
| m15421_5 | 38638 | 38664 | 38655 | **38681** | 38658 | 38636 |
| m15421_6 | 48034 | **48043** | **48043** | 47939 | 47986 | 47976 |
| m15421_7 | 55100 | 55112 | ***55141*** | 54960 | 54968 | 55065 |
| x60189_4 | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** |
| x60189_5 | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** | 14133 |
| x60189_6 | 18216 | 18275 | ***18301*** | 18184 | 18292 | ***18301*** |
| x60189_7 | 21196 | 21233 | **21260** | 21212 | 21212 | 21218 |
| f25_305 | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** |
| f25_400 | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** |
| f25_500 | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** |
| f50_315 | 1578 | **1580** | 1576 | 1578 | 1578 | 1578 |
| f50_412 | ***1573*** | 1571 | 1572 | 1569 | 1569 | 1570 |
| f50_498 | 1568 | ***1570*** | ***1570*** | 1568 | 1566 | 1565 |
| f100_307 | 2777 | 2779 | 2774 | **2780** | 2778 | 2779 |
| f100_415 | 2844 | 2843 | **2846** | 2845 | 2838 | 2842 |
| f100_512 | **2718** | 2713 | 2714 | 2716 | **2718** | 2713 |
| f508_354 | 17896 | **17925** | 17906 | 17921 | 17921 | 17920 |
| f635_350 | 22193 | **22219** | 22204 | 22196 | 22199 | 22220 |
| f737_355 | 24795 | **24844** | 24797 | 24808 | 24795 | 24798 |
| f1343_354 | 48080 | 48108 | 48104 | **48124** | 48094 | 48105 |
| f1577_354 | **56214** | 56172 | 56195 | 56182 | 56193 | 56204 |

Table 6.11: Summary of Results After Post Optimization and Forced Recentre

heuristic are considered to have been post optimized.

Just like the second set of experiments the dynamic approach to the number of restarts was taken. The factor approach (2x the number of fragments) to the initial number of transpositions with the percentage approach to alter the number of transpositions on a recentre was also used.

Similar to the second set of experiments conducted, variations of the algorithms which forced a recentre to occur on the first restart were implemented. For more details on these results refer to Section 6.6.3.

All results for the third set of experiments can be found in Section A.6.3. Section A.6.3 has results that have not had any post optimization and Section A.6.3 contains the results after 2-Opt was applied as a post optimization technique. Section A.6.3 contains results when there was no post optimization and a forced recentre on the first restart and Section A.6.3 contains post optimized results with a forced recentre on the first restart. There are multiple tables for each problem instance where each table corresponds to a particular algorithm variation. All tables are presented such that every combination of system parameters used is available. The tables are broken down into groups of columns which display each set of number of restarts used: 0 (basic GA), 5, 10, and 20.

Plots summarizing the best results for the third set of results can be found in Section B.5.3, specifically Section B.5.3 contains the plots before any post optimiza-

tion was performed with no forced recentre, Section B.5.3 contains results after post optimization with no forced recentre, Section B.5.3 contains plots before any post optimization with a forced initial recentre, and Section B.5.3 contains plots with post optimization and a forced recentre on the first restart. All of these plots are of the mean values along with vertical bars that represent the 95% confidence interval. All plots give a visualization of results allowing for trends to easily be observed and each plot shows the results of all algorithm variations on a given problem instance.

Section B.5.3 contains plots comparing the second and third experimental results and section B.5.3 contains plots comparing the effect of no forced recentre and a forced recenter.

No analysis is done on the results obtained that have no "post optimization" as these results are less significant and post optimization considerably improves the results.

The best average result for each algorithm variation on each problem instance was not included in the summary tables in this section. For a complete set of the average results on all instances for all sets of system parameters refer to Section A.6.3.

### No Forced Recentre

A summary of the best results obtained by each algorithm after post optimization and no forced recentre can be seen in Table 6.12. **Bold** entries represent the best performing algorithm's result on each data set and ***Italicized Bold*** entries are results that outperformed or tied all algorithms presented in Table 5.10. Comparisons for the $f$-series data set are made to Table 6.7. There are multiple instances the results for more than one algorithm on a given data set outperformed all other algorithms presented in Table 5.10. This table shows that at least one variation of the implemented algorithms outperformed all others on 13/16 problems. These results are unprecedented as not only are these algorithms performing well but no other algorithm performs as well as consistently. These algorithms were also able to achieve the suspected optimal on 5/14 of the $f$-series problem instances. Similarly to the previous experiments all results were very close to one another which suggests that all algorithm variations studied are effective. A clear improvement over the second set of results can be observed from this summary table.

Table 6.12 shows that no one algorithm always dominates but similar to the second set of results, the transposition representation variations appear to perform better than the direct representation variations. Again, all results are very close to one another and in nearly all cases the algorithms are able to produce results less than

| Data Set Name | Dir. RRGA Max | Dir. RRGA+RS Max | Dir. RRGA+IM Max | Trans RRGA Max | Trans RRGA+RS Max | Trans RRGA+IM Max |
|---|---|---|---|---|---|---|
| acin1 | 47356 | 47354 | 47436 | ***47458*** | 47433 | 47447 |
| acin2 | 151295 | 151269 | 151267 | ***151322*** | 151293 | 151299 |
| acin3 | 166980 | 167015 | 167029 | 167351 | 167395 | ***167413*** |
| acin5 | 163171 | 163167 | 163150 | 163168 | ***163182*** | 163143 |
| acin7 | 179936 | 179920 | 179958 | **179975** | 179949 | 179959 |
| acin9 | 343130 | 343111 | 343140 | 343171 | 343163 | ***343208*** |
| bx842596_4 | 227269 | 227383 | 227184 | 227238 | ***227570*** | 227384 |
| bx842596_7 | **442381** | 441393 | 441532 | 442269 | 442115 | 441532 |
| j02459_7 | 116124 | 116139 | ***116662*** | 116434 | 116454 | 116406 |
| m15421_5 | 38638 | 38664 | 38664 | **38694** | 38688 | 38690 |
| m15421_6 | 48034 | 48043 | 48043 | ***48052*** | 48050 | 48032 |
| m15421_7 | 55100 | 55112 | ***55168*** | 55036 | 55020 | 55034 |
| x60189_4 | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** |
| x60189_5 | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** |
| x60189_6 | 18216 | ***18301*** | ***18301*** | ***18301*** | ***18301*** | ***18301*** |
| x60189_7 | ***21271*** | 21233 | ***21271*** | 21212 | 21218 | 21218 |
| f25_305 | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** |
| f25_400 | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** |
| f25_500 | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** |
| f50_315 | ***1581*** | 1580 | 1576 | ***1581*** | 1578 | 1578 |
| f50_412 | 1571 | 1570 | 1572 | 1572 | **1572** | 1570 |
| f50_498 | 1568 | 1565 | ***1570*** | 1568 | 1568 | 1567 |
| f100_307 | 2771 | 2774 | 2771 | **2780** | 2773 | 2773 |
| f100_415 | 2844 | 2840 | 2845 | **2845** | 2838 | 2842 |
| f100_512 | **2718** | 2713 | 2714 | 2717 | **2718** | 2713 |
| f508_354 | 17889 | **17925** | 17906 | 17921 | 17921 | 17899 |
| f635_350 | 22193 | 22183 | 22203 | 22175 | 22168 | **22220** |
| f737_355 | 24795 | 24800 | 24797 | **24808** | 24788 | 24796 |
| f1343_354 | 48057 | **48098** | 48035 | 48090 | 48081 | 48092 |
| f1577_354 | **56205** | 56172 | 56195 | 56182 | 56147 | 56159 |

Table 6.12: Summary of Results After Post Optimization on Two Sets of GA Runs and No Forced Recentre

1% away from the suspected optimal.

The tables in Section A.6.3 show that, once again, system parameters have a minimal impact on the final result. Unlike previous results using 2-Opt, post optimization had a minimal impact on the end results. This can be explained due to the fact that the algorithm has had a long time to run and thereby loses the benefit of the initial seeds. An interesting note is that unlike the earlier experimental results the standard deviation tends to grow with the likelihood of more restarts increased. Overall the results are very close to one another across the system parameters and the algorithm variations.

Each plot summarizes the average result of all algorithms on a specific problem instance. Many of the previous trends observed in plots on previous experiments can be seen in the plots in Section A.6.3. These plots show that on average all algorithms perform competitively and that no one algorithm always dominates. The effect the likelihood of restarts has on the quality of results is inconsistent and chaotic, however it appears that the results are improved by having at least some number of restarts occurring. Unlike previous results, these plots show that the likelihood of restarts has minimal effect on the confidence interval. For a more specific view of the results refer to individual plots seen in Section A.6.3.

**Forced Recentre**

Table 6.13 summarizes the best results obtained by each algorithm after post optimization with a forced recentre. **Bold** entries represent the results for the best performing algorithm on each data set and ***Italicized Bold*** entries are results that outperformed or tied all algorithms presented in Table 5.10. Comparisons for the $f$-series data set are made to Table 6.7. There are many instances where the results for more than one algorithms on a given data set outperformed all other algorithms presented in Table 5.10. Table 6.13 shows that at least one variation of the studied algorithms outperformed the best DNA fragment assembly problem algorithms on 13/16 of the problem instances. Although Table 6.12 had the same result (13/16 problem instances) the actual problem instances for which these results were obtained are different showing that no one approach is best. It should be noted that more variations of the algorithms are achieving better results consistently on this particular experiment set. The algorithms were also able to achieve the suspected optimal on 5/14 of the $f$-series problem instances. All results were very close to one another suggesting that all algorithm variations studied are effective.

Table 6.13 shows that no one algorithm dominates all problem instances, however, once again, the transposition representation variations appear to perform better. All results are very competitive regardless of whether they beat out all other algorithms. In most cases all algorithms were able to achieve results within less than 1% of the suspected optimal.

Section A.6.3 contains tables with results of all experiments conducted for this set of runs. Similar to almost all results so far in this work the system parameters have minimal impact on the results. Unlike previous results the likelihood of more restarts has no apparent impact on the standard deviation, i.e. these values increase and decrease with no apparent trend.

Each plot available in Section B.5.3 summarizes the average result of all algorithms on a specific problem instance. Previous trends observed in plots on prior experiments can be seen in these plots. These plots show that on average all algorithms perform competitively and no one algorithm always dominates. Similar to the results seen in Section B.5.3 which presents plots with no forced recentre, the effect of the likelihood of restarts on the quality of results is inconsistent and chaotic. However it appears that the results are improved by having at least some number of restarts occurring. In addition the ring species variations of the algorithms perform very competitively. The confidence intervals change with respect to the likelihood of restarts in an interesting way: when the results are improved with the use of restarts then the 95% confidence

| Data Set Name | Dir. RRGA Max | Dir. RRGA+RS Max | Dir. RRGA+IM Max | Trans RRGA Max | Trans RRGA+RS Max | Trans RRGA+IM Max |
|---|---|---|---|---|---|---|
| acin1 | 47454 | ***47543*** | 47425 | 47460 | 47470 | 47433 |
| acin2 | 151294 | 151308 | 151346 | ***151353*** | 151336 | 151320 |
| acin3 | 167183 | 167158 | 167124 | ***167431*** | 167420 | 167382 |
| acin5 | 163290 | 163177 | 163206 | ***163313*** | 163272 | 163237 |
| acin7 | 179978 | 179968 | 179936 | ***180177*** | 180147 | 180088 |
| acin9 | 343187 | 343286 | 343181 | ***343315*** | 343297 | 343310 |
| bx842596_4 | 227316 | 227182 | 227093 | 227238 | 227321 | ***227384*** |
| bx842596_7 | **443435** | 442688 | 442689 | 442385 | 442227 | 442101 |
| j02459_7 | 116391 | 116405 | 116383 | **116487** | **116487** | 116352 |
| m15421_5 | 38683 | 38684 | 38662 | **38694** | 38681 | 38681 |
| m15421_6 | 48050 | 48050 | 47978 | ***48052*** | 48041 | 48039 |
| m15421_7 | 55152 | 55155 | ***55168*** | 55071 | 55020 | 55050 |
| x60189_4 | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** |
| x60189_5 | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** |
| x60189_6 | 18184 | ***18301*** | ***18301*** | ***18301*** | ***18301*** | ***18301*** |
| x60189_7 | ***21271*** | 21268 | 21217 | 21212 | 21218 | 21218 |
| f25_305 | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** |
| f25_400 | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** |
| f25_500 | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** |
| f50_315 | ***1581*** | 1580 | 1578 | 1578 | 1578 | 1578 |
| f50_412 | **1572** | **1572** | **1572** | **1572** | 1571 | 1569 |
| f50_498 | 1568 | ***1570*** | ***1570*** | ***1570*** | ***1570*** | ***1570*** |
| f100_307 | **2784** | 2776 | 2779 | 2780 | 2779 | 2776 |
| f100_415 | **2848** | 2846 | 2843 | 2846 | 2845 | 2846 |
| f100_512 | 2716 | 2715 | 2717 | 2717 | 2717 | **2720** |
| f508_354 | 17943 | 17914 | 17916 | 17936 | **17949** | 17901 |
| f635_350 | 22202 | 22181 | 22208 | 22239 | **22240** | 22222 |
| f737_355 | 24829 | 24801 | 24821 | 24844 | 24840 | **24854** |
| f1343_354 | 48100 | 48132 | 48112 | 48205 | **48209** | 48157 |
| f1577_354 | 56237 | 56254 | 56256 | 56300 | **56306** | 56243 |

Table 6.13: Summary of Results After Post Optimization on Two Sets of GA Runs and Forced Recentre

interval decreases but if these results do not improve then the interval increases. These trends cannot be seen in all plots and for a more specific view of the results refer to the individual plots.

### Comparison of No Forced and Forced Recentre Experimental Results

A comparing of the results seen in Tables 6.12 and 6.13 it is clear that forcing a recentre on the first restart has a strong impact on the overall results.

When analyzing the plots found in Section B.5.3 it can be observed that all results are very competitive and close to one another. Similar to the observation made on the second set of experimental results, in almost all cases the best performing algorithm was one which implemented a forced recentre. This trend is expected as forcing an initial restart will jump start the benefit of the RRGA in avoiding local optima.

### Comparison of Second and Third Set of Experimental Results With Forced Restarts

Section B.5.3 contains plots which show comparisons between the second and third set of experimental results. These plots make it very clear that the third set of experimental results are better. This is not surprising considering that the RRGA variation

is run completely an additional time with another run of 2-Opt as post optimization on the third set. These results simply demonstrate the benefit of combining heuristics and metaheuristics in creative ways.

### 6.6.4 Fourth Set of Results

The fourth set of experiments was a reimplementation of the third except the representations were swapped, i.e. if the first metaheuristic used the direct representation then the second metaheuristic used the indirect transposition representation. Just like the third set of experiment runs, this section will be of similar form to the following: $heuristic \rightarrow metaheuristic \rightarrow heuristic \rightarrow metaheuristic(repSwap)$ and $heuristic \rightarrow metaheuristic \rightarrow heuristic \rightarrow metaheuristic(repSwap) \rightarrow heuristic$. Experiments finished with the metaheuristic are considered the ones with "no post optimization" and the experiments finished with the heuristic are considered to have been post optimized.

The reasoning behind swapping the representations is to try to take advantage of the topography of each representation's search space. By changing the representations one could reason that another representation could easily remove itself from a local optimum as there is a chance that the optimum may not be present in a different landscape.

The summary tables in this section are presented in such a way that the results are under the representations on which they finished. For example, if a run was started with the RRGA+RS using the direct representation followed by a run of the RRGA+RS using the indirect transposition representation then it would be presented in the summary table under the "Trans (snd) RRGA+RS" column.

This fourth set of experiments used the dynamic approach to the number of restarts. The factor approach (2x the number of fragments) to the initial number of transpositions with the percentage approach to alter the number of transpositions on a recentre was used.

Similar to the second and third set of experiments, variations of the algorithms which forced a recentre to occur on the first restart were implemented. For details on these results refer to Section 6.6.4.

All results for the fourth set of experiments can be found in Section A.6.4. Section A.6.4 has results that have not been post optimized and Section A.6.4 contains the results after 2-Opt was applied as a post optimization technique. Section A.6.4 contains results when there was no post optimization and a forced recentre on the

first restart and Section A.6.4 contains post optimized results with a forced recentre on the first restart.

Multiple tables are presented for each problem instance where each table corresponds to a particular algorithm variation. All tables are presented such that every combination of system parameters used is available. The tables are broken down into groups of columns displaying each set of number of restarts used: 0 (basic GA), 5, 10, and 20.

Plots summarizing the best results for the fourth set of results can be found in Section B.5.4. Section B.5.4 contains the plots before any post optimization was performed with no forced recentre and Section B.5.4 contains results after post optimization with no forced recentre. Section B.5.4 contains plots before any post optimization with a forced initial recentre and Section B.5.4 contains plots with post optimization and a forced recentre on the first restart. All of these plots are of the mean values along with vertical bars that represent the 95% confidence interval. All plots give a visualization of results allowing for trends to easily be observed and each plot shows the results of all algorithm variations on a given problem instance.

Section B.5.4 contains plots comparing the third and fourth experimental results and Section B.5.4 contains plots comparing the results when using no forced recentre and a forced recentre.

No analysis is done on the results obtained that have no "post optimization" as these results are less significant and post optimization considerably improves the results.

The best average result for each algorithm variation on each problem instance was not included in the summary tables in this section. For a complete set of the average results on all instances on all sets of system parameters refer to Section A.6.4.

### Results With Post Optimization and No Forced Recentre

Table 6.14 contains a summary of the best results obtained by each algorithm after post optimization and no forced recentre. **Bold** entries represent results for the best performing algorithm on each data set and ***Italicized Bold*** entries are results that outperformed or tied all algorithms presented in Table 5.10. Comparisons for the $f$-series data set are made to Table 6.7. There are multiple instances where the results for more than one algorithm on a given data set outperformed all other algorithms presented in Table 5.10. In this table one can observe that at least one variation of the implemented algorithms outperformed all others on 13/16 of the problems and were able to achieve the suspected optimal on 5/14 of the $f$-series

problem instances. These results are unprecedented as not only are these algorithms performing well but no other algorithm performs as well as consistently. Similarly to the previous experiments all results were very close to one another which suggests that all algorithm variations studied are effective.

Table 6.14 unsurprisingly shows that no one algorithm dominates all problem instances. Unlike the second and third experiment sets there was a trend of the transposition representation constantly performing better. This is reasonable as the representations are being mixed halfway through the executions. All results are very close to one another and in almost all cases the algorithms are able to produce results less than 1% away from the suspected optimal.

As one would expect based on previous observations, the tables in Section A.6.4 show that the system parameters have little to no real effect on the final result. Unlike the common trend seen in many of the experiments of the initial seed being important, these results suggest otherwise as there is minimal consistency seen with respect to which seed works better. This is not surprising due to the fact that the algorithm has had a long time to run and lose the benefit of the initial seed. The standard deviation tends to grow as the likelihood of more restarts increased. Overall the results are very close to one another across the system parameters and the algorithm variations.

The tables in Section A.6.4 show that, once again, system parameters have a minimal impact on the final result with no real statistical differences. Similar to almost all previous results, the runs that were seeded with 2-Opt tended to perform better (although this trend cannot be seen in all cases). The values of the standard deviations are chaotic and only small isolated trends can be observed from table to table. Overall the results are very close to one another across the system parameters and the algorithm variations.

Section A.6.4 contains plots summarizing the average result with the 95% confidence interval on all algorithms on a specific problem instance. These plots show that on average all algorithms perform very competitively and that no one algorithm always dominates. In most cases all results are within 1% of each other. The effect of the likelihood of restarts on the quality of results is inconsistent and chaotic but in almost all cases the results are improved by having at least some number of restarts occurring. These plots show that the likelihood of restarts has little to no effect on the confidence interval. For a more specific view of the results refer to individual plots seen in Section A.6.4.

| Data Set Name | Dir. (snd) RRGA Max | Dir. (snd) RRGA+RS Max | Dir. (snd) RRGA+IM Max | Trans (snd) RRGA Max | Trans (snd) RRGA+RS Max | Trans (snd) RRGA+IM Max |
|---|---|---|---|---|---|---|
| acin1 | 47443 | 47429 | 47452 | ***47497*** | 47466 | 47474 |
| acin2 | ***151322*** | 151293 | 151299 | 151295 | 151269 | 151267 |
| acin3 | 167351 | 167395 | ***167413*** | 166980 | 167015 | 167029 |
| acin5 | 163168 | ***163182*** | 163143 | 163171 | 163167 | 163150 |
| acin7 | **179975** | 179949 | 179959 | 179936 | 179920 | 179958 |
| acin9 | 343171 | 343163 | ***343208*** | 343130 | 343111 | 343140 |
| bx842596_4 | 227133 | ***227570*** | 227229 | 227481 | 227383 | 227184 |
| bx842596_7 | 442079 | 441685 | 441429 | **442903** | 442246 | 442452 |
| j02459_7 | 116327 | 116438 | 116373 | 116348 | 116188 | **116502** |
| m15421_5 | 38681 | 38658 | ***38690*** | 38683 | 38666 | ***38690*** |
| m15421_6 | 47957 | 48043 | 48050 | ***48052*** | ***48052*** | 48046 |
| m15421_7 | 54975 | 54939 | 55156 | 55165 | 55161 | ***55168*** |
| x60189_4 | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** |
| x60189_5 | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** |
| x60189_6 | ***18301*** | ***18301*** | ***18301*** | 18216 | ***18301*** | ***18301*** |
| x60189_7 | ***21271*** | 21249 | 21218 | ***21271*** | 21233 | ***21271*** |
| f25_305 | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** |
| f25_400 | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** |
| f25_500 | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** |
| f50_315 | 1578 | 1578 | 1578 | ***1581*** | 1580 | 1576 |
| f50_412 | 1569 | 1569 | 1570 | 1571 | 1570 | **1572** |
| f50_498 | 1568 | 1566 | 1567 | 1568 | ***1570*** | ***1570*** |
| f100_307 | **2780** | 2773 | 2773 | 2771 | 2774 | 2771 |
| f100_415 | **2845** | 2838 | 2842 | 2844 | 2840 | **2845** |
| f100_512 | 2716 | **2718** | 2713 | **2718** | 2713 | 2714 |
| f508_354 | 17921 | 17921 | 17899 | 17889 | **17925** | 17906 |
| f635_350 | 22175 | 22168 | **22220** | 22193 | 22183 | 22203 |
| f737_355 | **24808** | 24788 | 24796 | 24795 | 24800 | 24797 |
| f1343_354 | 48090 | 48081 | 48092 | 48057 | **48098** | 48035 |
| f1577_354 | 56182 | 56147 | 56159 | **56205** | 56172 | 56195 |

Table 6.14: Summary of Results After Post Optimization on Two Sets of GA Runs With Swapping Representations and No Forced Recentre

### Results With Post Optimization and Forced Recentre

Table 6.15 summarizes the best results obtained by each algorithm after post optimization with a forced recentre. **Bold** entries represent the results of best performing algorithm on each data set and ***Italicized Bold*** entries are results that outperformed or tied all algorithms presented in Table 5.10. Comparisons for the $f$-series data set are made to Table 6.7. There are many instances where the results for more than one algorithm on a given data set outperformed all other algorithms presented in Table 5.10. Table 6.13 shows that at least one variation of the studied algorithms outperformed the best DNA fragment assembly problem algorithms on 13/16 of the problem instances. Similar to the third set of experiments, Table 6.14 (which refers to the same experiment but with no forced recentre) had the same result but the actual problem instances of which these results were obtained are different. This demonstrates how no one approach is always the best and why multiple approaches should be taken. The algorithms were also able to achieve the suspected optimal on 6/14 of the $f$-series problem instances which is the highest count for all experiment sets. All results were very close to one another suggesting that all algorithm variations studied are effective.

Summary Table 6.15 demonstrates that no algorithm completely dominates all problem instances. Similar to the trend seen in Table 6.14, there is minimal consis-

| Data Set Name | Dir. (snd) RRGA Max | Dir. (snd) RRGA+RS Max | Dir. (snd) RRGA+IM Max | Trans (snd) RRGA Max | Trans (snd) RRGA+RS Max | Trans (snd) RRGA+IM Max |
|---|---|---|---|---|---|---|
| acin1 | 47441 | 47432 | ***47494*** | 47481 | 47466 | 47477 |
| acin2 | 151291 | 151294 | 151295 | ***151343*** | 151321 | 151335 |
| acin3 | 167204 | ***167292*** | 167229 | 167133 | 167204 | 167268 |
| acin5 | 163203 | 163260 | 163215 | ***163280*** | 163262 | 163246 |
| acin7 | 180021 | 180020 | 180000 | ***180120*** | 180073 | 180033 |
| acin9 | 343194 | 343173 | 343157 | 343308 | 343305 | ***343314*** |
| bx842596_4 | 227487 | 227402 | 227271 | 227481 | ***227492*** | 227297 |
| bx842596_7 | 443080 | 442480 | 442648 | 442903 | **443195** | 442452 |
| j02459_7 | **116512** | 116480 | 116361 | 116483 | 116498 | 116502 |
| m15421_5 | 38693 | 38691 | 38690 | **38694** | 38666 | 38690 |
| m15421_6 | 48046 | 48043 | ***48052*** | ***48052*** | ***48052*** | 48048 |
| m15421_7 | 55130 | 55141 | 55156 | 55166 | ***55169*** | 55168 |
| x60189_4 | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** | ***11478*** |
| x60189_5 | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** | ***14161*** |
| x60189_6 | ***18301*** | ***18301*** | ***18301*** | 18216 | ***18301*** | ***18301*** |
| x60189_7 | ***21271*** | 21238 | 21218 | ***21271*** | 21233 | 21245 |
| f25_305 | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** | ***596*** |
| f25_400 | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** | ***777*** |
| f25_500 | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** | ***921*** |
| f50_315 | 1578 | 1577 | 1577 | ***1581*** | ***1581*** | 1579 |
| f50_412 | 1571 | 1571 | 1570 | ***1573*** | 1571 | 1572 |
| f50_498 | 1568 | ***1570*** | 1568 | 1568 | ***1570*** | 1567 |
| f100_307 | 2781 | 2779 | 2778 | 2778 | 2779 | **2782** |
| f100_415 | 2847 | 2845 | 2845 | **2851** | 2849 | 2847 |
| f100_512 | 2718 | 2720 | 2716 | **2721** | 2716 | 2715 |
| f508_354 | 17911 | 17929 | 17899 | **17951** | 17927 | 17914 |
| f635_350 | 22210 | 22186 | 22213 | **22238** | 22237 | 22220 |
| f737_355 | 24821 | 24824 | 24810 | 24850 | **24851** | 24827 |
| f1343_354 | 48096 | 48134 | 48160 | 48215 | **48225** | 48188 |
| f1577_354 | 56242 | 56216 | 56234 | 56320 | **56386** | 56314 |

Table 6.15: Summary of Results After Post Optimization on Two Sets of GA Runs With Swapping Representations and Forced Recentre

tency with respect to how the representations perform compared to the second and third set of experiments. Once again, this is reasonable as the representations are being mixed halfway through the executions. All results are very competitive regardless of whether they beat out all other algorithms. In most cases all algorithms were able to achieve results within less than 1% of the suspected optimal.

Section A.6.4 contains tables with results of all experiments conducted for this set of runs. Similar to almost all results so far in this work the system parameters, including the initial seeds, have minimal impact on the end results. A few isolated trends can be observed with regards to the standard deviation but cannot be seen in general.

Section B.5.4 presents plots which summarize the average result of all algorithms on all problem instances. As one would expect based on previous results, on average all algorithms perform competitively and no one algorithm always dominates. Once again, the effect of the likelihood of restarts on the quality of results is inconsistent and chaotic, but it is clear that there are definite improvements by having at least some number of restarts. The confidence intervals do change but with no apparent trends. Other various small trends can be seen in isolated cases but not in general.

### Comparison of No Forced and Forced Recentre Experimental Results

When comparing the results seen in Tables 6.14 and 6.15 it can be seen that forcing a recentre on the first restart has an impact on the overall quality of the results.

When analyzing the plots found in Section B.5.4 it can be observed that in almost every case forcing a recentre on the first restart improves the results over those that had no forced recentre. This trend was seen before in the second and third set of experiments. It is not surprising to see this trend as forcing an initial restart will jump start the benefit of the RRGA at avoiding local optima. Refer to individual plots in Section B.5.4 for details on specific problem instances.

### Comparison of Third and Fourth Set of Experimental Results With Forced Restarts

Section B.5.4 contains plots which show comparisons between the third and fourth set of experimental results. These plots are chaotic and it is clear that there is no consistency as to which set of experiments (third or fourth) work better. This is not unreasonable considering that both the third and fourth set of experiments underwent multiple cycles of heuristics and metaheuristics. Although this set of experiments swapped which representation was being used and there are specific cases where these results are the best, there appears to be no overall significant benefit. That being said, these results firmly suggest that if one wants to maximize the results for real world problems then one should rigorously study a batch of algorithms and algorithm combinations to fully explore the search space.

# Chapter 7

# Conclusions and Future Work

This thesis rigorously studies multiple ordered gene problems with multiple algorithms. These problems were the travelling salesman problem, bin packing problem, and the vertex colouring variation of the graph colouring problem. In addition to straightforward ordered gene problems two additional bioinformatics problems which are not traditionally seen as ordered gene problem, namely DNA error correction and DNA fragment assembly, were represented as such. These problems were successfully represented as ordered gene problems and algorithms which traditionally perform well on ordered gene problems performed just as well on the two bioinformatics problems.

Genetic algorithm variations were studied (Recentering-Restarting, Ring Species, and Island Model) in combination with each other with great success. These algorithms were also combined with heuristics and other local search algorithms with significant results. These algorithms worked very well when implemented with each other as they were able to take advantage of their respective strengths while avoiding their shortcomings. An example of this would be the strong performance of the RRGA when 2-Opt was used as an initial seed: heuristics can produce high quality solutions but often fall into a local optima; by using the RRGA, which is known to be very effective at removing itself from local optima, the heuristic solutions could be greatly improved upon. In addition to this specific benefit, in many cases the RRGA was observed to produce much better solutions than conventional heuristics, conventional metaheuristics, and even highly specialized heuristics and metaheuristics. When the Recentering-Restarting idea was implemented in combination with these other approaches the quality of results was improved.

Two representations were studied, the direct representation and the indirect transposition representation. Both of these approaches worked well in general but there appeared to be an interesting and important trend. When working in any search space

the direct representation always performs relatively well but seems to excel over the transposition representation when the starting location within the search space is randomly generated with no guarantee of the quality of the initial population. In contrary to the direct representation, the indirect transposition representation performs very well in very large search spaces and appears to outperform the direct representation when the starting location is already of high quality. An example of this would be the experiments conducted which used heuristics to seed the algorithm. This observation is not surprising as the transposition representation is built upon local search operators allowing it to search in more than one way at a time. Although this trend is observed when the algorithm is seeded with already high quality solutions, the transposition representation appears to perform poorly when seeded with the identity permutation. This is also reasonable as identifying the number of transpositions required to generate a high quality solution with the indirect representation is in itself another optimization problem. These observation suggests the indirect representation may be more appropriate for a strategy using multiple algorithms for further post-optimization.

Overall the results produced are very high quality and demonstrate many things. All algorithms perform very well and become even more competitive when combined with one another. This supports the idea that if one wants to study a specific problem then one should not simply take one specific algorithm, tune it, and perform a parameter sweep. By doing this one would severely limit the quality of results and miss the opportunity to draw significant conclusions. To avoid this problem many algorithms should be studied and implemented. By combining multiple approaches it is possible to thoroughly traverse a search space and achieve better results. This becomes particularly important when studying sensitive problems which have major real world implications such as DNA error correction and DNA fragment assembly. Scientific progress could be substantially inhibited if scientists constantly limit themselves with this ignorant one algorithm approach. This hindrance could be particularly detrimental when working in a domain of life sciences such as bioinformatics.

Throughout the work it was observed that the small trends being detected in the data rapidly disappeared as more problem instances and more system parameters were studied. This phenomenon appeared on all three problems studied. This suggests that the minor trends were insignificant and dependant on the specific problem instances. This problem specific observation corresponds to work done in [84]. This highlights one of the common problems in this field of research; scientists, intentionally or unintentionally, cherry pick their data to demonstrate trends which are in reality

insignificant. This further advocates for a truly thorough analysis of work using multiple search strategies.

Other general observations can be made in addition to the major ones discussed above regarding the heuristic-metaheuristic combination and the effect of the transpositions. Some of these noteworthy observations are presented below.

It became clear that the RRGA has major strengths and advantages and can produce very competitive results (in many cases it achieved the best results). These advantages include the ability to avoid local optima and premature convergence, tune already high quality solutions, and force one to use a dynamic representation. Major benefits can be seen when implemented with other genetic algorithm variations such as Ring Species and the Island Model. Although the RRGA could outperform these variations they are still very competitive. By adding the RRGA methodology to these variations a constructive effect was observed and the results were further improved.

It was demonstrated that using multiple sets of heuristics and metaheuristics greatly improved the results over an individual run. This observation may seem trivial but would be very difficult to implement if one were simply using one algorithm. For example, running an additional genetic algorithm immediately after one completes and converges would result in no real improvement. It is likely that local optima did not become an issue when switching algorithms as the heuristics and metaheuristics used took different trajectories through the search space and the topography of the search space is different depending on the algorithms and representations used. It is reasonable to consider that this effect is amplified when using the indirect transposition representation due to the fact that the implemented heuristics exclusively used the direct representations.

It is unclear as to whether the static restart approach or the dynamic restart approach was better. Although there were minimal trends in favour each way no strong conclusions could be made. The dynamic approach seems to have a benefit in being more general, however, similar to the theme of this work, one should try multiple strategies when studying a problem.

As observed in Section 6.6, it is quite clear that there is an added benefit of forcing an initial recentre. It appears that forcing an initial restart jump starts the benefit of the RRGA at avoiding local optima.

Conclusions pertaining to specific problems can be seen in the subsequent sections.

## 7.1 Travelling Salesman Problem: Small Problem Instances

The purpose of examining the small TSP instances was to demonstrate that no one algorithm performs best on all problem instances within the same domain. This differs from the no free lunch theorem [139] as this deals with problems within the same domain where the no free lunch theorem considers all algorithms on all problems. Even though no one algorithm dominates all problems, maybe one algorithm could dominate all problems within the same domain? This particular problem was studied to demonstrate that this is not the case. This problem was studied before but this idea was never fully demonstrated due to a few trends which could have been interpreted as one algorithm dominating [78][76].

The problem was studied with a different approach which counted the best performing algorithms in another way. This approach eliminated the requirement of the best performing algorithm being counted only if it to achieve a result within 5% of the optimal.

The results in Table 6.1 show that on the small problem instances all algorithm variations perform very well with no one algorithm dominating. Unfortunately this trend is eliminated when more cities are added. Once the 20 city problems were analyzed it became very clear that in fact the basic GA always performed the best.

There are a number of reasonable explanations for why this happened, but the most sound argument is that since the RRGA variations have restarts and recentres it is likely that the algorithms never had the chance to fully explore the search space before a restart. These restarts and recentres are very destructive operations for small problems as they would remove any significant gains made in the search space. This phenomenon would probably not be an issue if the RRGA variations were given enough generations to fully explore the search trajectories taken.

This hypothesis led to the addition of more experiments which increased the number of generations by an order of 10. A summary of these results can be seen in Table 6.2. These results clearly show that no one algorithm dominates all solutions with 4/8 of the algorithms studied achieving (or tying) the best result on at least 50/100 of the 20 city problems. These improvements were not gained by disadvantaging the basic GA, or giving the RRGA an advantage, they were gained by removing the advantage the basic GA had over the RRGA variations. It is expected that if one were to increase the number of generations further the RRGAs would have an unfair advantage because the RRGA variations excel at avoiding local optima and converging

early. This would allow these algorithms to continue searching the space while the basic GA would get stuck too early.

Regardless of whether or not the small problem instances show that no one algorithm dominates all problem instances within the same domain (which in fact is shown in these results), the results from all other subsequent sections show that this is in fact the case in general.

## 7.2 Bin Packing Problem

The purpose of studying the bin packing problem is to show why the RRGA produces good results in addition to demonstrating how well these algorithms perform. It is normally easy to propose a new algorithm and show the quality of the results but often difficult to understand why a certain algorithm performs the way it does. Fortunately the RRGA variations were constructed with the mechanical benefits in mind which will make it easier understand why they work.

Firstly, all results are high quality and very competitive on both sets of data sets. Although these results are good they are not the best for the studied problem instances. This is not a negative as there are more appropriate representations and genetic operators for problems of this type (see [55]). These techniques could have been implemented and it would be likely that they would produce even better results but this would demonstrate no benefit as it would exemplify the representations and genetic operators, not the RRGA.

The algorithms performed well on both groups of data sets but interestingly their performance was better on the ones developed to be very difficult (the *hard*28 instances). In many cases the algorithms were able to obtain optimal or near optimal results. Another trend seen was how well the direct representation variations performed compared to the indirect transposition representation variations. Overall there was no consistency with the results being statistically different between the representations but when strictly comparing the best performing versions of the algorithms there was a clear, statistically significant advantage when using the direct representation. Section B.1 contains plots which allows for an easy visualization of this effect.

The most important trend that should be noted is that the restarts and recentres force the RRGA out of local optima into much better solutions. Generally, as the likelihood of more restarts occurring increases, so does the quality of the solutions. On multiple instances the basic GA performed better when starting with a random seed

as opposed to the 2-Opt seed. This at first seems unusual but reasonable as 2-Opt is likely putting the basic GA into a local optimum from which it cannot remove itself. Evidence of this being the case is easy to see when observing the same experiments after restarts occur: when restarts are introduced to the algorithms using 2-Opt as the initial seed the end results surpass those of the basic GA with the random starting seed. This goes to show how well the RRGA is avoiding local optima and forcing the algorithm into new areas of the search space.

Memetic variations of the algorithms for the bin packing problem were implemented and studied. Unfortunately these versions did not perform well and required longer run times.

## 7.3 Graph Colouring Problem

Similar to the purpose of studying the bin packing problem, the purpose of studying the vertex colouring variation of the graph colouring problem is to demonstrate why the RRGA performs well.

It is easy to see how the RRGA variations performed and for the majority of instances they exceeded the results obtained by the basic GA. Although these results are high quality it is very difficult to conclude how well they really performed as there are no known optima for most of the selected problem instances. The only real measure for these instances is the calculated lower bound but this is by no means guaranteed to be near the optimal solution.

Just like the BPP, it is assumed that a more fitting representation and genetic operators [55] would make the RRGA perform better on this problem. This avenue was not taken since achieving the best possible results for the vertex colouring variation of the graph colouring problem is not the goal of this specific study, the goal is to understand why the RRGA works and how it measures up against other algorithms as is.

The direct representation variations appear to perform better than the indirect transposition representation in general. When comparing the best performing versions of each variation the direct representation has a clear statistical difference over the indirect representation. The plots in Section B.2 give an easy visualization of how the two representations compare to one another.

Unlike the bin packing problem, 2-Opt did not appear to put the search algorithms into local optima from which they could not escape. There were cases where the basic GA would get stuck at the seed's local optimum. In these cases the Restarting-

Recentering variation were able to remove itself from these locations and continue to search in other areas of the landscape. This further demonstrating the benefits of the RRGA.

## 7.4 Travelling Salesman Problem: Large Problem Instances

The purpose of studying the large TSP instances was to be able to compare the quality of the results to other algorithms on one of the most competitively studied problems. In addition, multiple variations of the algorithm were studied in an attempt to explore more of the search spaces and to demonstrate how no one algorithm will dominate. The small problem instances were designed to show how no one algorithm dominates but further evidence will be beneficial in demonstrating this trend. This study also examines the effect of post optimization on the final results.

The LKH [71] was initially used as one of the seeds as it has been shown to be of very high quality, producing solutions very close to suspected optima [2]. Unfortunately, although the DIMACS TSP implementation challenge's website reported results in which the LKH did not achieve the suspected optimum, when analyzed in this work the LKH was in fact able to achieve optimal results. This is regrettable as the instances were selected based on the fact that the LKH did not produce the optimal. Unsurprisingly when the LKH was used as the seed the metaheuristics were not able to learn as they were already at the optimum.

Even though LKH appears to produce optimal results on all instances selected it is extremely unlikely that this will always be the case. One could reason that there must be problems where the LKH cannot produce optimal results as these types of problems are NP-Hard and one could likely construct such a problem which exploits the heuristics' shortcomings.

Because the TSP instances are substantially larger than the BPP and GCP instances the initial seed had a significant impact on the overall results. When 2-Opt was used as the seed the algorithm variations were able to produce solutions which are competitive and comparable to many of the best search algorithms.

As one would expect post optimization had a dramatic positive impact on the solutions generated by the metaheuristics. Interestingly, post optimization appears to reverse the trends seen with the seeds - the random seeds, as opposed to seeds from 2-Opt, seem to have better results after post optimization. An explanation could be

that results obtained from 2-Opt seeds become too specialized and post optimization cannot have a significant impact.

Unlike the BPP and GCP the indirect transposition representation performs better than the direct transposition. This is reasonable as the transposition representation should perform well in these large and chaotic search spaces due to it being built upon local search operators.

The RRGA and RRGA+RS with the indirect transposition representation appear to perform best but by no means is this a significant trend as these observations are inconsistent. Other than the isolated trends all variations perform very well and no one algorithm dominates. This observation corresponds to conclusions made in Section 7.1.

In addition to the fact that the restarts and recentres greatly benefit the algorithms, this study shows how well heuristics and metaheuristics work together. This is not unusual as memetic variations of algorithms are typically successful. Unfortunately the true memetic variations didn't perform well on the BPP. The combination of heuristics and metaheuristics combined in the way they are ("loosely" memetic) in this specific study shows a clear benefit.

## 7.5 DNA Error Correction

Error correction is the process of removing errors from information with the use of redundancy. The purpose of studying DNA error correction is to observe how effective the RRGA variations are on a problem which is not traditionally seen as an ordered gene problem. Side Effect Machines are used as a form of machine learning and evolved through the use of an encoding which treats the problem as an ordered gene problem. This study was compared to previous work done by Joseph Brown [35] with the goal of improving upon the results.

When considering the first set of results on the 4, 6, 12, and 18 state machines it is difficult to make any conclusions about the effectiveness of the RRGA using the direct representation as there was no significant improvement over the basic GA. However there was a noteworthy trend observed with the RRGA using the indirect transposition representation. This method performed much better on the fuzzy analysis compared to the direct SCM analysis and this observation is amplified when the number of states in the SEM is decreased. This resulted in SEMs able to correct 100% of the distance 1 and 2 errors and 98.47% of the distance 3 errors. These trends correspond to the observations made in [25] and [26] which concluded that SEMs with

a smaller number of states are able to generalize more effectively.

An important noteworthy observation is that both the direct and fuzzy analysis were able to produce correct decoding for a large majority of the cases.

When the smaller SEMs were studied the transposition representation performed exceptionally well again with the fuzzy analysis with multiple SEMs correcting 100% of the distance 1, 2, and 3 error.

Although these smaller SEMs with a lower tolerance performed very well it should also be noted that the success of the fuzzy analysis on the SEMs is probably due to the fact that the Euclidean distance between the classification vectors would decrease as the number of states decreases.

These results clearly demonstrate the effectiveness of converting a non ordered gene problem into an ordered gene problem for the sake of using popular and powerful search algorithms.

## 7.6 DNA Fragment Assembly

The purpose of studying the DNA fragment assembly problem was to take the knowledge gained by the previous studies and apply it to a crucial real world problem. The goal is to produce an algorithm that can robustly generate very high quality results consistently. Another purpose of studying this problem is to further analyze the benefits of combining heuristics and metaheuristics along with how well different metaheuristic approaches work when combined with one another.

The RRGA and variations were able to produce very high quality results for the DNA fragment assembly problem. The results show that the RRGA variations can produce significant results which substantially outperform all of the best metaheuristics for many of the problem instances. In many cases these algorithms were able to obtain the suspected optimal results.

When comparing the results obtained to the best previously used algorithms one can see that no one algorithm performs as well as consistently as the RRGA variations. In addition, the RRGA variations are so much simpler than the other studied algorithms. Many of these other algorithms were designed with the DNA fragment assembly problem in mind and are tuned to perform well on this specific problem. The RRGA variations were not tuned in any way (other than the system parameters) in order to keep the algorithm general and very applicable to other problems.

Although these benchmarks were standardized prior to this study they were not in any way unfairly generated to benefit the RRGA variations [102].

The results clearly show that there was little to no consistency with respect to how the system parameters affected the results. This suggests that one should do a full parameter sweep to fully explore the search space. However, these results show that the algorithm combinations do greatly affect the results. This suggests that spending too much time tuning the system parameters might be a waste of time as simply exploring other algorithms will likely produce much better results because of their ability to substantially alter the traversal of the search space.

There were many small isolated trends when it came to which algorithm produced the best results on the data sets but there is still a lot of inconsistency. This further suggests that there is a requirement to use multiple search strategies when studying a problem. This heavily corresponds to the observations made when studying the small TSP instances since no one algorithm dominates all data sets. This observation advocates for a strategy which studies multiple algorithms being applied to a problem, otherwise the analysis could lack in meaningful conclusions with less significant implications.

Even though the LKH is able to achieve the suspected optimal for the problem instances studied it is very unlikely that this would be the case for all instances. One could simply use LKH on these problem instances to maximize results but this would not show any significant benefit when analyzing the combination of heuristics and metaheuristics. As problem instances become larger the heuristics become infeasible due to the time required. These facts show the benefit of metaheuristics as there is always a trade-off when it comes to time and accuracy. It is ideal to use combinations of these heuristics and metaheuristics (through pre and post optimization and possibly memetic variations) to further better results. As these problems become larger it would be reasonable to use a higher quality heuristic as the initial seed such as the LKH instead of 2-Opt.

Results generated by the LKH may be too rigid as it is designed to work only with the sum of the distances in a Hamiltonian circuit. A major advantage of metaheuristics is the easy alteration of fitness functions such as those that minimize the number of contigs or maximize contig length.

When studying the results it is very obvious that combining heuristics and metaheuristics is very beneficial. When looking specifically at the third and fourth experiment sets (the two best performing experiment sets) it is made very clear that doing multiple waves of heuristics and metaheuristics is advantageous. This might seem trivial but is not easily implemented if the algorithms are not designed to work in combination with one another. Experiment set four did not show any major benefit

to swapping representations throughout the search process.

One of the interesting observations made throughout the analysis is that the $f$-series and acin problem instances appear to have much more chaotic and misleading fitness landscapes compared to the others. This conclusion was formed based on how much more difficult it was for the studied algorithms to find higher quality solutions for these instances.

The results seen undoubtedly show the effectiveness of the RRGA variations in combination with different representations, metaheuristics techniques, and heuristics. Furthermore, because of this displayed success one could reason that this DNA fragment assembly problem is a very reasonable approach to assembling DNA reads to produce contigs.

## 7.7 Future Work

Many things could be considered in future research.

Some of the general ideas that could be implemented to many of the problems studied would be to apply more combinations of the algorithms studied on some problems to others, for example, applying RRGA+RS to DNA error correction. One could also combine more of the metaheuristic techniques; for example, instead of just combining Recentering-Restarting and Ring Species, maybe try RR+RS+IM. In every instance of heuristics being used only the direct representation was used. It would be interesting to see the effect of using an indirect representation with these heuristics.

Possible future work for the specific problems studied can be seen in their respective subsequent subsections.

#### Travelling Salesman Problem: Small Problem Instances

One of the areas in which the small TSP instances could be expanded is the inclusion of a more thorough parameter sweep, however the effect of this may be minimal as other results seen suggest that the parameters have minimal implications.

More seeds could be used, for example 2-Opt, but this might produce the optimal solutions for these small instances. To counter this larger sized problems could be included, for example, 22, 24, 26, 28, and 30 city problems.

More generations could be included to see how this affects the quality of the results of the basic GA compared to the RRGA variations.

### Bin Packing Problem

The most obvious addition to the bin packing problem would be to include more problems and study whether the same trends can be extended to further solidify the conclusions.

Including more opportunity for more restarts would also be interesting. It was observed that sometimes more restarts were beneficial and sometimes it had no benefit. By extending the range of restarts it would allow for a larger and more rigorous analysis of this observation.

### Graph Colouring Problem

The same things that could be done to expand the BPP could be implemented for the vertex colouring variation of the graph colouring problem: include more problem instances and increase the range of restarts allowed.

Including problem instances that have known optima would help determine how well the algorithms are actually performing. Unfortunately it was found that in most of the instances which were studied in preliminary tests were too easy when the optimal was known. Finding problems which are challenging enough but do have known optima would be key.

Having a larger range of restarts might further show the benefit of restarts and recentres in removing the search from local optima.

### Travelling Salesman Problem: Large Problem Instances

Finding and using problem instances for which LKH cannot obtain the optimal would be beneficial as it would demonstrate the need for metaheuristics on this type of problem. This would also allow for using LKH as the initial seed.

Doing a more comprehensive comparison of these results to the results made available online on the DIMACS TSP implementation's results page [2] would be useful as it would show just how competitive the RRGA variations are.

### DNA Error Correction

Future work for DNA error correction includes the study of larger codes as current results only demonstrate the effectiveness of this approach for $(12, 55, 7)_4$ and $(12, 60, 7)_4$ codes. These codes allow for demonstrating the effectiveness of this algorithm but real world applications could include a much larger number of words.

The indirect transposition representation and its ability to perform well with fuzzy analysis should be further studied. This could include larger codes and codes with a larger minimum distance, i.e. capable of correcting more errors.

It would be interesting to explore the direct classification (single classification machines) using a direct representation on SEMs with a higher number of states. SEMs with 18 states were implemented and produced significant results. By increasing the number of states one could determine if the trend of SEMs with a higher number of states producing better results with the direct analysis continues.

### DNA Fragment Assembly

Future work derived from this study of DNA fragment assembly could be to further study the system parameters which are particular to the Island Model and Ring Species variations of the algorithms. This would be noteworthy as they were not fully explored and it is expected that this could produce even better results.

Because of the substantial improvements seen when combining the IM and RS with the RRGA it would be interesting to explore the idea of combining more variations. An example of this would be to combining RRGA with Ring Species and Island Model all in one implementation. It would also be interesting to try adding the restarting-recentering idea to other successful DNA fragment assembly algorithms.

In the fourth experiment set the representations were swapped between waves of heuristics and metaheuristics. Instead of switching the representations the actual algorithms could be switched, for example, RRGA+RS implemented for the first wave of metaheuristics then converted to RRGA+IM for the second wave.

Additional large, real world problem instances should be analyzed thoroughly enough to produce significant results. Unfortunately this is a very time consuming process as these real world problems are substantially larger than the studied benchmarks. To the best of our knowledge the largest instance currently available for study in the convenient format for the DNA fragment assembly problem is over $2,000,000$ fragments and is available at [4]. The creation of these large real world problem instances is discussed in [102].

# Bibliography


[1] Tsp history home. http://www.tsp.gatech.edu/history/index.html, January 2007. [Online; accessed 20-October-2012].

[2] Dimacs tsp challenge. http://dimacs.rutgers.edu/Challenges/TSP/, December 2008. [Online; accessed 19-June-2014].

[3] Concorde tsp solver. http://www.math.uwaterloo.ca/tsp/concorde/index.html, 2011. [Online; accessed 19-Jan-2014].

[4] Dna assembly problem benchmark repository. http://chac.sis.uia.mx/fragbench/, 2013. [Online; accessed 10-Sept-2013].

[5] Geonome analysis centre/staphylococcus aureus mw2. http://www.bio.nite.go.jp/ngac/e/mw2-e.html, 2013. [Online; accessed 10-Sept-2013].

[6] National center for biotechnology information (ncbi). www.ncbi.nlm.nih.gov, 2013. [Online; accessed 9-Sept-2013].

[7] Center for bioinformatics & computational biology: Benchmark data for genome assembly. http://www.cbcb.umd.edu/research/benchmark.shtml, n.d. [Online; accessed 12-Sept-2013].

[8] Euro special intrest group on cutting and packing: Listing gallery: Data sets 1d: One dimensional cutting and packing data sets. http://paginas.fe.up.pt/~esicup/tiki-list_file_gallery.php?galleryId=1, n.d. [Online; accessed 19-Sept-2013].

[9] Kegg genome: Staphylococcus aureus subsp. aureus col (mrsa). http://www.genome.jp/kegg-bin/show_organism?org=sac, n.d. [Online; accessed 12-Sept-2013].

[10] University of maryland: asmg benchmark. ftp://ftp.cbcb.umd.edu/pub/data/asmg_benchmark, n.d. [Online; accessed 12-Sept-2013].

[11] Mark D Adams, Susan E Celniker, Robert A Holt, Cheryl A Evans, Jeannine D Gocayne, Peter G Amanatides, Steven E Scherer, Peter W Li, Roger A Hoskins, Richard F Galle, et al. The genome sequence of drosophila melanogaster. *Science*, 287(5461):2185–2195, 2000.

[12] Enrique Alba and Gabriel Luque. A new local search algorithm for the dna fragment assembly problem. In *Evolutionary Computation in Combinatorial Optimization*, pages 1–12. Springer, 2007.

[13] Enrique Alba and Gabriel Luque. A hybrid genetic algorithm for the dna fragment assembly problem. In *Recent Advances in Evolutionary Computation for Combinatorial Optimization*, pages 101–112. Springer, 2008.

[14] Stephen Anderson. Shotgun dna sequencing using cloned dnase i-generated fragments. *Nucleic Acids Research*, 9(13):3015–3027, 1981.

[15] David L Applegate, Robert E Bixby, Vasek Chvatal, and William J Cook. *The traveling salesman problem: a computational study*. Princeton University Press, 2011.

[16] D Ashlock and A McEachern. Ring optimization of side effect machines. *Intelligent Engineering Systems Through Artificial Neural Networks*, 19:165–172, 2009.

[17] Dan Ashlock and Colin Lee. Characterization of extremal epidemic networks with diffusion characters. In *IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology, 2008. CIBCB'08.*, pages 264–271. IEEE, 2008.

[18] Dan Ashlock, Taika von Konigslow, Elizabeth Clare, and Wendy Ashlock. Transience in the simulation of ring species. In *IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology, 2008. CIBCB'08.*, pages 256–263. IEEE, 2008.

[19] Dan Ashlock and Elizabeth Warner. Classifying synthetic and biological dna sequences with side effect machines. In *IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology, 2008. CIBCB'08.*, pages 22–29. IEEE, 2008.

[20] Daniel Ashlock, Elizabeth L Clare, Taika E von Königslöw, and Wendy Ashlock. Evolution and instability in ring species complexes: An¡ i¿ in silico¡/i¿ approach to the study of speciation. *Journal of theoretical biology*, 264(4):1202–1213, 2010.

[21] Daniel Ashlock, Sheridan K Houghten, Joseph Alexander Brown, and John Orth. On the synthesis of dna error correcting codes. *Biosystems*, 1:0, 2012.

[22] Daniel Ashlock and Elisabeth Shiller. Fitting contact networks to epidemic behavior with an evolutionary algorithm. In *2011 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB)*, pages 1–8. IEEE, 2011.

[23] Daniel Ashlock, Elisabeth Shiller, and Colin Lee. Comparison of evolved epidemic networks with diffusion characters. In *2011 IEEE Congress on Evolutionary Computation (CEC)*, pages 781–788. IEEE, 2011.

[24] Daniel Ashlock and Elizabeth Warner. Side effect machines for sequence classification. In *Canadian Conference on Electrical and Computer Engineering, 2008. CCECE 2008.*, pages 001453–001456. IEEE, 2008.

[25] W. Ashlock and S. Datta. Detecting retroviruses using reading frame information and side effect machines. In *Proceedings of the 2010 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology*, pages 235–242, May. 2010.

[26] W. Ashlock and S. Datta. Evolved features for DNA sequence classification and their fitness landscapes. *IEEE Transactions on Evolutionary Computation*, PP(99):to appear, 2013.

[27] Wendy Ashlock and Suprakash Datta. Detecting retroviruses using reading frame information and side effect machines. In *2010 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB)*, pages 1–8. IEEE, 2010.

[28] Wendy Ashlock and Suprakash Datta. Distinguishing endogenous retroviral ltrs from sine elements using features extracted from evolved side effect machines. *IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB)*, 9(6):1676–1689, 2012.

[29] Jørgen Bang-Jensen, Gregory Gutin, and Anders Yeo. When the greedy algorithm fails. *Discrete Optimization*, 1(2):121–127, 2004.

[30] TL Barlow. An historical note on the parity of permutations. *American Mathematical Monthly*, pages 766–769, 1972.

[31] Gleb Belov and Guntram Scheithauer. A branch-and-cut-and-price algorithm for one-dimensional stock cutting and two-dimensional two-stage cutting. *European Journal of Operational Research*, 171(1):85–106, 2006.

[32] Heinrich Braun. On solving travelling salesman problems by genetic algorithms. In *Parallel Problem Solving from Nature*, pages 129–133. Springer, 1991.

[33] Daniel Brélaz. New methods to color the vertices of a graph. *Communications of the ACM*, 22(4):251–256, 1979.

[34] Joseph A Brown, Sheridan K Houghten, and Daniel Ashlock. Side effect machines for quaternary edit metric decoding. In *2010 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB)*, pages 1–8. IEEE, 2010.

[35] Joseph A Brown, Sheridan K Houghten, and Daniel A Ashlock. Edit metric decoding: a new hope. In *Proceedings of the 2nd Canadian Conference on Computer Science and Software Engineering*, pages 233–242. ACM, 2009.

[36] Joseph Alexander Brown. Decoding algorithms using side-effect machines. 2010.

[37] M. Caramia and P. Dell'Olmo. $k$-fullins graphs: a proposal of a new class of benchmarks. Manuscript, 2002.

[38] M. Caramia and P. Dell'Olmo. $k$-insertions graphs: a proposal of a new class of benchmarks. Manuscript, 2002.

[39] Mark Chaisson, Pavel Pevzner, and Haixu Tang. Fragment assembly with short reads. *Bioinformatics*, 20(13):2067–2074, 2004.

[40] Asif T Chinwalla, Lisa L Cook, Kimberly D Delehaunty, Ginger A Fewell, Lucinda A Fulton, Robert S Fulton, Tina A Graves, LaDeana W Hillier, Elaine R Mardis, John D McPherson, et al. Initial sequencing and comparative analysis of the mouse genome. *Nature*, 420(6915):520–562, 2002.

[41] Nicos Christofides. Worst-case analysis of a new heuristic for the travelling salesman problem. Technical report, DTIC Document, 1976.

[42] George M Church. Genomes for all. *Scientific American*, 294(1):46–54, 2006.

[43] V Chvatal. Coloring the queen graphs. *Web repository*, 2004.

[44] Vašek Chvátal, William Cook, and Mark Hartmann. On cutting-plane proofs in combinatorial optimization. *Linear algebra and its applications*, 114:455–499, 1989.

[45] T.H. Cormen, C.E. Leiserson, R.L. Rivest, and C. Stein. *Introduction to algorithms*. MIT press, third edition, 2009.

[46] GA Croes. A method for solving traveling-salesman problems. *Operations Research*, 6(6):791–812, 1958.

[47] Cornelius Croitoru, Henri Luchian, Ovidiu Gheorghies, and Adriana Apetrei. A new genetic graph coloring heuristic. In *Proceedings of the Computational Symposium on Graph Coloring and its Generalizations*, pages 63–74, 2002.

[48] Joseph Culberson, Adam Beacham, and Denis Papp. Hiding our colors. In *CP95 Workshop on Studying and Solving Really Hard Problems*, pages 31–42. Citeseer, 1995.

[49] Francisco Fernandez de Vega, German Galeano Gil, Juan Antonio Gomez Pulido, and Jose Luis Guisado. Control of bloat in genetic programming by means of the island model. *Lecture notes in computer science*, pages 263–271, 2004.

[50] Marco Dorigo and Luca Maria Gambardella. Ant colonies for the travelling salesman problem. *BioSystems*, 43(2):73–81, 1997.

[51] Marco Dorigo and Luca Maria Gambardella. Ant colony system: A cooperative learning approach to the traveling salesman problem. *IEEE Transactions on Evolutionary Computation*, 1(1):53–66, 1997.

[52] Dent Earl, Keith Bradnam, John St John, Aaron Darling, Dawei Lin, Joseph Fass, Hung On Ken Yu, Vince Buffalo, Daniel R Zerbino, Mark Diekhans, et al. Assemblathon 1: A competitive assessment of de novo short read assembly methods. *Genome research*, 21(12):2224–2241, 2011.

[53] Ágoston E Eiben, Jan K Van Der Hauw, and Jano I van Hemert. Graph coloring with adaptive evolutionary algorithms. *Journal of Heuristics*, 4(1):25–46, 1998.

[54] Michael L Engle and Christian Burks. Genfrag 2.1: new features for more robust fragment assembly benchmarks. *Computer applications in the biosciences: CABIOS*, 10(5):567–568, 1994.

[55] Emanuel Falkenauer. A hybrid grouping genetic algorithm for bin packing. *Journal of heuristics*, 2(1):5–30, 1996.

[56] Shu-Cherng Fang, Yong Wang, and Jie Zhong. A genetic algorithm approach to solving dna fragment assembly problem. *Journal of Computational and Theoretical Nanoscience*, 2(4):499–505, 2005.

[57] Francisco Fernández, Marco Tomassini, and Leonardo Vanneschi. An empirical study of multipopulation genetic programming. *Genetic Programming and Evolvable Machines*, 4(1):21–51, 2003.

[58] Jesun Sahariar Firoz, M Sohel Rahman, and Tanay Kumar Saha. Bee algorithms for solving dna fragment assembly problem with noisy and noiseless data. In *Proceedings of the fourteenth international conference on Genetic and evolutionary computation conference*, pages 201–208. ACM, 2012.

[59] David B Fogel. An evolutionary approach to the traveling salesman problem. *Biological Cybernetics*, 60(2):139–144, 1988.

[60] Bernd Freisleben and Peter Merz. A genetic local search algorithm for solving symmetric and asymmetric traveling salesman problems. In *Proceedings of IEEE International Conference on Evolutionary Computation, 1996.*, pages 616–621. IEEE, 1996.

[61] Ashwin Ganesan. On a bound for the diameter of cayley networks of symmetric groups generated by transposition trees. *CoRR*, abs/1111.3114, 2011.

[62] Steven R Gill, Derrick E Fouts, Gordon L Archer, Emmanuel F Mongodin, Robert T DeBoy, Jacques Ravel, Ian T Paulsen, James F Kolonay, Lauren Brinkac, Mauren Beanan, et al. Insights on evolution of virulence and resistance from the complete genome analysis of an early methicillin-resistant staphylococcus aureus strain and a biofilm-producing methicillin-resistant staphylococcus epidermidis strain. *Journal of bacteriology*, 187(7):2426–2438, 2005.

[63] D.E. Goldberg. Genetic algorithms in search, optimization, and machine learning. 1989.

[64] Carla Gomes and David Shmoys. Completing quasigroups or latin squares: A structured graph coloring problem. In *proceedings of the Computational Symposium on Graph Coloring and Generalizations*, pages 22–39, 2002.

[65] Shuba Gopal, Anne Haake, Rhys Price Jones, and Paul Tymann. *Bioinformatics: a computing perspective*. McGraw-Hill Science/Engineering/Math, 2008.

[66] V Scott Gordon and Darrell Whitley. Serial and parallel genetic algorithms as function optimizers. In *ICGA*, pages 177–183, 1993.

[67] S. Gualandi and M. Chiarandini. Graph coloring benchmarks: Vertex coloring. `https://sites.google.com/site/graphcoloring/vertex-coloring`, n.d. [Online; accessed 21-Sept-2013].

[68] Daniel Gusfield. *Algorithms on Strings, Trees, and Sequences: Computer Science and Computational Biology*. Cambridge University Press, Boston, 1997.

[69] Gregory Gutin and Abraham P Punnen. *The traveling salesman problem and its variations*, volume 12. Springer, 2002.

[70] Neil Hall. Advanced sequencing technologies and their wider impact in microbiology. *Journal of Experimental Biology*, 210(9):1518–1525, 2007.

[71] Keld Helsgaun. An effective implementation of the lin–kernighan traveling salesman heuristic. *European Journal of Operational Research*, 126(1):106–130, 2000.

[72] David Hernandez, Patrice François, Laurent Farinelli, Magne Østerås, and Jacques Schrenzel. De novo bacterial genome sequencing: millions of very short reads assembled on a desktop computer. *Genome research*, 18(5):802–809, 2008.

[73] J.H. Holland. Adaptation in natural and artificial systems, University of Michigan press. *Ann Arbor, MI*, 1(97):5, 1975.

[74] Shahadat Hossain and Trond Steihaug. Graph coloring in the estimation of mathematical derivatives. 2002.

[75] James Hughes, Joseph Alexander Brown, Sheridan Houghten, and Daniel Ashlock. Edit metric decoding: Representation strikes back. In *2013 IEEE Congress on Evolutionary Computation (CEC)*, pages 229–236. IEEE, 2013.

[76] James Hughes, Sheridan Houghten, and Daniel Ashlock. Recentering, reanchoring & restarting an evolutionary algorithm. In *2013 World Congress on Nature and Biologically Inspired Computing (NaBIC)*, pages 76–83. IEEE, 2013.

[77] James Hughes, Sheridan Houghten, Guillermo M Mallen-Fullerton, and Daniel Ashlock. Recentering and restarting genetic algorithm variations for dna fragment assembly. In *2014 IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology*, pages 1–8. IEEE, 2014.

[78] James A. Hughes. Reanchoring, recentering & restarting an evolutionary algorithm. Undergraduate Thesis, Brock University.

[79] Thomas Hungerford. *Abstract algebra: an introduction*. Cengage Learning, Pacific Grove, CA, 3rd edition, 2012.

[80] Nathan Jacobson. *Basic algebra I*. Courier Dover Publications, 2012.

[81] David S Johnson, Cecilia R Aragon, Lyle A McGeoch, and Catherine Schevon. Optimization by simulated annealing: an experimental evaluation; part ii, graph coloring and number partitioning. *Operations research*, 39(3):378–406, 1991.

[82] D.S. Johnson and L.A. McGeoch. The traveling salesman problem: A case study in local optimization. *Local search in combinatorial optimization*, 1:215–310, 1997.

[83] Sung Hoon Jung. Queen-bee evolution for genetic algorithms. *Electronics letters*, 39(6):575–576, 2003.

[84] Jorge Kanda, Andre Carvalho, Eduardo Hruschka, and Carlos Soares. Selection of algorithms to solve traveling salesman problems using meta-learning. *International Journal of Hybrid Intelligent Systems*, 8(3):117–128, 2011.

[85] Dervis Karaboga and Bahriye Basturk. A powerful and efficient algorithm for numerical function optimization: artificial bee colony (abc) algorithm. *Journal of global optimization*, 39(3):459–471, 2007.

[86] James Kennedy. Particle swarm optimization. In *Encyclopedia of Machine Learning*, pages 760–766. Springer, 2010.

[87] Satoko Kikuchi and Goutam Chakraborty. Heuristically tuned ga to solve genome fragment assembly problem. In *IEEE Congress on Evolutionary Computation, 2006. CEC 2006.*, pages 1491–1498. IEEE, 2006.

[88] Satoko Kikuchi and Goutam Chakraborty. An efficient genome fragment assembling using ga with neighborhood aware fitness function. *Applied Computational Intelligence and Soft Computing*, 2012:7, 2012.

[89] Kieun Kim and Chilukuri K Mohan. Parallel hierarchical adaptive genetic algorithm for fragment assembly. In *The 2003 Congress on Evolutionary Computation, 2003. CEC'03.*, volume 1, pages 600–607. IEEE, 2003.

[90] Donald E Knuth. The art of computer programming, vol. 3: Sorting and searching,", 1973.

[91] T. Koch, A. Martin, and S. Voß. SteinLib: An updated library on steiner tree problems in graphs. Technical Report ZIB-Report 00-37, Konrad-Zuse-Zentrum für Informationstechnik Berlin, Takustr. 7, Berlin, 2000.

[92] Jiří Kubalik, Petr Buryan, and Libor Wagner. Solving the dna fragment assembly problem efficiently using iterative optimization with evolved hypermutations. In *Proceedings of the 12th annual conference on Genetic and evolutionary computation*, pages 213–214. ACM, 2010.

[93] C. Lee and D. Ashlock. Diffusion characters: Breaking the spectral barrier. In *Canadian Conference on Electrical and Computer Engineering, 2008. CCECE 2008.*, pages 000847–000850. IEEE, 2008.

[94] Vladimir I. Levenshtein. Binary codes capable of correcting deletions, insertions, and reversals. *Soviet Physics Doklady*, 10(8):707–710, 1966.

[95] Vladimir I Levenshtein. Binary codes capable of correcting deletions, insertions and reversals. In *Soviet physics doklady*, volume 10, page 707, 1966.

[96] Gary Lewandowski and Anne Condon. Experiments with parallel graph coloring heuristics and applications of graph coloring. *Johnson & Trick*, page 309, 1996.

[97] Xianran Li, Chengsong Zhu, Zhongwei Lin, Yun Wu, Dabao Zhang, Guihua Bai, Weixing Song, Jianxin Ma, Gary J Muehlbauer, Michael J Scanlon, et al. Chromosome size in diploid eukaryotic species centers on the average length with a conserved boundary. *Molecular biology and evolution*, 28(6):1901–1911, 2011.

[98] Yingrui Li, Yujie Hu, Lars Bolund, Jun Wang, et al. State of the art de novo assembly of human genomes from massively parallel sequencing data. *Hum Genomics*, 4(4):271–277, 2010.

[99] Shen Lin and Brian W Kernighan. An effective heuristic algorithm for the traveling-salesman problem. *Operations research*, 21(2):498–516, 1973.

[100] Gabriel Luque and Enrique Alba. Metaheuristics for the dna fragment assembly problem. *International Journal of Computational Intelligence Research*, 1(1):98–108, 2005.

[101] Guillermo M Mallen-Fullerton and Guillermo Fernandez-Anaya. Dna fragment assembly using optimization. In *2013 IEEE Congress on Evolutionary Computation (CEC)*, pages 1570–1577. IEEE, 2013.

[102] Guillermo M Mallén-Fullerton, James Alexander Hughes, Sheridan Houghten, and Guillermo Fernández-Anaya. Benchmark datasets for the dna fragment assembly problem. *International Journal of Bio-Inspired Computation*, 5(6):384–394, 2013.

[103] Yannis Marinakis, Magdalene Marinaki, and Georgios Dounias. Honey bees mating optimization algorithm for the euclidean traveling salesman problem. *Information Sciences*, 181(20):4684–4698, 2011.

[104] Andrew McEachern, Daniel Ashlock, and Justin Schonfeld. Sequence classification with side effect machines evolved via ring optimization. *Biosystems*, 2013.

[105] Anuj Mehrotra and Michael A Trick. A column generation approach for graph coloring. *informs Journal on Computing*, 8(4):344–354, 1996.

[106] Prakit Meksangsouy and N Chaiyaratana. Dna fragment assembly using an ant colony system algorithm. In *The 2003 Congress on Evolutionary Computation, 2003. CEC'03.*, volume 3, pages 1756–1763. IEEE, 2003.

[107] Jason R Miller, Sergey Koren, and Granger Sutton. Assembly algorithms for next-generation sequencing data. *Genomics*, 95(6):315–327, 2010.

[108] Gabriela Minetti and Enrique Alba. Metaheuristic assemblers of dna strands: Noiseless and noisy cases. In *2010 IEEE Congress on Evolutionary Computation (CEC)*, pages 1–8. IEEE, 2010.

[109] Gabriela Minetti, Enrique Alba, and Gabriel Luque. Seeding strategies and recombination operators for solving the dna fragment assembly problem. *Information Processing Letters*, 108(3):94–100, 2008.

[110] Gabriela Minetti, Guillermo Leguizamón, and Enrique Alba. Sax: a new and efficient assembler for solving dna fragment assembly problem. *2012 Argentine Symposium on Artificial Intelligence*, 2012.

[111] K Mizuno. Toward ordered generation of exceptionally hard instances for graph 3-colorability. In *Computational Symp. on Graph Coloring and its Generalizations (COLOR'02)*, 2002.

[112] Kazunori Mizuno and Seiichi Nishihara. Constructive generation of very hard 3-colorability instances. *Discrete Applied Mathematics*, 156(2):218–229, 2008.

[113] Eugene W Myers. Toward simplifying and accurately formulating fragment assembly. *Journal of Computational Biology*, 2(2):275–290, 1995.

[114] Antonio J Nebro, Gabriel Luque, Francisco Luna, and Enrique Alba. Dna fragment assembly using a grid-based genetic algorithm. *Computers & Operations Research*, 35(9):2776–2790, 2008.

[115] Godfrey Onwubolu and Donald Davendra. *Differential Evolution for PermutationBased Combinatorial Problems*. Springer, 2009.

[116] Rebecca Parsons and Mark E Johnson. Dna sequence assembly and genetic algorithms-new results and puzzling insights. In *ISMB*, pages 277–284, 1995.

[117] Rebecca J Parsons, Stephanie Forrest, and Christian Burks. Genetic algorithms, operators, and dna fragment assembly. *Machine Learning*, 21(1-2):11–33, 1995.

[118] Pavel Pevzner. *Computational molecular biology: an algorithmic approach*, volume 1. MIT press Cambridge, 2000.

[119] Pavel A Pevzner, Haixu Tang, and Michael S Waterman. An eulerian path approach to dna fragment assembly. *Proceedings of the National Academy of Sciences*, 98(17):9748–9753, 2001.

[120] Robert Clay Prim. Shortest connection networks and some generalizations. *Bell system technical journal*, 36(6):1389–1401, 1957.

[121] LD Qin, QY Jiang, ZY Zou, and YJ Cao. A queen-bee evolution based on genetic algorithm for economic power dispatch. In *Universities Power Engineering Conference, 2004. UPEC 2004. 39th International*, volume 1, pages 453–456. IEEE, 2004.

[122] Nicholas J Radcliffe. Forma analysis and random respectful recombination. In *ICGA*, volume 91, pages 222–229, 1991.

[123] Gerhard Reinelt. Tsplib. `http://comopt.ifi.uni-heidelberg.de/software/TSPLIB95/`. [Online; accessed 13-Nov-2013].

[124] D.J. Rosenkrantz, R.E. Stearns, and P.M. Lewis. An analysis of several heuristics for the traveling salesman problem. *SIAM Journal on Computing*, 6(3):563–581, 1977.

[125] Frederick Sanger, Steven Nicklen, and Alan R Coulson. Dna sequencing with chain-terminating inhibitors. *Proceedings of the National Academy of Sciences*, 74(12):5463–5467, 1977.

[126] S.Baker, R.Flack, and S.Houghten. Optimal variable-length insertion-deletion correcting codes and edit metric codes. *Congressus Numerantium*, 186:65–80, 2007.

[127] Jon E Schoenfield. Fast, exact solution of open bin packing problems without linear programming. *Draft, US Army Space & Missile Defense Command*, page 45, 2002.

[128] Justin Schonfeld and Dan Ashlock. Classifying cytochrome c oxidase subunit 1 by translation initiation mechanism using side effect machines. In *2010 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB)*, pages 1–7. IEEE, 2010.

[129] A. Schrijver. On the history of combinatorial optimization (till 1960). *Handbook of Discrete Optimization*, 12:1–68, 2005.

[130] Temple F Smith and Michael S Waterman. Identification of common molecular subsequences. *Journal of molecular biology*, 147(1):195–197, 1981.

[131] Timothy Starkweather, S McDaniel, Keith E Mathias, L Darrell Whitley, and C Whitley. A comparison of genetic sequencing operators. In *ICGA*, pages 69–76. Citeseer, 1991.

[132] Rainer Storn. On the usage of differential evolution for function optimization. In *1996 Biennial Conference of the North American Fuzzy Information Processing Society, 1996. NAFIPS.*, pages 519–523. IEEE, 1996.

[133] Rainer Storn and Kenneth Price. Differential evolution–a simple and efficient heuristic for global optimization over continuous spaces. *Journal of global optimization*, 11(4):341–359, 1997.

[134] El-Ghazali Talbi. *Metaheuristics: from design to implementation*, volume 74. John Wiley & Sons, 2009.

[135] Fatih Tasgetiren, Angela Chen, Gunes Gencyilmaz, and Said Gattoufi. Smallest position value approach. In *Differential Evolution: A Handbook for Global Permutation-Based Combinatorial Optimization*, pages 121–138. Springer, 2009.

[136] J Craig Venter, Mark D Adams, Eugene W Myers, Peter W Li, Richard J Mural, Granger G Sutton, Hamilton O Smith, Mark Yandell, Cheryl A Evans, Robert A Holt, et al. The sequence of the human genome. *science*, 291(5507):1304–1351, 2001.

[137] Darrell Whitley. An executable model of a simple genetic algorithm. In *FOGA*, pages 45–62. Citeseer, 1992.

[138] Darrell Whitley, Soraya Rana, and Robert B Heckendorn. The island model genetic algorithm: On separability, population size and convergence. *Journal of Computing and Information Technology*, 7:33–48, 1999.

[139] David H Wolpert and William G Macready. No free lunch theorems for search. Technical report, Technical Report SFI-TR-95-02-010, Santa Fe Institute, 1995.

[140] Li-Pei Wong, Malcolm Yoke Hean Low, and Chin Soon Chong. Bee colony optimization with local search for traveling salesman problem. *International Journal on Artificial Intelligence Tools*, 19(03):305–334, 2010.

[141] Binzhou Xia and Zhiyi Tan. Tighter bounds of the first fit algorithm for the bin-packing problem. *Discrete Applied Mathematics*, 158(15):1668–1675, 2010.

[142] Daniel R Zerbino and Ewan Birney. Velvet: algorithms for de novo short read assembly using de bruijn graphs. *Genome research*, 18(5):821–829, 2008.

[143] Yidan Zhao, Ping Ma, Jie Lan, Chun Liang, and Guoli Ji. An improved ant colony algorithm for dna sequence alignment. In *International Symposium on Information Science and Engineering, 2008. ISISE'08.*, volume 2, pages 683–688. IEEE, 2008.

[144] Adrian Zymolka, Arie MCA Koster, and Roland Wessäly. *Transparent optical network design with sparse wavelength conversion*. Konrad-Zuse-Zentrum für Informationstechnik Berlin, 2002.

# Appendix A

# Tables

# A.1 Travelling Salesman Problem: Small Problem Instances

| | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instance | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 0 | 0, 1, 2, 3, 4 | 1, 2 | 3, 4 | 0, 1 | 2, 4 | 1, 4 | 1, 2, 4 | 2, 3, 4 |
| 1 | 0, 1, 2, 3, 4 | 0, 1, 2 | 2, 4 | 0, 4 | 1, 4 | 1, 2, 4 | 1, 2, 4 | 1, 4 |
| 2 | 0, 1, 2, 3, 4 | | 1, 2, 4 | 2, 4 | 0, 2, 3, 4 | 3 | 1, 3, 4 | 0, 2, 3, 4 |
| 3 | 0, 1, 2, 3, 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 |
| 4 | 0, 1, 2, 3, 4 | 0, 3, 4 | 0, 2, 4 | 4 | 0, 2, 3, 4 | 0, 1, 3, 4 | 0, 1, 3, 4 | 0, 2, 3, 4 |
| 5 | 0, 1, 2, 3, 4 | 1 | 4 | 4 | 0, 1, 2, 4 | 0, 1, 4 | 0, 1, 4 | 0, 1, 2, 4 |
| 6 | 0, 1, 2, 3, 4 | 4 | 2, 3, 4 | 0, 1, 3, 4 | 1, 2, 3, 4 | 0, 1 | 0, 1 | 1, 2, 3, 4 |
| 7 | 0, 1, 2, 3, 4 | 2, 3 | 2, 4 | 4 | 2, 4 | 0, 4 | 3 | 0, 2, 4 |
| 8 | 0, 1, 2, 3, 4 | | 0, 4 | 3, 4 | 0, 2, 4 | 0, 2 | 0, 2 | 0, 2, 4 |
| 9 | 0, 1, 2, 3, 4 | 0, 2, 3 | 2, 3, 4 | 0, 4 | 0, 1, 2, 4 | 0, 2, 3 | 0, 3, 4 | 0, 2, 3, 4 |
| 10 | 0, 1, 2, 3, 4 | 1 | 0, 1, 3, 4 | 0, 2, 3, 4 | 0, 2, 4 | 0, 1, 2, 3, 4 | 0, 1, 2, 3, 4 | 0, 2, 4 |
| 11 | 0, 1, 2, 3, 4 | 1, 2, 3 | 0, 2, 4 | 0, 3, 4 | 2, 3, 4 | 1 | 3 | 2, 4 |
| 12 | 0, 1, 2, 3, 4 | 0, 3, 4 | 0, 1, 2, 4 | 0, 1, 3 | 1, 2, 4 | 0, 2, 4 | 2, 4 | 0, 2, 4 |
| 13 | 0, 1, 2, 3, 4 | 0, 3 | 0, 2, 3, 4 | 0, 3 | 0, 2, 3, 4 | 4 | 2, 4 | 0, 2, 4 |
| 14 | 0, 1, 2, 3, 4 | 0, 1, 2, 3 | 0, 1, 4 | 0, 2, 3, 4 | 3, 4 | 0, 3 | 0, 3 | 3, 4 |
| 15 | 0, 1, 2, 3, 4 | 2 | 2, 4 | | 0, 2, 3, 4 | | | 0, 2, 3, 4 |
| 16 | 0, 1, 2, 3, 4 | 0 | 4 | 0, 1, 3 | 0, 2, 4 | 1, 3, 4 | 0, 1, 2 | 0, 1, 2, 4 |
| 17 | 0, 1, 2, 3, 4 | | 0, 1, 2, 4 | 0, 1, 4 | 0, 2, 4 | 1, 2, 3, 4 | 1, 2, 3, 4 | 0, 2, 4 |
| 18 | 0, 1, 2, 3, 4 | 3 | 4 | 0, 3, 4 | 4 | 0, 3, 4 | 0, 1, 2, 3, 4 | 2, 3, 4 |
| 19 | 0, 1, 2, 3, 4 | | 0, 1, 2, 4 | 0, 1, 2, 4 | 3, 4 | 0, 3, 4 | 0, 3, 4 | 3, 4 |
| 20 | 0, 1, 2, 3, 4 | | 2, 4 | | 2, 4 | | | 2, 4 |
| 21 | 0, 1, 2, 3, 4 | 0, 1, 3 | 1, 4 | | 0, 2, 4 | 1 | 1 | 0, 2, 4 |
| 22 | 0, 2, 3, 4 | | 4 | 4 | 1, 2, 4 | 0 | | 2 |
| 23 | 0, 1, 2, 3, 4 | | 0, 1, 2, 3, 4 | 0, 4 | 0, 2, 4 | 1, 3, 4 | 3 | 2, 3, 4 |
| 24 | 0, 1, 2, 3, 4 | | 0, 2, 3, 4 | 4 | 3, 4 | | | 3, 4 |
| 25 | 0, 1, 2, 3, 4 | 3 | 1, 2, 4 | 1, 2, 3, 4 | 0, 1, 2, 3, 4 | 1, 3, 4 | 1, 3, 4 | 0, 1, 2, 3, 4 |
| 26 | 0, 1, 2, 3, 4 | 2, 3 | 0, 1, 2, 4 | 0, 3, 4 | 2, 3, 4 | 0, 2, 3 | 0, 2, 3, 4 | 0, 1, 2, 4 |
| 27 | 0, 1, 2, 3, 4 | 1 | 0, 1, 4 | | 0, 1, 2, 3, 4 | 1, 2, 4 | 1, 2, 4 | 0, 1, 2, 3, 4 |
| 28 | 0, 1, 2, 3, 4 | 1 | 0, 4 | | 1, 3, 4 | | | 1, 3, 4 |
| 29 | 0, 1, 2, 3, 4 | 3 | 2, 3, 4 | 2 | 4 | | | 4 |
| 30 | 0, 1, 2, 3, 4 | 0, 3 | 4 | 1, 3 | 2, 3, 4 | | | 2, 3, 4 |
| 31 | 0, 1, 2, 3, 4 | 3 | 4 | 1, 4 | 0, 2, 3, 4 | 4 | 4 | 4 |
| 32 | 0, 1, 2, 3, 4 | | 0, 2, 3, 4 | 2, 4 | 1, 4 | 0, 3 | 0, 3 | 1, 4 |
| 33 | 0, 1, 2, 3, 4 | 1 | 0, 1, 2, 3, 4 | 1, 2, 4 | 0, 2, 4 | 1 | 1 | 0, 2, 4 |
| 34 | 0, 1, 2, 3, 4 | | 4 | | 2, 4 | 3 | 3 | 2, 4 |
| 35 | 0, 1, 2, 3, 4 | | 0, 1, 4 | 3 | 1, 2, 4 | 0, 4 | 0 | 0, 4 |
| 36 | 0, 1, 2, 3, 4 | 0, 3 | 2, 4 | | 4 | | | |
| 37 | 0, 1, 2, 3, 4 | | 1, 4 | 0, 2, 3 | 0, 1, 2, 4 | 1, 3, 4 | 1, 3, 4 | 0, 1, 2, 4 |
| 38 | 0, 1, 2, 3, 4 | 3 | 4 | 4 | 0, 2, 4 | 4 | 1, 3, 4 | 1, 2, 4 |
| 39 | 0, 1, 2, 3, 4 | 0, 4 | 0, 2, 4 | | 2, 3, 4 | 4 | 1, 4 | 0, 1, 2, 4 |
| 40 | 0, 1, 2, 3, 4 | | 2, 3, 4 | 0, 4 | 0, 1, 2, 4 | 0, 1, 2, 3 | 0, 1, 2, 3 | 0, 1, 2, 4 |
| 41 | 0, 1, 2, 3, 4 | 3 | 0, 2, 3, 4 | | 1, 4 | 0, 2, 3 | 0, 2, 3 | 1, 4 |
| 42 | 0, 1, 2, 3, 4 | 0 | 0, 3, 4 | 2, 4 | 2, 3, 4 | 0, 4 | 2, 4 | 1, 2, 3, 4 |
| 43 | 0, 3, 4 | 1 | 0, 4 | 0 | 1, 4 | 4 | 3 | 4 |
| 44 | 0, 1, 2, 3, 4 | 3 | 0, 2, 4 | 1, 3 | 2, 3, 4 | 0, 1, 2, 3, 4 | 0, 1, 2, 3, 4 | 2, 3, 4 |
| 45 | 1, 2, 3, 4 | | 2, 4 | 0, 4 | 0, 4 | 3 | 3 | 0, 4 |
| 46 | 0, 1, 2, 3, 4 | | 2, 4 | 0, 1, 3, 4 | 4 | 0, 3 | 2, 4 | 0, 1, 4 |
| 47 | 0, 1, 2, 3, 4 | 3 | 0, 2, 4 | 3, 4 | 2, 4 | 3 | 3 | 2 |
| 48 | 0, 1, 2, 3, 4 | 0, 1, 3, 4 | 2, 4 | 0, 1, 4 | 2, 4 | 0, 1, 2, 3, 4 | 0, 3, 4 | 1, 2, 3, 4 |
| 49 | 0, 1, 2, 3, 4 | 0, 2, 3, 4 | 0, 1, 2, 4 | 0, 1, 3, 4 | 0, 2, 4 | 0, 1, 3, 4 | 0, 1, 3, 4 | 0, 2, 4 |

Table A.1: Summary of Results on Instances 0 - 49 for Cities of Size 12

| | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instance | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 50 | 0, 1, 2, 3, 4 | 3, 4 | 0, 2, 3, 4 | 0, 4 | 0, 2, 4 | 3 | 3 | 0, 2, 4 |
| 51 | 0, 1, 2, 3, 4 | | 2, 3, 4 | 1, 4 | 3, 4 | | | 3, 4 |
| 52 | 0, 1, 2, 3, 4 | 0, 2 | 3, 4 | | 4 | 2 | 2, 4 | 0, 2 |
| 53 | 0, 1, 2, 3, 4 | 0 | 3, 4 | | 0, 2, 3, 4 | 2, 3, 4 | 2, 3, 4 | 0, 2, 3, 4 |
| 54 | 0, 1, 2, 3, 4 | 1, 3 | 0, 3, 4 | 0, 3 | 4 | 4 | 4 | 4 |
| 55 | 0, 1, 2, 3, 4 | 4 | 4 | 0, 2, 4 | 0, 2, 4 | 1, 3, 4 | 1, 3, 4 | 0, 2, 4 |
| 56 | 0, 1, 2, 3, 4 | | 0, 2, 4 | 2, 4 | 2, 3, 4 | 1 | 1 | 2, 3, 4 |
| 57 | 0, 1, 2, 3, 4 | 0 | 4 | | 1, 2, 4 | | | 2, 4 |
| 58 | 0, 1, 2, 3, 4 | 3, 4 | 0, 1, 2, 4 | 3 | 1, 2, 4 | 1 | 1 | 1, 2, 4 |
| 59 | 0, 1, 2, 3, 4 | 0, 1, 3 | 0, 2, 4 | 0 | 0, 1, 4 | | | 0, 1, 4 |
| 60 | 0, 1, 2, 3, 4 | 1, 3, 4 | 2, 4 | 0 | 1, 2, 4 | 0, 3, 4 | 0, 3, 4 | 1, 2, 4 |
| 61 | 0, 1, 2, 3, 4 | 2 | 1, 2, 4 | 0, 3 | 1, 3, 4 | 0, 1 | 0, 1 | 1, 3, 4 |
| 62 | 0, 1, 2, 3, 4 | 2 | 0, 2, 4 | 4 | 1, 2, 4 | 0, 1, 4 | 0, 1, 4 | 1, 2, 4 |
| 63 | 0, 1, 2, 3, 4 | 2, 3 | 1, 2, 4 | 0, 1, 3, 4 | 3 | 0, 2, 3 | | 1, 2, 4 |
| 64 | 0, 1, 2, 3, 4 | 0, 1, 3, 4 | 0, 1, 2, 3, 4 | 0, 2, 4 | 0, 1, 2, 4 | 3, 4 | 3, 4 | 0, 1, 2, 4 |
| 65 | 0, 1, 2, 3 | 1 | 1, 4 | 3 | 0, 3, 4 | | | 0, 3, 4 |
| 66 | 0, 1, 2, 3, 4 | | 4 | | 0, 1, 4 | 2 | 2 | 0, 1, 4 |
| 67 | 0, 1, 2, 3, 4 | 0, 1 | 0, 4 | 4 | 2, 3, 4 | 0 | 0 | 2, 3, 4 |
| 68 | 0, 1, 2, 3, 4 | 0 | 0, 2 | | 4 | | | 4 |
| 69 | 0, 1, 2, 3, 4 | 4 | 0, 1, 3, 4 | 0, 1, 3, 4 | 0, 4 | 0, 1, 2 | | 0, 2, 4 |
| 70 | 0, 1, 2, 3, 4 | 0, 4 | 1, 3, 4 | 1, 4 | 2, 4 | 0, 1, 2 | 0, 1, 2 | 2, 4 |
| 71 | 0, 1, 2, 3, 4 | 0, 1 | 2, 4 | 0, 2, 3 | 0, 1, 2, 3, 4 | 2, 4 | 2, 4 | 0, 1, 2, 3, 4 |
| 72 | 0, 1, 2, 3, 4 | | 4 | 0, 2 | 0, 2, 3, 4 | 1, 2, 3, 4 | 1, 2, 3, 4 | 0, 2, 3, 4 |
| 73 | 0, 1, 2, 3, 4 | 0, 3 | 2, 3, 4 | 1 | 2, 3, 4 | 1, 2 | 1, 2 | 2, 3 |
| 74 | 0, 1, 2, 3, 4 | 1, 3 | 2, 3, 4 | 0, 3 | 1, 2, 3, 4 | 3, 4 | 3, 4 | 1, 2, 3, 4 |
| 75 | 0, 1, 2, 3, 4 | | 0, 4 | 2 | 0, 1, 2, 4 | 0, 3, 4 | 3 | 2, 4 |
| 76 | 0, 1, 2, 3, 4 | 3, 4 | 2, 4 | 0 | 0, 3, 4 | 0 | 0 | 0, 3, 4 |
| 77 | 0, 1, 2, 3, 4 | 0, 1 | 1, 2, 3, 4 | 4 | 0, 2, 4 | | | 0, 2, 4 |
| 78 | 0, 1, 2, 3, 4 | 2, 4 | 1, 2, 4 | 0, 2, 3 | 0, 1, 2, 3, 4 | 1, 2, 3 | 1, 2, 3 | 0, 1, 2, 3, 4 |
| 79 | 0, 1, 2, 3, 4 | 2, 3 | 1, 2, 4 | 2, 3 | 0, 1, 2, 4 | 0, 2, 3, 4 | 0, 2, 3, 4 | 0, 1, 2, 4 |
| 80 | 0, 1, 2, 3, 4 | | 0, 2, 4 | | 0, 2, 3, 4 | | 4 | 0, 1, 2, 4 |
| 81 | 0, 1, 2, 3, 4 | 0, 3 | 1, 2, 4 | 0, 4 | 4 | 2 | 2 | 4 |
| 82 | 0, 1, 2, 3, 4 | 1 | 2, 4 | 0, 1, 3 | 2, 4 | 3 | 3 | 2, 4 |
| 83 | 0, 1, 2, 3, 4 | 3, 4 | 0, 2, 4 | 3 | 3, 4 | | | 3, 4 |
| 84 | 0, 1, 2, 3, 4 | | 0, 2, 4 | 0, 2, 3, 4 | 0, 2, 4 | | | 0, 2, 4 |
| 85 | 0, 1, 2, 3, 4 | 0, 1, 2, 3 | 0, 2, 3, 4 | 2, 3 | 0, 3, 4 | | | 0, 3, 4 |
| 86 | 0, 1, 2, 3, 4 | 2, 3 | 4 | 0 | 0, 3, 4 | 2 | 2 | 0, 3, 4 |
| 87 | 0, 1, 2, 3, 4 | 3 | 4 | 0, 2 | 0, 1, 2, 4 | 2 | 2 | 0, 1, 2, 4 |
| 88 | 0, 1, 2, 3, 4 | 1, 3 | 0, 2, 4 | 0, 3 | 2, 3, 4 | | 0, 4 | 4 |
| 89 | 0, 1, 2, 3, 4 | 0 | 0, 2, 4 | 2 | 2, 4 | | | 2, 4 |
| 90 | 0, 1, 2, 3, 4 | | 0, 2, 4 | 3 | 4 | 0, 1 | 0, 1 | 4 |
| 91 | 0, 1, 2, 3, 4 | 2, 4 | 1, 3, 4 | 2, 4 | 1, 2, 4 | 0 | 0 | 1, 2, 4 |
| 92 | 0, 1, 2, 3, 4 | 3 | 2, 4 | 0 | 0, 3, 4 | | | 0, 3 |
| 93 | 0, 1, 2, 3, 4 | 1, 2, 3 | 0, 1, 4 | 0, 4 | 4 | 1, 4 | 1, 4 | 4 |
| 94 | 0, 1, 2, 3, 4 | | 0, 1, 4 | 0, 1, 4 | 4 | 0 | 0 | 4 |
| 95 | 0, 1, 2, 3, 4 | 3 | 2, 4 | 0, 3 | 0, 1, 2, 3, 4 | | 1, 3 | 0, 1, 2, 4 |
| 96 | 0, 1, 2, 3, 4 | 1 | 0, 2, 3, 4 | 0, 4 | 0, 2, 3, 4 | 4 | 4 | 0, 2, 3, 4 |
| 97 | 0, 1, 2, 3, 4 | 3 | 0, 1, 2, 3, 4 | 2, 4 | 2, 4 | 3, 4 | 3, 4 | 2, 4 |
| 98 | 0, 1, 2, 3, 4 | 0, 2 | 0, 1, 2, 3, 4 | 2, 3, 4 | 0, 1, 2, 3, 4 | 0, 1, 2, 3, 4 | 0, 1, 2, 4 | 2, 4 |
| 99 | 0, 1, 2, 3, 4 | 1 | 2, 4 | 0, 2, 4 | 2, 3, 4 | 0, 2, 3 | 3 | 2, 3, 4 |

Table A.2: Summary of Results on Instances 50 - 99 for Cities of Size 12

| Instance | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 0 | 1, 2, 3, 4 | | 4 | | | | | 4 |
| 1 | 1, 2, 3, 4 | | 4 | | 4 | | | |
| 2 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 3 | 0, 1, 2, 3, 4 | | | | | | | |
| 4 | 0, 1, 2, 3, 4 | | 4 | 4 | 4 | | | 4 |
| 5 | 1, 2, 3 | 1 | 4 | | 4 | | | 4 |
| 6 | 1, 2, 3, 4 | | 4 | | | | | |
| 7 | 0, 1, 3, 4 | | | | 4 | | | 4 |
| 8 | 0, 1, 2, 3 | | 4 | | 4 | | | 4 |
| 9 | 0, 1, 2, 3, 4 | | 4 | | 3, 4 | 1 | 1 | 3, 4 |
| 10 | 0, 2, 3, 4 | | 4 | 3 | | | | 4 |
| 11 | 0, 1, 2, 3 | | 4 | | | | | 4 |
| 12 | 1, 3, 4 | | 3 | | 4 | | | 4 |
| 13 | 0, 1, 2, 3, 4 | | 2 | | 4 | | | 4 |
| 14 | 0, 1, 2, 3, 4 | | 4 | 3 | 4 | 1 | | 2, 4 |
| 15 | 0, 1, 2, 3, 4 | | 4 | 3, 4 | 4 | | 0 | 4 |
| 16 | 0, 1, 2, 3 | | 4 | | 4 | | | 4 |
| 17 | 0, 1, 2, 3, 4 | 1 | 4 | | 4 | | | |
| 18 | 0, 1, 2, 3 | | | | | | | |
| 19 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 20 | 0, 1, 2, 3 | | | | 4 | | | 4 |
| 21 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 22 | 0, 1, 3 | | 4 | 3 | 4 | | | |
| 23 | 0, 1, 3, 4 | 4 | 4 | 4 | | | | 4 |
| 24 | 0, 1, 3, 4 | | 0, 2, 4 | | 4 | | | 4 |
| 25 | 0, 1, 2, 3, 4 | | 4 | | | | | 4 |
| 26 | 0, 1, 2, 3 | | 2, 4 | | 4 | | | 4 |
| 27 | 0, 1, 2, 3, 4 | | 4 | | 4 | 3 | | 2, 4 |
| 28 | 0, 1, 2, 3, 4 | | 4 | | 2 | | | 4 |
| 29 | 0, 1, 3, 4 | 0 | 4 | | 4 | | | 4 |
| 30 | 0, 1, 2, 3 | | 4 | 1 | 4 | | 1, 4 | 4 |
| 31 | 0, 1, 2, 3, 4 | | 4 | 0, 3 | 4 | | | 4 |
| 32 | 0, 1, 2, 3, 4 | | 4 | 0 | | 2 | 2 | 4 |
| 33 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 34 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 35 | 0, 1, 3, 4 | 3 | 4 | | 4 | | | 4 |
| 36 | 0, 3, 4 | | | | 4 | | | |
| 37 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | |
| 38 | 0, 3, 4 | | | 1 | 3 | | 0 | |
| 39 | 0, 1, 2, 3, 4 | | 1, 4 | | | | | |
| 40 | 0, 1, 2, 3, 4 | | | | | | | |
| 41 | 0, 1, 2, 3, 4 | 4 | | | 2 | | | 2 |
| 42 | 0, 1, 2, 3, 4 | | 4 | 4 | 4 | | | 4 |
| 43 | 0, 1, 2, 3, 4 | | 2, 4 | | 0, 4 | | | 0 |
| 44 | 0, 1, 2, 3, 4 | | 4 | | 4 | 0, 1 | 0, 1 | 4 |
| 45 | 0, 2, 3, 4 | | 4 | | 2, 4 | | | 2, 4 |
| 46 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 47 | 0, 1, 2, 3, 4 | | 4 | 4 | 4 | | | 4 |
| 48 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 49 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |

Table A.3: Summary of Results on Instances 0 - 49 for Cities of Size 14

| | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instance | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 50 | 0, 1, 2, 3, 4 | | 4 | | | | | 4 |
| 51 | 2, 3 | | | | 4 | | 0 | 4 |
| 52 | 0, 4 | | | | 4 | | | |
| 53 | 0, 1, 2, 3, 4 | | | | | | | |
| 54 | 0, 1, 2, 3, 4 | 1, 3 | 4 | | | | | 4 |
| 55 | 0, 1, 2, 3, 4 | 1 | 4 | | 2, 4 | | | 2, 4 |
| 56 | 0, 1, 2, 3, 4 | | | | 4 | | | |
| 57 | 0, 3 | | | | 4 | | | 4 |
| 58 | 0, 1, 2, 3, 4 | 4 | 4 | | | | | 4 |
| 59 | 0, 1, 2, 3, 4 | | 4 | | 4 | 1 | | 4 |
| 60 | 0, 1, 2, 3, 4 | | 4 | | | | | 4 |
| 61 | 0, 1, 2, 3, 4 | | | | 4 | | | 2, 4 |
| 62 | 0, 1, 2, 3, 4 | | 4 | | 0, 4 | | 3 | 4 |
| 63 | 0, 1, 3, 4 | | 4 | | | | | |
| 64 | 0, 1, 2, 3, 4 | | 4 | 1 | 1, 4 | | | 4 |
| 65 | 0, 1, 2, 3, 4 | | 2, 4 | | 0, 4 | 2, 4 | 2, 4 | 0, 4 |
| 66 | 0, 1, 2, 3, 4 | | 4 | 4 | 4 | | | 4 |
| 67 | 0, 1, 2, 3 | | | | 4 | | 1 | |
| 68 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 69 | 0, 1, 3, 4 | | 4 | 1 | | | | 4 |
| 70 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 71 | 0, 1, 2, 3, 4 | | 4 | | 2, 4 | | | 4 |
| 72 | 0, 1, 2, 3, 4 | | 4 | 3 | 4 | 1 | 1 | 4 |
| 73 | 0, 2, 3, 4 | 3 | | | 4 | 1 | 1 | 4 |
| 74 | 0, 1, 2, 3, 4 | | 4 | | 4 | 4 | 3 | 4 |
| 75 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 76 | 0, 1, 2, 3, 4 | | 4 | | 2, 4 | | | 2, 4 |
| 77 | 0, 1, 2, 3, 4 | | 4 | | 4 | | 4 | 0, 4 |
| 78 | 0, 1, 2, 3, 4 | 3 | 4 | | 4 | | | 4 |
| 79 | 1, 2, 3, 4 | | | | 4 | | | 4 |
| 80 | 0, 1, 2, 3, 4 | | 0, 4 | | | | | |
| 81 | 0, 1, 2, 3, 4 | | 4 | | 4 | 2 | 2 | 4 |
| 82 | 0, 1, 2, 3, 4 | | 4 | | | | | |
| 83 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 84 | 0, 1, 3, 4 | | 4 | 0 | 4 | | | 2, 4 |
| 85 | 0, 1, 2, 3, 4 | | 4 | | 4 | | 1, 3 | 2, 4 |
| 86 | 0, 1, 3, 4 | | 4 | 3 | | | | 4 |
| 87 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 88 | 0, 2, 3, 4 | | 4 | | | | | 4 |
| 89 | 0, 1, 2, 3, 4 | | | | 4 | | | |
| 90 | 0, 1, 3, 4 | 2 | 4 | 3 | 2 | 0 | 0 | 2 |
| 91 | | | 4 | | | | | |
| 92 | 0, 3 | | 4 | | | | | 4 |
| 93 | 0, 1, 2, 3, 4 | 4 | 4 | | 4 | | | |
| 94 | 0, 1, 2, 3, 4 | | 4 | 4 | 4 | 0, 2 | 0, 2 | 4 |
| 95 | 0, 1, 2, 3 | | 2 | 1 | 4 | | | |
| 96 | 1, 2, 3 | | 4 | | | | | |
| 97 | 0, 1, 2, 3 | | 3, 4 | | 0 | | | 0, 4 |
| 98 | 0, 2, 3, 4 | | 4 | | 4 | | | 4 |
| 99 | 0, 1, 2, 3, 4 | | 4 | 4 | 4 | | | 4 |

Table A.4: Summary of Results on Instances 50 - 99 for Cities of Size 14

| | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instance | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 0 | 0, 1, 3, 4 | | | | | | | |
| 1 | 1, 3 | | | | | | | |
| 2 | 3 | | | | 4 | | | 4 |
| 3 | 1, 2 | | | | | | | |
| 4 | 1, 3, 4 | | 4 | | | | | |
| 5 | | | 4 | | | | | |
| 6 | 0, 3, 4 | | 4 | | | | | 4 |
| 7 | 0, 1, 2 | | | | | | | |
| 8 | 1 | | | | | | | |
| 9 | 2 | | | | | | | 4 |
| 10 | 0, 1, 2, 3, 4 | | | | | | | |
| 11 | 3 | | | | | | | 4 |
| 12 | 2 | | | | | | | |
| 13 | 2, 4 | | | | | | | 4 |
| 14 | 0, 2, 4 | | | | | | | |
| 15 | 3 | | | | | | | |
| 16 | 1, 2, 3, 4 | | | | | | | |
| 17 | 0, 1, 3, 4 | | | | | | | |
| 18 | 0, 2, 4 | | | | | | | |
| 19 | 0, 4 | | 4 | | | | | |
| 20 | 0, 1, 2, 3, 4 | | | | | | | |
| 21 | 0, 1, 2, 3, 4 | | 4 | | 4 | | | |
| 22 | 0, 2, 3 | | | | | | | |
| 23 | 0, 1, 4 | | 4 | | 4 | | | |
| 24 | 2, 3, 4 | | | | 4 | | | |
| 25 | 0, 3 | | 4 | | | | | 4 |
| 26 | | | | | 4 | | | 4 |
| 27 | 1, 3, 4 | | | | 4 | | | 4 |
| 28 | 0, 2, 3, 4 | | 4 | | | 0 | 0 | 4 |
| 29 | 0, 1, 3 | | 4 | | | | | |
| 30 | 1 | | | | 4 | | | |
| 31 | | | | | | | | 4 |
| 32 | 3, 4 | | | | | | | |
| 33 | 1 | | | | | | | |
| 34 | 1, 3 | | 4 | | | | | |
| 35 | 0, 1, 2, 3, 4 | | | | | | | |
| 36 | 0, 3, 4 | | | | 4 | | | |
| 37 | 1, 3 | | | 3 | 4 | | | |
| 38 | 1, 3 | | | | 4 | | | |
| 39 | 2, 3, 4 | | | | 4 | | | 4 |
| 40 | 4 | | | | | | | 4 |
| 41 | 0, 1, 2, 3, 4 | | | | | | | |
| 42 | 1, 3 | | | | | | | 4 |
| 43 | 0, 2, 3, 4 | | | | | | | |
| 44 | 0, 1, 4 | | 4 | | | | | |
| 45 | 1, 3 | | | | | | | |
| 46 | 0, 2, 3 | | | | | | | 4 |
| 47 | 0, 1, 4 | | | | | | | 4 |
| 48 | 0, 3, 4 | | 4 | | 4 | | | 4 |
| 49 | 0, 1, 2, 3, 4 | | | | | | | |

Table A.5: Summary of Results on Instances 0 - 49 for Cities of Size 16

| | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instance | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 50 | 1, 3 | | | | | | | |
| 51 | | | | | 4 | | | 4 |
| 52 | 2, 3 | | | 3 | | | | |
| 53 | 0, 2, 3, 4 | | | | | | | |
| 54 | 2, 3, 4 | | 4 | | | | | 4 |
| 55 | 0, 1, 3 | | 4 | | 4 | | | |
| 56 | 0 | | | | | | | |
| 57 | 0, 2, 3, 4 | | | | | | | |
| 58 | 0, 1, 3, 4 | | | | | | | |
| 59 | 1, 2, 3 | | 4 | | | | | |
| 60 | 4 | | | | | | | |
| 61 | 0, 1, 2, 3, 4 | | 4 | | | | | |
| 62 | 0, 1 | | | | 4 | | | 4 |
| 63 | 3, 4 | | | | | | | 4 |
| 64 | 1, 2 | | | | | | | |
| 65 | 0, 3 | | 4 | | | | | |
| 66 | 0, 1, 2 | | | | | | | |
| 67 | 3 | | | | | | | |
| 68 | 0, 1, 4 | | 4 | | | | | |
| 69 | 3 | | | | | | | |
| 70 | 0, 2, 3 | | | | | | | 4 |
| 71 | 1, 2, 3, 4 | | | | | | 2 | |
| 72 | 0 | | | | | | | |
| 73 | 0, 4 | | | | | | | |
| 74 | 1, 3, 4 | | | | | | | |
| 75 | 3, 4 | | | | | | | |
| 76 | 0, 1, 3 | | | | | | | |
| 77 | 3 | 4 | | | | | | |
| 78 | 1, 2 | | | | | | | |
| 79 | 1, 2, 3, 4 | | | | 4 | | | 4 |
| 80 | 0, 1, 2, 3 | | | | | | | |
| 81 | 0, 1, 3, 4 | | | | | | | |
| 82 | 3, 4 | | | | | | | |
| 83 | 1 | | | | | | | |
| 84 | 1, 3 | | | | 4 | | | |
| 85 | 1, 3 | | | | | | | |
| 86 | 3 | | | | | | | |
| 87 | 1, 3 | | | | | | | |
| 88 | 0, 1, 3, 4 | | | | | | | 4 |
| 89 | 0, 1, 2, 3 | | | | | | | |
| 90 | 0, 1, 2, 3, 4 | | | | | | | 4 |
| 91 | 0, 1, 2, 3, 4 | | 4 | | | | | 4 |
| 92 | 1, 3 | | | | | | | |
| 93 | 0, 1, 2, 3 | | | | | | | 4 |
| 94 | 0, 1, 2, 3 | | 4 | | | | | |
| 95 | 1, 2, 3, 4 | | 4 | | | 1 | 1 | |
| 96 | 0, 3 | | | | | | | |
| 97 | | | | | 4 | | | 4 |
| 98 | 0, 1, 3 | | | | | | | |
| 99 | 3 | | | | | | | 4 |

Table A.6: Summary of Results on Instances 50 - 99 for Cities of Size 16

| | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instance | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 0 | 0, 1 | | | | | | | |
| 1 | 0 | | | | 4 | | | |
| 2 | 2, 3 | | | | | | | |
| 3 | 0 | | | | | | | |
| 4 | 1 | | | | | | | |
| 5 | 3 | | | | | | | |
| 6 | 0, 1, 4 | | | | | | | |
| 7 | 0 | | | | | | | |
| 8 | 3 | | | | | | | |
| 9 | 0 | | | | | | | |
| 10 | | | | | | | | 4 |
| 11 | 3 | | | | | | | |
| 12 | 0 | | | | | | | |
| 13 | 3 | | | | | | | |
| 14 | | | | | | | | 4 |
| 15 | 3 | | | | | | | |
| 16 | 3 | | | | | | | |
| 17 | 1, 3 | | | | | | | |
| 18 | 1, 2 | | | | | | | |
| 19 | 0 | | | | | | | |
| 20 | 0 | | | | | | | |
| 21 | 0 | | | | | | | 4 |
| 22 | 3 | | | | | | | |
| 23 | | | 4 | | | | | |
| 24 | | | | | 4 | | | |
| 25 | 1 | | | | | | | 4 |
| 26 | 0 | | | | | | | |
| 27 | 2, 3 | | | | | | | |
| 28 | 3 | | | | | | | |
| 29 | 0, 3, 4 | | | | | | | |
| 30 | 2 | | | | | | | |
| 31 | 0, 3, 4 | | | | | | | |
| 32 | | | | | 4 | | | |
| 33 | 1 | | | | | | | |
| 34 | 0, 1, 3 | | | | | | | |
| 35 | 3 | | | | | | | |
| 36 | 3 | | | | | | | |
| 37 | 4 | | | | | | | |
| 38 | 3 | | | | | | | |
| 39 | 0 | | | | | | | |
| 40 | 1, 3 | | | | | | | |
| 41 | 1 | | | | | | | |
| 42 | 1, 3 | | | | | | | |
| 43 | 4 | | | | | | | |
| 44 | 0 | | | | | | | |
| 45 | 1 | | | | | | | |
| 46 | 4 | | | | | | | |
| 47 | 3 | | | | | | | 4 |
| 48 | 3 | | | | | | | |
| 49 | 1, 3 | | | | | | | 4 |

Table A.7: Summary of Results on Instances 0 - 49 for Cities of Size 18

| | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instance | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 50 | 1 | | | | | | | |
| 51 | | | | | | | | 4 |
| 52 | 0 | | | | | | | |
| 53 | 4 | | | | | | | |
| 54 | 0 | | | | | | | |
| 55 | 3 | | | | | | | |
| 56 | 1, 2, 3 | | | | | | | |
| 57 | 3 | | | | | | | |
| 58 | 1 | | | | | | | |
| 59 | 0 | | | | | | | |
| 60 | 2 | | | | | | | |
| 61 | 0, 1, 4 | | | | | | | |
| 62 | 3 | | | | | | | |
| 63 | 0 | | | | | | | |
| 64 | | | | | | | | 4 |
| 65 | 0 | | | | | | | |
| 66 | | | | | | | | 4 |
| 67 | | | 4 | | | | | |
| 68 | 0, 3 | | | | | | | |
| 69 | 4 | | | | | | | |
| 70 | 1 | | | | | | | |
| 71 | 3 | | | | | | | |
| 72 | 0 | | | | | | | |
| 73 | 1, 3 | | | | | | | |
| 74 | 4 | | | | | | | |
| 75 | 2 | | | | | | | |
| 76 | 0 | | | | | | | |
| 77 | 0 | | | | | | | |
| 78 | 3 | | | | | | | |
| 79 | | | | | | | | 4 |
| 80 | 1 | | | | | | | |
| 81 | 0, 1, 3 | | | | | | | |
| 82 | 1 | | 4 | | | | | |
| 83 | 2, 3 | | | | | | | |
| 84 | 1, 4 | | | | | | | |
| 85 | 0 | | | | | | | |
| 86 | 1 | | | | | | | |
| 87 | 3 | | | | | | | |
| 88 | 3 | | | | | | | |
| 89 | | | | | 4 | | | |
| 90 | 1, 3 | | | | | | | |
| 91 | | | | | | | | 4 |
| 92 | 2 | | | | | | | |
| 93 | 3 | | | | | | | |
| 94 | 3 | | | | | | | |
| 95 | 3, 4 | | | | | | | |
| 96 | 0, 2, 4 | | | | | | | |
| 97 | 3 | | | | | | | |
| 98 | 2 | | | | | | | |
| 99 | 3 | | | | | | | |

Table A.8: Summary of Results on Instances 50 - 99 for Cities of Size 18

| | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instance | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 0 | 4 | | | | | | | |
| 1 | 1 | | | | | | | |
| 2 | 2 | | | | | | | |
| 3 | 4 | | | | | | | |
| 4 | 1 | | | | | | | |
| 5 | 3 | | | | | | | |
| 6 | | | 4 | | | | | |
| 7 | 4 | | | | | | | |
| 8 | 3 | | | | | | | |
| 9 | 4 | | | | | | | |
| 10 | 0, 1 | | | | | | | |
| 11 | 0 | | | | | | | |
| 12 | 3 | | | | | | | |
| 13 | | | 4 | | | | | |
| 14 | | | | | | | | 4 |
| 15 | 4 | | | | | | | |
| 16 | 0 | | | | | | | |
| 17 | 3 | | | | | | | |
| 18 | 0 | | | | | | | |
| 19 | 0 | | | | | | | |
| 20 | 1 | | | | | | | |
| 21 | 0 | | | | | | | |
| 22 | 1 | | | | | | | |
| 23 | | | | | | | | 4 |
| 24 | 0 | | | | | | | |
| 25 | 1 | | | | | | | |
| 26 | 1 | | | | | | | |
| 27 | | | | | 4 | | | |
| 28 | 4 | | | | | | | |
| 29 | 3 | | | | | | | |
| 30 | 1 | | | | | | | |
| 31 | 4 | | | | | | | |
| 32 | 3 | | | | | | | |
| 33 | 1 | | | | | | | |
| 34 | | | | | | | | 4 |
| 35 | 1 | | | | | | | |
| 36 | 3 | | | | | | | |
| 37 | 3 | | | | | | | |
| 38 | | | 4 | | | | | |
| 39 | 1 | | | | | | | |
| 40 | 4 | | | | | | | |
| 41 | 4 | | | | | | | |
| 42 | | | | | | | | 4 |
| 43 | 1 | | | | | | | |
| 44 | 3 | | | | | | | |
| 45 | 3 | | | | | | | |
| 46 | 2 | | | | | | | |
| 47 | 0 | | | | | | | |
| 48 | 1 | | | | | | | |
| 49 | 4 | | | | | | | |

Table A.9: Summary of Results on Instances 0 - 49 for Cities of Size 20

| | Set of System Parameters Achieving Best | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instance | GA Direct | GA Indirect | RRGA Direct | RRGA Indirect | RRGA Direct NN | RRGA Indirect NN | RRGA Direct MIN | RRGA Indirect MIN |
| 50 | 3 | | | | | | | |
| 51 | 1 | | | | | | | |
| 52 | 0 | | | | | | | |
| 53 | 4 | | | | | | | |
| 54 | 4 | | | | | | | |
| 55 | 4 | | | | | | | |
| 56 | 0 | | | | | | | |
| 57 | 1 | | | | | | | |
| 58 | 1 | | | | | | | |
| 59 | 0 | | | | | | | |
| 60 | 0 | | | | | | | |
| 61 | 1 | | | | | | | |
| 62 | | | | | 4 | | | |
| 63 | 1 | | | | | | | |
| 64 | 1 | | | | | | | |
| 65 | 0 | | | | | | | |
| 66 | 4 | | | | | | | |
| 67 | 3 | | | | | | | |
| 68 | 0 | | | | | | | |
| 69 | 0 | | | | | | | |
| 70 | | | | | | | | 4 |
| 71 | 4 | | | | | | | |
| 72 | 0 | | | | | | | |
| 73 | 4 | | | | | | | |
| 74 | 0 | | | | | | | |
| 75 | | | 4 | | | | | |
| 76 | 1 | | | | | | | |
| 77 | 0 | | | | | | | |
| 78 | 0, 4 | | | | | | | |
| 79 | 0 | | | | | | | |
| 80 | 4 | | | | | | | |
| 81 | 1 | | | | | | | |
| 82 | | | 4 | | | | | |
| 83 | 0 | | | | | | | |
| 84 | 1 | | | | | | | |
| 85 | 4 | | | | | | | |
| 86 | 0 | | | | | | | |
| 87 | 0 | | | | | | | |
| 88 | 1 | | | | | | | |
| 89 | 0 | | | | | | | |
| 90 | 3 | | | | | | | |
| 91 | 1 | | | | | | | |
| 92 | 4 | | | | | | | |
| 93 | 1 | | | | | | | |
| 94 | 3 | | | | | | | |
| 95 | 3 | | | | | | | |
| 96 | | | | | | | | 4 |
| 97 | 3 | | | | | | | |
| 98 | 1 | | | | | | | |
| 99 | 1 | | | | | | | |

Table A.10: Summary of Results on Instances 50 - 99 for Cities of Size 20

### A.1.1 Increased Number of Generations

## A.2 Bin Packing Problem

### A.2.1 $u$ Instance Results

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 415 (4.01) | 416.4 | 0.62 | 414 (3.76) | 415.7 | 0.6 | 414 (3.76) | 415.3 | 0.6 |
| | | | 2op | 414 (3.76) | 415.5 | 0.57 | 414 (3.76) | 415.17 | 0.53 | 414 (3.76) | 415.1 | 0.55 |
| | | 1 | rnd | 415 (4.01) | 416.4 | 0.62 | 413 (3.51) | 414.57 | 0.82 | 413 (3.51) | 414.37 | 0.61 |
| | | | 2op | 414 (3.76) | 415.5 | 0.57 | 413 (3.51) | 414.67 | 0.66 | 413 (3.51) | 414.43 | 0.68 |
| | 50 | 0 | rnd | 414 (3.76) | 415.43 | 0.63 | 413 (3.51) | 414.8 | 0.66 | 413 (3.51) | 414.77 | 0.68 |
| | | | 2op | 414 (3.76) | 414.8 | 0.61 | 414 (3.76) | 414.8 | 0.66 | 414 (3.76) | 414.9 | 0.4 |
| | | 1 | rnd | 414 (3.76) | 415.43 | 0.63 | 413 (3.51) | 414.33 | 0.76 | 413 (3.51) | 414.3 | 0.6 |
| | | | 2op | 414 (3.76) | 414.8 | 0.61 | 413 (3.51) | 414.53 | 0.63 | 413 (3.51) | 414.23 | 0.63 |
| 51 | 20 | 0 | rnd | 414 (3.76) | 415.43 | 0.73 | 414 (3.76) | 415.43 | 0.73 | 414 (3.76) | 415.07 | 0.58 |
| | | | 2op | 414 (3.76) | 414.97 | 0.67 | 414 (3.76) | 414.97 | 0.67 | 413 (3.51) | 414.7 | 0.65 |
| | | 1 | rnd | 414 (3.76) | 415.43 | 0.73 | 414 (3.76) | 415.43 | 0.73 | 413 (3.51) | 414.53 | 0.63 |
| | | | 2op | 414 (3.76) | 414.97 | 0.67 | 414 (3.76) | 414.97 | 0.67 | 413 (3.51) | 414.2 | 0.61 |
| | 50 | 0 | rnd | 413 (3.51) | 414.33 | 0.61 | 413 (3.51) | 414.33 | 0.61 | 413 (3.51) | 414.07 | 0.69 |
| | | | 2op | 413 (3.51) | 414.33 | 0.55 | 413 (3.51) | 414.33 | 0.55 | 413 (3.51) | 414.03 | 0.61 |
| | | 1 | rnd | 413 (3.51) | 414.33 | 0.61 | 413 (3.51) | 414.33 | 0.61 | 412 (3.26) | 413.77 | 0.82 |
| | | | 2op | 413 (3.51) | 414.33 | 0.55 | 413 (3.51) | 414.33 | 0.55 | 413 (3.51) | 414.03 | 0.67 |

Table A.11: $u1000_00$: BasicRRGA – Perfect Score is 399

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 417 (4.51) | 418.37 | 0.56 | 416 (4.26) | 417.7 | 0.53 | 415 (4.01) | 416.57 | 0.57 |
| | | | 2op | 415 (4.01) | 416.7 | 0.53 | 415 (4.01) | 416.07 | 0.52 | 415 (4.01) | 415.6 | 0.5 |
| | | 1 | rnd | 417 (4.51) | 418.37 | 0.56 | 413 (3.51) | 414.63 | 0.67 | 413 (3.51) | 414.4 | 0.72 |
| | | | 2op | 415 (4.01) | 416.7 | 0.53 | 413 (3.51) | 414.6 | 0.56 | 412 (3.26) | 414.47 | 0.78 |
| | 50 | 0 | rnd | 418 (4.76) | 418.37 | 0.49 | 417 (4.51) | 417.63 | 0.56 | 415 (4.01) | 416.43 | 0.57 |
| | | | 2op | 416 (4.26) | 416.27 | 0.45 | 415 (4.01) | 415.87 | 0.57 | 415 (4.01) | 415.43 | 0.5 |
| | | 1 | rnd | 418 (4.76) | 418.37 | 0.49 | 414 (3.76) | 414.67 | 0.61 | 413 (3.51) | 414.33 | 0.55 |
| | | | 2op | 416 (4.26) | 416.27 | 0.45 | 414 (3.76) | 414.6 | 0.62 | 413 (3.51) | 414.53 | 0.73 |
| 51 | 20 | 0 | rnd | 417 (4.51) | 417.7 | 0.47 | 417 (4.51) | 417.7 | 0.47 | 415 (4.01) | 416.4 | 0.62 |
| | | | 2op | 415 (4.01) | 415.87 | 0.43 | 415 (4.01) | 415.87 | 0.43 | 414 (3.76) | 414.97 | 0.61 |
| | | 1 | rnd | 417 (4.51) | 417.7 | 0.47 | 417 (4.51) | 417.7 | 0.47 | 413 (3.51) | 414.2 | 0.66 |
| | | | 2op | 415 (4.01) | 415.87 | 0.43 | 415 (4.01) | 415.87 | 0.43 | 414 (3.76) | 414.63 | 0.49 |
| | 50 | 0 | rnd | 417 (4.51) | 417.67 | 0.48 | 417 (4.51) | 417.67 | 0.48 | 415 (4.01) | 416.17 | 0.59 |
| | | | 2op | 414 (3.76) | 415.83 | 0.53 | 414 (3.76) | 415.83 | 0.53 | 414 (3.76) | 414.77 | 0.57 |
| | | 1 | rnd | 417 (4.51) | 417.67 | 0.48 | 417 (4.51) | 417.67 | 0.48 | 413 (3.51) | 414.4 | 0.62 |
| | | | 2op | 414 (3.76) | 415.83 | 0.53 | 414 (3.76) | 415.83 | 0.53 | 413 (3.51) | 414.27 | 0.69 |

Table A.12: $u1000_00$: TransRRGA – Perfect Score is 399

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 423 (4.19) | 423.57 | 0.5 | 422 (3.94) | 423.17 | 0.65 | 421 (3.69) | 422.73 | 0.64 |
| | | | 2op | 422 (3.94) | 422.67 | 0.55 | 422 (3.94) | 422.5 | 0.51 | 421 (3.69) | 422.27 | 0.52 |
| | | 1 | rnd | 423 (4.19) | 423.57 | 0.5 | 420 (3.45) | 421.6 | 0.62 | 420 (3.45) | 421.4 | 0.62 |
| | | | 2op | 422 (3.94) | 422.67 | 0.55 | 420 (3.45) | 421.87 | 0.73 | 421 (3.69) | 421.83 | 0.59 |
| | 50 | 0 | rnd | 421 (3.69) | 422.43 | 0.68 | 420 (3.45) | 422.13 | 0.73 | 421 (3.69) | 421.8 | 0.48 |
| | | | 2op | 421 (3.69) | 422 | 0.53 | 421 (3.69) | 421.63 | 0.49 | 421 (3.69) | 421.57 | 0.5 |
| | | 1 | rnd | 421 (3.69) | 422.43 | 0.68 | 420 (3.45) | 421.7 | 0.7 | 420 (3.45) | 421.4 | 0.72 |
| | | | 2op | 421 (3.69) | 422 | 0.53 | 420 (3.45) | 421.47 | 0.63 | 420 (3.45) | 421.3 | 0.65 |
| 51 | 20 | 0 | rnd | 422 (3.94) | 422.83 | 0.53 | 422 (3.94) | 422.83 | 0.53 | 420 (3.45) | 422.27 | 0.74 |
| | | | 2op | 421 (3.69) | 422.2 | 0.61 | 421 (3.69) | 422.2 | 0.61 | 421 (3.69) | 422 | 0.59 |
| | | 1 | rnd | 422 (3.94) | 422.83 | 0.53 | 422 (3.94) | 422.83 | 0.53 | 420 (3.45) | 421.37 | 0.67 |
| | | | 2op | 421 (3.69) | 422.2 | 0.61 | 421 (3.69) | 422.2 | 0.61 | 421 (3.69) | 421.6 | 0.5 |
| | 50 | 0 | rnd | 420 (3.45) | 421.57 | 0.63 | 420 (3.45) | 421.57 | 0.63 | 420 (3.45) | 421.2 | 0.71 |
| | | | 2op | 420 (3.45) | 421.13 | 0.51 | 420 (3.45) | 421.13 | 0.51 | 420 (3.45) | 420.97 | 0.49 |
| | | 1 | rnd | 420 (3.45) | 421.57 | 0.63 | 420 (3.45) | 421.57 | 0.63 | 420 (3.45) | 420.97 | 0.67 |
| | | | 2op | 420 (3.45) | 421.13 | 0.51 | 420 (3.45) | 421.13 | 0.51 | 419 (3.2) | 420.97 | 0.76 |

Table A.13: $u1000_0 1$: BasicRRGA – Perfect Score is 406

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 425 (4.68) | 425.3 | 0.47 | 424 (4.43) | 424.87 | 0.51 | 423 (4.19) | 423.97 | 0.41 |
| | | | 2op | 423 (4.19) | 423.9 | 0.48 | 422 (3.94) | 423.2 | 0.48 | 422 (3.94) | 422.57 | 0.5 |
| | | 1 | rnd | 425 (4.68) | 425.3 | 0.47 | 421 (3.69) | 421.63 | 0.61 | 421 (3.69) | 421.5 | 0.63 |
| | | | 2op | 423 (4.19) | 423.9 | 0.48 | 420 (3.45) | 421.63 | 0.81 | 420 (3.45) | 421.73 | 0.64 |
| | 50 | 0 | rnd | 425 (4.68) | 425.37 | 0.49 | 424 (4.43) | 424.6 | 0.62 | 423 (4.19) | 423.77 | 0.43 |
| | | | 2op | 423 (4.19) | 423.87 | 0.35 | 422 (3.94) | 423 | 0.45 | 421 (3.69) | 422.5 | 0.57 |
| | | 1 | rnd | 425 (4.68) | 425.37 | 0.49 | 420 (3.45) | 421.5 | 0.86 | 420 (3.45) | 421.33 | 0.61 |
| | | | 2op | 423 (4.19) | 423.87 | 0.35 | 420 (3.45) | 421.77 | 0.73 | 421 (3.69) | 421.87 | 0.57 |
| 51 | 20 | 0 | rnd | 424 (4.43) | 424.9 | 0.31 | 424 (4.43) | 424.9 | 0.31 | 423 (4.19) | 423.63 | 0.49 |
| | | | 2op | 422 (3.94) | 423.27 | 0.52 | 422 (3.94) | 423.27 | 0.52 | 421 (3.69) | 422.17 | 0.59 |
| | | 1 | rnd | 424 (4.43) | 424.9 | 0.31 | 424 (4.43) | 424.9 | 0.31 | 421 (3.69) | 421.57 | 0.63 |
| | | | 2op | 422 (3.94) | 423.27 | 0.52 | 422 (3.94) | 423.27 | 0.52 | 420 (3.45) | 421.53 | 0.57 |
| | 50 | 0 | rnd | 424 (4.43) | 424.9 | 0.31 | 424 (4.43) | 424.9 | 0.31 | 422 (3.94) | 423.6 | 0.62 |
| | | | 2op | 423 (4.19) | 423.17 | 0.38 | 423 (4.19) | 423.17 | 0.38 | 421 (3.69) | 422.1 | 0.66 |
| | | 1 | rnd | 424 (4.43) | 424.9 | 0.31 | 424 (4.43) | 424.9 | 0.31 | 420 (3.45) | 421.13 | 0.51 |
| | | | 2op | 423 (4.19) | 423.17 | 0.38 | 423 (4.19) | 423.17 | 0.38 | 420 (3.45) | 421.5 | 0.57 |

Table A.14: $u1000_0 1$: TransRRGA – Perfect Score is 406

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 428 (4.14) | 429 | 0.69 | 427 (3.89) | 428.3 | 0.75 | 427 (3.89) | 427.93 | 0.58 |
| | | | 2op | 426 (3.65) | 427.2 | 0.66 | 425 (3.41) | 427 | 0.74 | 426 (3.65) | 427.03 | 0.56 |
| | | 1 | rnd | 428 (4.14) | 429 | 0.69 | 425 (3.41) | 427.2 | 0.71 | 426 (3.65) | 427.23 | 0.68 |
| | | | 2op | 426 (3.65) | 427.2 | 0.66 | 425 (3.41) | 426.27 | 0.52 | 425 (3.41) | 426.6 | 0.67 |
| | 50 | 0 | rnd | 427 (3.89) | 428.43 | 0.57 | 426 (3.65) | 427.6 | 0.62 | 426 (3.65) | 427.4 | 0.62 |
| | | | 2op | 426 (3.65) | 426.93 | 0.64 | 426 (3.65) | 426.57 | 0.63 | 425 (3.41) | 426.63 | 0.56 |
| | | 1 | rnd | 427 (3.89) | 428.43 | 0.57 | 426 (3.65) | 427.13 | 0.68 | 425 (3.41) | 427.13 | 0.82 |
| | | | 2op | 426 (3.65) | 426.93 | 0.64 | 425 (3.41) | 426.3 | 0.6 | 425 (3.41) | 426.13 | 0.51 |
| 51 | 20 | 0 | rnd | 427 (3.89) | 428.37 | 0.67 | 427 (3.89) | 428.37 | 0.67 | 427 (3.89) | 428.1 | 0.66 |
| | | | 2op | 425 (3.41) | 427 | 0.79 | 425 (3.41) | 427 | 0.79 | 426 (3.65) | 426.5 | 0.57 |
| | | 1 | rnd | 427 (3.89) | 428.37 | 0.67 | 427 (3.89) | 428.37 | 0.67 | 425 (3.41) | 426.97 | 0.72 |
| | | | 2op | 425 (3.41) | 427 | 0.79 | 425 (3.41) | 427 | 0.79 | 426 (3.65) | 426.47 | 0.51 |
| | 50 | 0 | rnd | 426 (3.65) | 427.17 | 0.83 | 426 (3.65) | 427.17 | 0.83 | 425 (3.41) | 426.83 | 0.75 |
| | | | 2op | 425 (3.41) | 426.2 | 0.66 | 425 (3.41) | 426.2 | 0.66 | 425 (3.41) | 425.97 | 0.56 |
| | | 1 | rnd | 426 (3.65) | 427.17 | 0.83 | 426 (3.65) | 427.17 | 0.83 | 425 (3.41) | 426.7 | 0.65 |
| | | | 2op | 425 (3.41) | 426.2 | 0.66 | 425 (3.41) | 426.2 | 0.66 | 425 (3.41) | 426 | 0.74 |

Table A.15: $u1000_02$: BasicRRGA – Perfect Score is 411

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 431 (4.87) | 431.7 | 0.6 | 430 (4.62) | 430.9 | 0.48 | 429 (4.38) | 429.83 | 0.53 |
| | | | 2op | 428 (4.14) | 428.73 | 0.45 | 426 (3.65) | 428.03 | 0.67 | 426 (3.65) | 427.17 | 0.53 |
| | | 1 | rnd | 431 (4.87) | 431.7 | 0.6 | 426 (3.65) | 427.43 | 0.63 | 426 (3.65) | 427.43 | 0.73 |
| | | | 2op | 428 (4.14) | 428.73 | 0.45 | 425 (3.41) | 426.67 | 0.61 | 426 (3.65) | 426.83 | 0.59 |
| | 50 | 0 | rnd | 430 (4.62) | 431.57 | 0.57 | 429 (4.38) | 430.87 | 0.63 | 429 (4.38) | 429.53 | 0.51 |
| | | | 2op | 428 (4.14) | 428.77 | 0.43 | 427 (3.89) | 428 | 0.59 | 426 (3.65) | 426.87 | 0.35 |
| | | 1 | rnd | 430 (4.62) | 431.57 | 0.57 | 426 (3.65) | 427.4 | 0.62 | 426 (3.65) | 427.07 | 0.52 |
| | | | 2op | 428 (4.14) | 428.77 | 0.43 | 425 (3.41) | 426.7 | 0.65 | 425 (3.41) | 426.47 | 0.57 |
| 51 | 20 | 0 | rnd | 430 (4.62) | 431.1 | 0.4 | 430 (4.62) | 431.1 | 0.4 | 429 (4.38) | 429.63 | 0.49 |
| | | | 2op | 427 (3.89) | 428.2 | 0.48 | 427 (3.89) | 428.2 | 0.48 | 425 (3.41) | 426.7 | 0.6 |
| | | 1 | rnd | 430 (4.62) | 431.1 | 0.4 | 430 (4.62) | 431.1 | 0.4 | 426 (3.65) | 427.13 | 0.63 |
| | | | 2op | 427 (3.89) | 428.2 | 0.48 | 427 (3.89) | 428.2 | 0.48 | 426 (3.65) | 426.43 | 0.5 |
| | 50 | 0 | rnd | 430 (4.62) | 430.9 | 0.55 | 430 (4.62) | 430.9 | 0.55 | 428 (4.14) | 429.37 | 0.61 |
| | | | 2op | 428 (4.14) | 428.37 | 0.49 | 428 (4.14) | 428.37 | 0.49 | 426 (3.65) | 426.67 | 0.55 |
| | | 1 | rnd | 430 (4.62) | 430.9 | 0.55 | 430 (4.62) | 430.9 | 0.55 | 426 (3.65) | 426.77 | 0.57 |
| | | | 2op | 428 (4.14) | 428.37 | 0.49 | 428 (4.14) | 428.37 | 0.49 | 425 (3.41) | 426.47 | 0.57 |

Table A.16: $u1000_02$: TransRRGA – Perfect Score is 411

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 428 (4.14) | 429.2 | 0.81 | 427 (3.89) | 428.8 | 0.81 | 427 (3.89) | 428.7 | 0.65 |
| | | | 2op | 427 (3.89) | 427.97 | 0.56 | 427 (3.89) | 428 | 0.59 | 427 (3.89) | 427.9 | 0.61 |
| | | 1 | rnd | 428 (4.14) | 429.2 | 0.81 | 426 (3.65) | 427.43 | 0.73 | 426 (3.65) | 427.13 | 0.63 |
| | | | 2op | 427 (3.89) | 427.97 | 0.56 | 426 (3.65) | 427.27 | 0.58 | 426 (3.65) | 427.17 | 0.53 |
| | 50 | 0 | rnd | 427 (3.89) | 428.27 | 0.74 | 426 (3.65) | 428.07 | 0.64 | 426 (3.65) | 427.8 | 0.66 |
| | | | 2op | 427 (3.89) | 427.63 | 0.56 | 427 (3.89) | 427.47 | 0.51 | 426 (3.65) | 427.57 | 0.57 |
| | | 1 | rnd | 427 (3.89) | 428.27 | 0.74 | 426 (3.65) | 427.37 | 0.56 | 426 (3.65) | 427.17 | 0.59 |
| | | | 2op | 427 (3.89) | 427.63 | 0.56 | 426 (3.65) | 427.07 | 0.58 | 426 (3.65) | 427 | 0.53 |
| 51 | 20 | 0 | rnd | 428 (4.14) | 428.8 | 0.81 | 428 (4.14) | 428.8 | 0.81 | 426 (3.65) | 428.23 | 0.73 |
| | | | 2op | 427 (3.89) | 427.67 | 0.48 | 427 (3.89) | 427.67 | 0.48 | 427 (3.89) | 427.5 | 0.51 |
| | | 1 | rnd | 428 (4.14) | 428.8 | 0.81 | 428 (4.14) | 428.8 | 0.81 | 427 (3.89) | 427.4 | 0.5 |
| | | | 2op | 427 (3.89) | 427.67 | 0.48 | 427 (3.89) | 427.67 | 0.48 | 426 (3.65) | 427 | 0.53 |
| | 50 | 0 | rnd | 426 (3.65) | 427.4 | 0.72 | 426 (3.65) | 427.4 | 0.72 | 426 (3.65) | 427.2 | 0.61 |
| | | | 2op | 425 (3.41) | 427.13 | 0.78 | 425 (3.41) | 427.13 | 0.78 | 426 (3.65) | 427.03 | 0.49 |
| | | 1 | rnd | 426 (3.65) | 427.4 | 0.72 | 426 (3.65) | 427.4 | 0.72 | 426 (3.65) | 426.93 | 0.74 |
| | | | 2op | 425 (3.41) | 427.13 | 0.78 | 425 (3.41) | 427.13 | 0.78 | 426 (3.65) | 426.7 | 0.47 |

Table A.17: $u1000_03$: BasicRRGA – Perfect Score is 411

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 432 (5.11) | 432.53 | 0.51 | 430 (4.62) | 431.63 | 0.61 | 430 (4.62) | 430.83 | 0.46 |
| | | | 2op | 428 (4.14) | 429.23 | 0.63 | 428 (4.14) | 428.7 | 0.53 | 428 (4.14) | 428.13 | 0.35 |
| | | 1 | rnd | 432 (5.11) | 432.53 | 0.51 | 427 (3.89) | 427.93 | 0.69 | 427 (3.89) | 427.77 | 0.68 |
| | | | 2op | 428 (4.14) | 429.23 | 0.63 | 426 (3.65) | 427.3 | 0.65 | 426 (3.65) | 427.17 | 0.53 |
| | 50 | 0 | rnd | 432 (5.11) | 432.33 | 0.48 | 431 (4.87) | 431.7 | 0.6 | 430 (4.62) | 430.37 | 0.49 |
| | | | 2op | 428 (4.14) | 429.3 | 0.53 | 428 (4.14) | 428.37 | 0.49 | 427 (3.89) | 427.93 | 0.25 |
| | | 1 | rnd | 432 (5.11) | 432.33 | 0.48 | 426 (3.65) | 427.7 | 0.79 | 426 (3.65) | 427.5 | 0.73 |
| | | | 2op | 428 (4.14) | 429.3 | 0.53 | 427 (3.89) | 427.5 | 0.57 | 426 (3.65) | 427.1 | 0.48 |
| 51 | 20 | 0 | rnd | 431 (4.87) | 431.97 | 0.41 | 431 (4.87) | 431.97 | 0.41 | 429 (4.38) | 430.1 | 0.61 |
| | | | 2op | 428 (4.14) | 428.47 | 0.51 | 428 (4.14) | 428.47 | 0.51 | 427 (3.89) | 427.77 | 0.43 |
| | | 1 | rnd | 431 (4.87) | 431.97 | 0.41 | 431 (4.87) | 431.97 | 0.41 | 426 (3.65) | 427.57 | 0.73 |
| | | | 2op | 428 (4.14) | 428.47 | 0.51 | 428 (4.14) | 428.47 | 0.51 | 426 (3.65) | 426.83 | 0.46 |
| | 50 | 0 | rnd | 431 (4.87) | 431.87 | 0.35 | 431 (4.87) | 431.87 | 0.35 | 429 (4.38) | 430.13 | 0.43 |
| | | | 2op | 428 (4.14) | 428.5 | 0.51 | 428 (4.14) | 428.5 | 0.51 | 427 (3.89) | 427.7 | 0.47 |
| | | 1 | rnd | 431 (4.87) | 431.87 | 0.35 | 431 (4.87) | 431.87 | 0.35 | 425 (3.41) | 427.47 | 0.94 |
| | | | 2op | 428 (4.14) | 428.5 | 0.51 | 428 (4.14) | 428.5 | 0.51 | 426 (3.65) | 427.13 | 0.51 |

Table A.18: $u1000_03$: TransRRGA – Perfect Score is 411

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 413 (4.03) | 414.47 | 0.63 | 413 (4.03) | 413.9 | 0.61 | 413 (4.03) | 413.63 | 0.49 |
| | | | 2op | 412 (3.78) | 413.3 | 0.6 | 412 (3.78) | 413.07 | 0.52 | 412 (3.78) | 412.97 | 0.49 |
| | | 1 | rnd | 413 (4.03) | 414.47 | 0.63 | 412 (3.78) | 413.13 | 0.68 | 411 (3.53) | 412.93 | 0.87 |
| | | | 2op | 412 (3.78) | 413.3 | 0.6 | 411 (3.53) | 412.57 | 0.68 | 411 (3.53) | 412.43 | 0.57 |
| | 50 | 0 | rnd | 412 (3.78) | 413.93 | 0.78 | 411 (3.53) | 413.1 | 0.71 | 411 (3.53) | 412.87 | 0.63 |
| | | | 2op | 411 (3.53) | 412.97 | 0.67 | 411 (3.53) | 412.53 | 0.57 | 412 (3.78) | 412.67 | 0.48 |
| | | 1 | rnd | 412 (3.78) | 413.93 | 0.78 | 411 (3.53) | 412.73 | 0.69 | 411 (3.53) | 412.77 | 0.73 |
| | | | 2op | 411 (3.53) | 412.97 | 0.67 | 411 (3.53) | 412.4 | 0.62 | 411 (3.53) | 412.47 | 0.57 |
| 51 | 20 | 0 | rnd | 412 (3.78) | 413.97 | 0.76 | 412 (3.78) | 413.97 | 0.76 | 412 (3.78) | 413.13 | 0.68 |
| | | | 2op | 412 (3.78) | 412.97 | 0.49 | 412 (3.78) | 412.97 | 0.49 | 412 (3.78) | 412.67 | 0.55 |
| | | 1 | rnd | 412 (3.78) | 413.97 | 0.76 | 412 (3.78) | 413.97 | 0.76 | 412 (3.78) | 412.93 | 0.58 |
| | | | 2op | 412 (3.78) | 412.97 | 0.49 | 412 (3.78) | 412.97 | 0.49 | 412 (3.78) | 412.5 | 0.57 |
| | 50 | 0 | rnd | 411 (3.53) | 412.9 | 0.76 | 411 (3.53) | 412.9 | 0.76 | 411 (3.53) | 412.2 | 0.61 |
| | | | 2op | 411 (3.53) | 412.27 | 0.58 | 411 (3.53) | 412.27 | 0.58 | 411 (3.53) | 412 | 0.59 |
| | | 1 | rnd | 411 (3.53) | 412.9 | 0.76 | 411 (3.53) | 412.9 | 0.76 | 411 (3.53) | 412.2 | 0.71 |
| | | | 2op | 411 (3.53) | 412.27 | 0.58 | 411 (3.53) | 412.27 | 0.58 | 410 (3.27) | 411.97 | 0.67 |

Table A.19: $u1000_04$: BasicRRGA – Perfect Score is 397

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 415 (4.53) | 416.13 | 0.63 | 413 (4.03) | 415.03 | 0.72 | 413 (4.03) | 413.93 | 0.52 |
| | | | 2op | 414 (4.28) | 414.63 | 0.49 | 412 (3.78) | 413.93 | 0.64 | 412 (3.78) | 413.2 | 0.61 |
| | | 1 | rnd | 415 (4.53) | 416.13 | 0.63 | 412 (3.78) | 413.3 | 0.75 | 411 (3.53) | 413 | 0.83 |
| | | | 2op | 414 (4.28) | 414.63 | 0.49 | 412 (3.78) | 413.03 | 0.61 | 412 (3.78) | 412.87 | 0.43 |
| | 50 | 0 | rnd | 415 (4.53) | 416.4 | 0.67 | 414 (4.28) | 414.97 | 0.61 | 413 (4.03) | 413.77 | 0.5 |
| | | | 2op | 414 (4.28) | 414.57 | 0.5 | 413 (4.03) | 413.77 | 0.57 | 412 (3.78) | 412.83 | 0.46 |
| | | 1 | rnd | 415 (4.53) | 416.4 | 0.67 | 411 (3.53) | 413.1 | 0.8 | 412 (3.78) | 412.93 | 0.52 |
| | | | 2op | 414 (4.28) | 414.57 | 0.5 | 412 (3.78) | 413.1 | 0.55 | 411 (3.53) | 412.53 | 0.57 |
| 51 | 20 | 0 | rnd | 414 (4.28) | 415.63 | 0.56 | 414 (4.28) | 415.63 | 0.56 | 412 (3.78) | 413.47 | 0.63 |
| | | | 2op | 413 (4.03) | 414 | 0.45 | 413 (4.03) | 414 | 0.45 | 411 (3.53) | 412.67 | 0.55 |
| | | 1 | rnd | 414 (4.28) | 415.63 | 0.56 | 414 (4.28) | 415.63 | 0.56 | 411 (3.53) | 412.8 | 0.76 |
| | | | 2op | 413 (4.03) | 414 | 0.45 | 413 (4.03) | 414 | 0.45 | 412 (3.78) | 412.47 | 0.51 |
| | 50 | 0 | rnd | 414 (4.28) | 415.37 | 0.56 | 414 (4.28) | 415.37 | 0.56 | 413 (4.03) | 413.37 | 0.56 |
| | | | 2op | 413 (4.03) | 413.83 | 0.46 | 413 (4.03) | 413.83 | 0.46 | 411 (3.53) | 412.4 | 0.56 |
| | | 1 | rnd | 414 (4.28) | 415.37 | 0.56 | 414 (4.28) | 415.37 | 0.56 | 412 (3.78) | 412.73 | 0.64 |
| | | | 2op | 413 (4.03) | 413.83 | 0.46 | 413 (4.03) | 413.83 | 0.46 | 412 (3.78) | 412.33 | 0.48 |

Table A.20: $u1000_04$: TransRRGA – Perfect Score is 397

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 415 (4.01) | 416.57 | 0.68 | 415 (4.01) | 416.07 | 0.74 | 415 (4.01) | 415.73 | 0.58 |
| | | | 2op | 413 (3.51) | 414.53 | 0.68 | 413 (3.51) | 414.43 | 0.57 | 414 (3.76) | 414.57 | 0.5 |
| | | 1 | rnd | 415 (4.01) | 416.57 | 0.68 | 414 (3.76) | 415 | 0.53 | 414 (3.76) | 415.03 | 0.56 |
| | | | 2op | 413 (3.51) | 414.53 | 0.68 | 412 (3.26) | 413.57 | 0.63 | 413 (3.51) | 413.6 | 0.5 |
| | 50 | 0 | rnd | 414 (3.76) | 415.87 | 0.68 | 414 (3.76) | 415.37 | 0.67 | 414 (3.76) | 415.1 | 0.66 |
| | | | 2op | 413 (3.51) | 414.3 | 0.7 | 413 (3.51) | 414.03 | 0.61 | 413 (3.51) | 413.97 | 0.49 |
| | | 1 | rnd | 414 (3.76) | 415.87 | 0.68 | 414 (3.76) | 414.77 | 0.57 | 414 (3.76) | 414.63 | 0.72 |
| | | | 2op | 413 (3.51) | 414.3 | 0.7 | 413 (3.51) | 413.5 | 0.57 | 413 (3.51) | 413.6 | 0.5 |
| 51 | 20 | 0 | rnd | 414 (3.76) | 415.97 | 0.76 | 414 (3.76) | 415.97 | 0.76 | 414 (3.76) | 415.53 | 0.63 |
| | | | 2op | 413 (3.51) | 414.2 | 0.61 | 413 (3.51) | 414.2 | 0.61 | 413 (3.51) | 413.87 | 0.63 |
| | | 1 | rnd | 414 (3.76) | 415.97 | 0.76 | 414 (3.76) | 415.97 | 0.76 | 413 (3.51) | 414.8 | 0.71 |
| | | | 2op | 413 (3.51) | 414.2 | 0.61 | 413 (3.51) | 414.2 | 0.61 | 413 (3.51) | 413.6 | 0.5 |
| | 50 | 0 | rnd | 413 (3.51) | 414.67 | 0.71 | 413 (3.51) | 414.67 | 0.71 | 413 (3.51) | 414.4 | 0.72 |
| | | | 2op | 413 (3.51) | 413.67 | 0.66 | 413 (3.51) | 413.67 | 0.66 | 412 (3.26) | 413.4 | 0.62 |
| | | 1 | rnd | 413 (3.51) | 414.67 | 0.71 | 413 (3.51) | 414.67 | 0.71 | 413 (3.51) | 414.2 | 0.55 |
| | | | 2op | 413 (3.51) | 413.67 | 0.66 | 413 (3.51) | 413.67 | 0.66 | 412 (3.26) | 413.37 | 0.67 |

Table A.21: $u1000_0 5$: BasicRRGA – Perfect Score is 399

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 418 (4.76) | 418.8 | 0.48 | 417 (4.51) | 417.8 | 0.48 | 416 (4.26) | 416.9 | 0.4 |
| | | | 2op | 415 (4.01) | 415.63 | 0.56 | 415 (4.01) | 415.13 | 0.35 | 414 (3.76) | 414.83 | 0.38 |
| | | 1 | rnd | 418 (4.76) | 418.8 | 0.48 | 414 (3.76) | 415.2 | 0.61 | 414 (3.76) | 414.83 | 0.65 |
| | | | 2op | 415 (4.01) | 415.63 | 0.56 | 413 (3.51) | 413.4 | 0.5 | 413 (3.51) | 413.57 | 0.5 |
| | 50 | 0 | rnd | 418 (4.76) | 418.77 | 0.43 | 416 (4.26) | 417.67 | 0.71 | 415 (4.01) | 416.33 | 0.61 |
| | | | 2op | 414 (3.76) | 415.57 | 0.57 | 414 (3.76) | 415.07 | 0.58 | 413 (3.51) | 414.4 | 0.62 |
| | | 1 | rnd | 418 (4.76) | 418.77 | 0.43 | 414 (3.76) | 414.83 | 0.59 | 414 (3.76) | 414.7 | 0.7 |
| | | | 2op | 414 (3.76) | 415.57 | 0.57 | 412 (3.26) | 413.3 | 0.7 | 413 (3.51) | 413.37 | 0.49 |
| 51 | 20 | 0 | rnd | 417 (4.51) | 418.17 | 0.46 | 417 (4.51) | 418.17 | 0.46 | 415 (4.01) | 416.4 | 0.67 |
| | | | 2op | 414 (3.76) | 415 | 0.37 | 414 (3.76) | 415 | 0.37 | 414 (3.76) | 414.33 | 0.48 |
| | | 1 | rnd | 417 (4.51) | 418.17 | 0.46 | 417 (4.51) | 418.17 | 0.46 | 413 (3.51) | 414.7 | 0.75 |
| | | | 2op | 414 (3.76) | 415 | 0.37 | 414 (3.76) | 415 | 0.37 | 412 (3.26) | 413.17 | 0.59 |
| | 50 | 0 | rnd | 417 (4.51) | 418.03 | 0.49 | 417 (4.51) | 418.03 | 0.49 | 415 (4.01) | 416.1 | 0.66 |
| | | | 2op | 414 (3.76) | 414.8 | 0.48 | 414 (3.76) | 414.8 | 0.48 | 413 (3.51) | 413.87 | 0.43 |
| | | 1 | rnd | 417 (4.51) | 418.03 | 0.49 | 417 (4.51) | 418.03 | 0.49 | 412 (3.26) | 414.53 | 0.78 |
| | | | 2op | 414 (3.76) | 414.8 | 0.48 | 414 (3.76) | 414.8 | 0.48 | 412 (3.26) | 413.1 | 0.76 |

Table A.22: $u1000_0 5$: TransRRGA – Perfect Score is 399

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 410 (3.8) | 411.1 | 0.66 | 409 (3.54) | 410.73 | 0.74 | 409 (3.54) | 410.27 | 0.52 |
| | | | 2op | 409 (3.54) | 409.77 | 0.5 | 408 (3.29) | 409.47 | 0.57 | 409 (3.54) | 409.3 | 0.47 |
| | | 1 | rnd | 410 (3.8) | 411.1 | 0.66 | 408 (3.29) | 409.63 | 0.67 | 409 (3.54) | 409.77 | 0.57 |
| | | | 2op | 409 (3.54) | 409.77 | 0.5 | 408 (3.29) | 408.83 | 0.53 | 407 (3.04) | 408.87 | 0.63 |
| | 50 | 0 | rnd | 410 (3.8) | 410.77 | 0.63 | 409 (3.54) | 410.1 | 0.66 | 408 (3.29) | 409.63 | 0.61 |
| | | | 2op | 408 (3.29) | 409.4 | 0.67 | 407 (3.04) | 409 | 0.69 | 408 (3.29) | 408.83 | 0.46 |
| | | 1 | rnd | 410 (3.8) | 410.77 | 0.63 | 408 (3.29) | 409.6 | 0.62 | 408 (3.29) | 409.2 | 0.61 |
| | | | 2op | 408 (3.29) | 409.4 | 0.67 | 407 (3.04) | 408.77 | 0.63 | 407 (3.04) | 408.87 | 0.68 |
| 51 | 20 | 0 | rnd | 409 (3.54) | 410.67 | 0.66 | 409 (3.54) | 410.67 | 0.66 | 409 (3.54) | 410.33 | 0.66 |
| | | | 2op | 408 (3.29) | 409.47 | 0.63 | 408 (3.29) | 409.47 | 0.63 | 408 (3.29) | 409.1 | 0.55 |
| | | 1 | rnd | 409 (3.54) | 410.67 | 0.66 | 409 (3.54) | 410.67 | 0.66 | 408 (3.29) | 409.4 | 0.77 |
| | | | 2op | 408 (3.29) | 409.47 | 0.63 | 408 (3.29) | 409.47 | 0.63 | 408 (3.29) | 408.83 | 0.65 |
| | 50 | 0 | rnd | 408 (3.29) | 409.6 | 0.77 | 408 (3.29) | 409.6 | 0.77 | 408 (3.29) | 409.17 | 0.59 |
| | | | 2op | 408 (3.29) | 408.6 | 0.56 | 408 (3.29) | 408.6 | 0.56 | 407 (3.04) | 408.53 | 0.57 |
| | | 1 | rnd | 408 (3.29) | 409.6 | 0.77 | 408 (3.29) | 409.6 | 0.77 | 408 (3.29) | 409.1 | 0.71 |
| | | | 2op | 408 (3.29) | 408.6 | 0.56 | 408 (3.29) | 408.6 | 0.56 | 407 (3.04) | 408.13 | 0.57 |

Table A.23: $u1000_0 6$: BasicRRGA – Perfect Score is 395

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 412 (4.3) | 413.1 | 0.66 | 411 (4.05) | 412 | 0.64 | 410 (3.8) | 411 | 0.45 |
| | | | 2op | 410 (3.8) | 411.03 | 0.41 | 410 (3.8) | 410.43 | 0.5 | 409 (3.54) | 409.77 | 0.43 |
| | | 1 | rnd | 412 (4.3) | 413.1 | 0.66 | 409 (3.54) | 409.9 | 0.66 | 409 (3.54) | 409.7 | 0.53 |
| | | | 2op | 410 (3.8) | 411.03 | 0.41 | 408 (3.29) | 409.13 | 0.68 | 408 (3.29) | 408.97 | 0.56 |
| | 50 | 0 | rnd | 412 (4.3) | 413 | 0.45 | 411 (4.05) | 411.97 | 0.56 | 410 (3.8) | 410.7 | 0.53 |
| | | | 2op | 410 (3.8) | 410.87 | 0.51 | 410 (3.8) | 410.43 | 0.5 | 409 (3.54) | 409.33 | 0.48 |
| | | 1 | rnd | 412 (4.3) | 413 | 0.45 | 409 (3.54) | 409.87 | 0.57 | 408 (3.29) | 409.23 | 0.57 |
| | | | 2op | 410 (3.8) | 410.87 | 0.51 | 408 (3.29) | 408.87 | 0.63 | 408 (3.29) | 408.83 | 0.59 |
| 51 | 20 | 0 | rnd | 412 (4.3) | 412.27 | 0.45 | 412 (4.3) | 412.27 | 0.45 | 410 (3.8) | 410.53 | 0.57 |
| | | | 2op | 409 (3.54) | 410.37 | 0.56 | 409 (3.54) | 410.37 | 0.56 | 408 (3.29) | 409.3 | 0.53 |
| | | 1 | rnd | 412 (4.3) | 412.27 | 0.45 | 412 (4.3) | 412.27 | 0.45 | 408 (3.29) | 409.33 | 0.76 |
| | | | 2op | 409 (3.54) | 410.37 | 0.56 | 409 (3.54) | 410.37 | 0.56 | 408 (3.29) | 408.87 | 0.51 |
| | 50 | 0 | rnd | 412 (4.3) | 412.17 | 0.38 | 412 (4.3) | 412.17 | 0.38 | 410 (3.8) | 410.63 | 0.61 |
| | | | 2op | 409 (3.54) | 410.47 | 0.57 | 409 (3.54) | 410.47 | 0.57 | 408 (3.29) | 409.4 | 0.56 |
| | | 1 | rnd | 412 (4.3) | 412.17 | 0.38 | 412 (4.3) | 412.17 | 0.38 | 408 (3.29) | 409.37 | 0.67 |
| | | | 2op | 409 (3.54) | 410.47 | 0.57 | 409 (3.54) | 410.47 | 0.57 | 408 (3.29) | 408.9 | 0.55 |

Table A.24: $u1000_0 6$: TransRRGA – Perfect Score is 395

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 420 (3.96) | 421.97 | 0.81 | 420 (3.96) | 421.13 | 0.63 | 420 (3.96) | 421.13 | 0.51 |
| | | | 2op | 419 (3.71) | 419.87 | 0.51 | 419 (3.71) | 419.4 | 0.5 | 419 (3.71) | 419.53 | 0.51 |
| | | 1 | rnd | 420 (3.96) | 421.97 | 0.81 | 419 (3.71) | 420.13 | 0.78 | 418 (3.47) | 419.7 | 0.84 |
| | | | 2op | 419 (3.71) | 419.87 | 0.51 | 418 (3.47) | 419.1 | 0.61 | 418 (3.47) | 419.2 | 0.61 |
| | 50 | 0 | rnd | 419 (3.71) | 421.1 | 0.84 | 419 (3.71) | 420.63 | 0.81 | 419 (3.71) | 420.1 | 0.66 |
| | | | 2op | 418 (3.47) | 419.43 | 0.57 | 418 (3.47) | 418.97 | 0.56 | 418 (3.47) | 419.1 | 0.55 |
| | | 1 | rnd | 419 (3.71) | 421.1 | 0.84 | 419 (3.71) | 419.87 | 0.68 | 418 (3.47) | 419.43 | 0.73 |
| | | | 2op | 418 (3.47) | 419.43 | 0.57 | 417 (3.22) | 418.77 | 0.73 | 418 (3.47) | 418.83 | 0.59 |
| 51 | 20 | 0 | rnd | 419 (3.71) | 421.13 | 0.73 | 419 (3.71) | 421.13 | 0.73 | 419 (3.71) | 420.57 | 0.63 |
| | | | 2op | 418 (3.47) | 419.43 | 0.57 | 418 (3.47) | 419.43 | 0.57 | 418 (3.47) | 419.2 | 0.55 |
| | | 1 | rnd | 419 (3.71) | 421.13 | 0.73 | 419 (3.71) | 421.13 | 0.73 | 418 (3.47) | 419.7 | 0.7 |
| | | | 2op | 418 (3.47) | 419.43 | 0.57 | 418 (3.47) | 419.43 | 0.57 | 418 (3.47) | 418.93 | 0.45 |
| | 50 | 0 | rnd | 419 (3.71) | 419.9 | 0.71 | 419 (3.71) | 419.9 | 0.71 | 418 (3.47) | 419.37 | 0.67 |
| | | | 2op | 417 (3.22) | 418.43 | 0.63 | 417 (3.22) | 418.43 | 0.63 | 417 (3.22) | 418.3 | 0.6 |
| | | 1 | rnd | 419 (3.71) | 419.9 | 0.71 | 419 (3.71) | 419.9 | 0.71 | 418 (3.47) | 419.17 | 0.65 |
| | | | 2op | 417 (3.22) | 418.43 | 0.63 | 417 (3.22) | 418.43 | 0.63 | 417 (3.22) | 418.33 | 0.71 |

Table A.25: $u1000_07$: BasicRRGA – Perfect Score is 404

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 423 (4.7) | 423.77 | 0.57 | 422 (4.46) | 422.63 | 0.56 | 421 (4.21) | 421.67 | 0.55 |
| | | | 2op | 420 (3.96) | 420.7 | 0.47 | 419 (3.71) | 420.1 | 0.48 | 419 (3.71) | 419.97 | 0.18 |
| | | 1 | rnd | 423 (4.7) | 423.77 | 0.57 | 419 (3.71) | 419.77 | 0.68 | 418 (3.47) | 419.67 | 0.66 |
| | | | 2op | 420 (3.96) | 420.7 | 0.47 | 418 (3.47) | 419.33 | 0.66 | 418 (3.47) | 419.17 | 0.65 |
| | 50 | 0 | rnd | 423 (4.7) | 423.8 | 0.61 | 421 (4.21) | 422.6 | 0.62 | 421 (4.21) | 421.8 | 0.41 |
| | | | 2op | 420 (3.96) | 420.57 | 0.5 | 419 (3.71) | 420.1 | 0.4 | 419 (3.71) | 419.53 | 0.51 |
| | | 1 | rnd | 423 (4.7) | 423.8 | 0.61 | 418 (3.47) | 419.97 | 0.76 | 419 (3.71) | 419.47 | 0.57 |
| | | | 2op | 420 (3.96) | 420.57 | 0.5 | 419 (3.71) | 419.53 | 0.51 | 418 (3.47) | 419.27 | 0.52 |
| 51 | 20 | 0 | rnd | 422 (4.46) | 423 | 0.26 | 422 (4.46) | 423 | 0.26 | 420 (3.96) | 421.47 | 0.57 |
| | | | 2op | 419 (3.71) | 420.07 | 0.45 | 419 (3.71) | 420.07 | 0.45 | 419 (3.71) | 419.37 | 0.49 |
| | | 1 | rnd | 422 (4.46) | 423 | 0.26 | 422 (4.46) | 423 | 0.26 | 418 (3.47) | 419.7 | 0.79 |
| | | | 2op | 419 (3.71) | 420.07 | 0.45 | 419 (3.71) | 420.07 | 0.45 | 418 (3.47) | 419.07 | 0.52 |
| | 50 | 0 | rnd | 422 (4.46) | 422.9 | 0.4 | 422 (4.46) | 422.9 | 0.4 | 420 (3.96) | 421.4 | 0.67 |
| | | | 2op | 419 (3.71) | 419.93 | 0.45 | 419 (3.71) | 419.93 | 0.45 | 418 (3.47) | 419.1 | 0.4 |
| | | 1 | rnd | 422 (4.46) | 422.9 | 0.4 | 422 (4.46) | 422.9 | 0.4 | 418 (3.47) | 419.27 | 0.78 |
| | | | 2op | 419 (3.71) | 419.93 | 0.45 | 419 (3.71) | 419.93 | 0.45 | 418 (3.47) | 419.03 | 0.41 |

Table A.26: $u1000_07$: TransRRGA – Perfect Score is 404

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 415 (4.01) | 415.63 | 0.61 | 414 (3.76) | 415 | 0.64 | 414 (3.76) | 414.83 | 0.53 |
| | | | 2op | 413 (3.51) | 414.73 | 0.69 | 413 (3.51) | 414.53 | 0.63 | 413 (3.51) | 414.23 | 0.57 |
| | | 1 | rnd | 415 (4.01) | 415.63 | 0.61 | 413 (3.51) | 414.23 | 0.73 | 413 (3.51) | 414.23 | 0.63 |
| | | | 2op | 413 (3.51) | 414.73 | 0.69 | 412 (3.26) | 413.93 | 0.78 | 413 (3.51) | 413.67 | 0.66 |
| | 50 | 0 | rnd | 413 (3.51) | 414.73 | 0.74 | 413 (3.51) | 414.27 | 0.74 | 414 (3.76) | 414.27 | 0.45 |
| | | | 2op | 413 (3.51) | 414.1 | 0.66 | 413 (3.51) | 414.23 | 0.57 | 413 (3.51) | 413.97 | 0.49 |
| | | 1 | rnd | 413 (3.51) | 414.73 | 0.74 | 413 (3.51) | 413.9 | 0.55 | 413 (3.51) | 413.83 | 0.53 |
| | | | 2op | 413 (3.51) | 414.1 | 0.66 | 412 (3.26) | 413.6 | 0.77 | 412 (3.26) | 413.43 | 0.82 |
| 51 | 20 | 0 | rnd | 414 (3.76) | 414.83 | 0.65 | 414 (3.76) | 414.83 | 0.65 | 413 (3.51) | 414.37 | 0.61 |
| | | | 2op | 413 (3.51) | 414.3 | 0.65 | 413 (3.51) | 414.3 | 0.65 | 413 (3.51) | 413.93 | 0.58 |
| | | 1 | rnd | 414 (3.76) | 414.83 | 0.65 | 414 (3.76) | 414.83 | 0.65 | 413 (3.51) | 413.8 | 0.71 |
| | | | 2op | 413 (3.51) | 414.3 | 0.65 | 413 (3.51) | 414.3 | 0.65 | 412 (3.26) | 413.57 | 0.57 |
| | 50 | 0 | rnd | 412 (3.26) | 413.63 | 0.61 | 412 (3.26) | 413.63 | 0.61 | 413 (3.51) | 413.6 | 0.5 |
| | | | 2op | 412 (3.26) | 413.47 | 0.68 | 412 (3.26) | 413.47 | 0.68 | 412 (3.26) | 413.33 | 0.66 |
| | | 1 | rnd | 412 (3.26) | 413.63 | 0.61 | 412 (3.26) | 413.63 | 0.61 | 412 (3.26) | 413.3 | 0.65 |
| | | | 2op | 412 (3.26) | 413.47 | 0.68 | 412 (3.26) | 413.47 | 0.68 | 411 (3.01) | 413.13 | 0.63 |

Table A.27: $u1000_0 8$: BasicRRGA – Perfect Score is 399

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 416 (4.26) | 417.2 | 0.61 | 415 (4.01) | 416.5 | 0.57 | 415 (4.01) | 415.5 | 0.51 |
| | | | 2op | 416 (4.26) | 416.7 | 0.47 | 415 (4.01) | 416.3 | 0.65 | 414 (3.76) | 414.9 | 0.4 |
| | | 1 | rnd | 416 (4.26) | 417.2 | 0.61 | 413 (3.51) | 414.53 | 0.78 | 413 (3.51) | 414.3 | 0.7 |
| | | | 2op | 416 (4.26) | 416.7 | 0.47 | 413 (3.51) | 414.67 | 1.27 | 412 (3.26) | 413.8 | 0.85 |
| | 50 | 0 | rnd | 416 (4.26) | 417.23 | 0.5 | 415 (4.01) | 416.27 | 0.58 | 413 (3.51) | 415.07 | 0.52 |
| | | | 2op | 416 (4.26) | 416.73 | 0.45 | 415 (4.01) | 416 | 0.45 | 414 (3.76) | 414.6 | 0.5 |
| | | 1 | rnd | 416 (4.26) | 417.23 | 0.5 | 413 (3.51) | 414.5 | 0.82 | 412 (3.26) | 414 | 0.74 |
| | | | 2op | 416 (4.26) | 416.73 | 0.45 | 413 (3.51) | 414.27 | 1.17 | 412 (3.26) | 413.9 | 0.76 |
| 51 | 20 | 0 | rnd | 416 (4.26) | 416.63 | 0.49 | 416 (4.26) | 416.63 | 0.49 | 414 (3.76) | 415.03 | 0.49 |
| | | | 2op | 415 (4.01) | 416.1 | 0.4 | 415 (4.01) | 416.1 | 0.4 | 413 (3.51) | 414.43 | 0.73 |
| | | 1 | rnd | 416 (4.26) | 416.63 | 0.49 | 416 (4.26) | 416.63 | 0.49 | 413 (3.51) | 414.13 | 0.68 |
| | | | 2op | 415 (4.01) | 416.1 | 0.4 | 415 (4.01) | 416.1 | 0.4 | 412 (3.26) | 413.4 | 0.67 |
| | 50 | 0 | rnd | 415 (4.01) | 416.37 | 0.56 | 415 (4.01) | 416.37 | 0.56 | 414 (3.76) | 414.87 | 0.57 |
| | | | 2op | 415 (4.01) | 416.13 | 0.43 | 415 (4.01) | 416.13 | 0.43 | 413 (3.51) | 414.4 | 0.67 |
| | | 1 | rnd | 415 (4.01) | 416.37 | 0.56 | 415 (4.01) | 416.37 | 0.56 | 413 (3.51) | 413.77 | 0.57 |
| | | | 2op | 415 (4.01) | 416.13 | 0.43 | 415 (4.01) | 416.13 | 0.43 | 412 (3.26) | 413.63 | 0.81 |

Table A.28: $u1000_0 8$: TransRRGA – Perfect Score is 399

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 413 (4.03) | 414.63 | 0.72 | 413 (4.03) | 414.07 | 0.52 | 413 (4.03) | 413.77 | 0.57 |
| | | | 2op | 412 (3.78) | 413.87 | 0.82 | 412 (3.78) | 413.4 | 0.62 | 412 (3.78) | 413.5 | 0.68 |
| | | 1 | rnd | 413 (4.03) | 414.63 | 0.72 | 412 (3.78) | 413.2 | 0.66 | 412 (3.78) | 412.83 | 0.53 |
| | | | 2op | 412 (3.78) | 413.87 | 0.82 | 411 (3.53) | 412.2 | 0.66 | 411 (3.53) | 412 | 0.64 |
| | 50 | 0 | rnd | 412 (3.78) | 413.87 | 0.73 | 412 (3.78) | 413.63 | 0.67 | 412 (3.78) | 413.1 | 0.61 |
| | | | 2op | 412 (3.78) | 413.1 | 0.66 | 412 (3.78) | 413.1 | 0.66 | 412 (3.78) | 412.97 | 0.56 |
| | | 1 | rnd | 412 (3.78) | 413.87 | 0.73 | 411 (3.53) | 412.83 | 0.83 | 412 (3.78) | 412.93 | 0.74 |
| | | | 2op | 412 (3.78) | 413.1 | 0.66 | 411 (3.53) | 412.13 | 0.51 | 411 (3.53) | 411.83 | 0.59 |
| 51 | 20 | 0 | rnd | 413 (4.03) | 414.2 | 0.48 | 413 (4.03) | 414.2 | 0.48 | 413 (4.03) | 413.67 | 0.55 |
| | | | 2op | 412 (3.78) | 413.13 | 0.68 | 412 (3.78) | 413.13 | 0.68 | 412 (3.78) | 413.03 | 0.76 |
| | | 1 | rnd | 413 (4.03) | 414.2 | 0.48 | 413 (4.03) | 414.2 | 0.48 | 412 (3.78) | 413.07 | 0.58 |
| | | | 2op | 412 (3.78) | 413.13 | 0.68 | 412 (3.78) | 413.13 | 0.68 | 411 (3.53) | 412 | 0.64 |
| | 50 | 0 | rnd | 412 (3.78) | 413.33 | 0.76 | 412 (3.78) | 413.33 | 0.76 | 412 (3.78) | 412.7 | 0.6 |
| | | | 2op | 411 (3.53) | 412.53 | 0.63 | 411 (3.53) | 412.53 | 0.63 | 412 (3.78) | 412.2 | 0.41 |
| | | 1 | rnd | 412 (3.78) | 413.33 | 0.76 | 412 (3.78) | 413.33 | 0.76 | 411 (3.53) | 412.5 | 0.68 |
| | | | 2op | 411 (3.53) | 412.53 | 0.63 | 411 (3.53) | 412.53 | 0.63 | 411 (3.53) | 411.6 | 0.5 |

Table A.29: $u1000_09$: BasicRRGA – Perfect Score is 397

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 414 (4.28) | 416 | 0.79 | 414 (4.28) | 415.17 | 0.53 | 414 (4.28) | 414.37 | 0.49 |
| | | | 2op | 414 (4.28) | 415.33 | 0.55 | 413 (4.03) | 414.53 | 0.63 | 413 (4.03) | 413.97 | 0.56 |
| | | 1 | rnd | 414 (4.28) | 416 | 0.79 | 412 (3.78) | 413.1 | 0.66 | 412 (3.78) | 412.77 | 0.68 |
| | | | 2op | 414 (4.28) | 415.33 | 0.55 | 411 (3.53) | 412.07 | 0.69 | 411 (3.53) | 412.2 | 0.66 |
| | 50 | 0 | rnd | 415 (4.53) | 415.87 | 0.63 | 414 (4.28) | 414.8 | 0.61 | 413 (4.03) | 414.17 | 0.46 |
| | | | 2op | 414 (4.28) | 415.07 | 0.52 | 413 (4.03) | 414.2 | 0.55 | 413 (4.03) | 413.63 | 0.56 |
| | | 1 | rnd | 415 (4.53) | 415.87 | 0.63 | 411 (3.53) | 412.83 | 0.75 | 412 (3.78) | 412.83 | 0.65 |
| | | | 2op | 414 (4.28) | 415.07 | 0.52 | 410 (3.27) | 411.8 | 0.76 | 411 (3.53) | 412.1 | 0.61 |
| 51 | 20 | 0 | rnd | 414 (4.28) | 415.2 | 0.55 | 414 (4.28) | 415.2 | 0.55 | 413 (4.03) | 414 | 0.45 |
| | | | 2op | 414 (4.28) | 414.5 | 0.51 | 414 (4.28) | 414.5 | 0.51 | 412 (3.78) | 412.93 | 0.45 |
| | | 1 | rnd | 414 (4.28) | 415.2 | 0.55 | 414 (4.28) | 415.2 | 0.55 | 411 (3.53) | 412.7 | 0.84 |
| | | | 2op | 414 (4.28) | 414.5 | 0.51 | 414 (4.28) | 414.5 | 0.51 | 411 (3.53) | 411.83 | 0.53 |
| | 50 | 0 | rnd | 414 (4.28) | 415.17 | 0.65 | 414 (4.28) | 415.17 | 0.65 | 413 (4.03) | 413.83 | 0.38 |
| | | | 2op | 413 (4.03) | 414.33 | 0.61 | 413 (4.03) | 414.33 | 0.61 | 412 (3.78) | 412.7 | 0.47 |
| | | 1 | rnd | 414 (4.28) | 415.17 | 0.65 | 414 (4.28) | 415.17 | 0.65 | 412 (3.78) | 412.67 | 0.61 |
| | | | 2op | 413 (4.03) | 414.33 | 0.61 | 413 (4.03) | 414.33 | 0.61 | 410 (3.27) | 411.5 | 0.63 |

Table A.30: $u1000_09$: TransRRGA – Perfect Score is 397

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 416 (4) | 416.4 | 0.5 | 415 (3.75) | 415.87 | 0.43 | 415 (3.75) | 415.9 | 0.55 |
| | | | 2op | 415 (3.75) | 415.87 | 0.51 | 414 (3.5) | 415.63 | 0.56 | 414 (3.5) | 415.43 | 0.57 |
| | | 1 | rnd | 416 (4) | 416.4 | 0.5 | 414 (3.5) | 415.47 | 0.63 | 413 (3.25) | 415.23 | 0.77 |
| | | | 2op | 415 (3.75) | 415.87 | 0.51 | 414 (3.5) | 415.13 | 0.57 | 414 (3.5) | 414.93 | 0.52 |
| | 50 | 0 | rnd | 415 (3.75) | 415.97 | 0.67 | 414 (3.5) | 415.43 | 0.68 | 414 (3.5) | 415.17 | 0.46 |
| | | | 2op | 414 (3.5) | 415.37 | 0.61 | 414 (3.5) | 415 | 0.59 | 414 (3.5) | 414.93 | 0.45 |
| | | 1 | rnd | 415 (3.75) | 415.97 | 0.67 | 414 (3.5) | 415.03 | 0.61 | 414 (3.5) | 414.83 | 0.53 |
| | | | 2op | 414 (3.5) | 415.37 | 0.61 | 414 (3.5) | 414.67 | 0.48 | 414 (3.5) | 414.7 | 0.6 |
| 51 | 20 | 0 | rnd | 415 (3.75) | 416.2 | 0.61 | 415 (3.75) | 416.2 | 0.61 | 415 (3.75) | 415.6 | 0.5 |
| | | | 2op | 414 (3.5) | 415.5 | 0.57 | 414 (3.5) | 415.5 | 0.57 | 414 (3.5) | 415.07 | 0.45 |
| | | 1 | rnd | 415 (3.75) | 416.2 | 0.61 | 415 (3.75) | 416.2 | 0.61 | 414 (3.5) | 415.13 | 0.73 |
| | | | 2op | 414 (3.5) | 415.5 | 0.57 | 414 (3.5) | 415.5 | 0.57 | 414 (3.5) | 414.87 | 0.43 |
| | 50 | 0 | rnd | 413 (3.25) | 414.87 | 0.63 | 413 (3.25) | 414.87 | 0.63 | 413 (3.25) | 414.67 | 0.66 |
| | | | 2op | 413 (3.25) | 414.77 | 0.63 | 413 (3.25) | 414.77 | 0.63 | 413 (3.25) | 414.4 | 0.56 |
| | | 1 | rnd | 413 (3.25) | 414.87 | 0.63 | 413 (3.25) | 414.87 | 0.63 | 413 (3.25) | 414.2 | 0.66 |
| | | | 2op | 413 (3.25) | 414.77 | 0.63 | 413 (3.25) | 414.77 | 0.63 | 413 (3.25) | 414.1 | 0.66 |

Table A.31: $u1000_10$: BasicRRGA – Perfect Score is 400

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 417 (4.25) | 417.93 | 0.37 | 416 (4) | 417.2 | 0.55 | 416 (4) | 416.33 | 0.48 |
| | | | 2op | 416 (4) | 416.63 | 0.56 | 415 (3.75) | 415.97 | 0.41 | 415 (3.75) | 415.8 | 0.41 |
| | | 1 | rnd | 417 (4.25) | 417.93 | 0.37 | 414 (3.5) | 415.63 | 0.61 | 414 (3.5) | 415.6 | 0.81 |
| | | | 2op | 416 (4) | 416.63 | 0.56 | 414 (3.5) | 415.27 | 0.69 | 414 (3.5) | 414.8 | 0.71 |
| | 50 | 0 | rnd | 417 (4.25) | 417.83 | 0.38 | 416 (4) | 417.07 | 0.52 | 415 (3.75) | 416.03 | 0.49 |
| | | | 2op | 416 (4) | 416.3 | 0.47 | 415 (3.75) | 415.93 | 0.45 | 415 (3.75) | 415.7 | 0.47 |
| | | 1 | rnd | 417 (4.25) | 417.83 | 0.38 | 415 (3.75) | 415.63 | 0.61 | 414 (3.5) | 415.23 | 0.57 |
| | | | 2op | 416 (4) | 416.3 | 0.47 | 414 (3.5) | 415.37 | 0.61 | 414 (3.5) | 414.87 | 0.63 |
| 51 | 20 | 0 | rnd | 417 (4.25) | 417.47 | 0.51 | 417 (4.25) | 417.47 | 0.51 | 415 (3.75) | 416.03 | 0.49 |
| | | | 2op | 416 (4) | 416.1 | 0.31 | 416 (4) | 416.1 | 0.31 | 414 (3.5) | 415.27 | 0.64 |
| | | 1 | rnd | 417 (4.25) | 417.47 | 0.51 | 417 (4.25) | 417.47 | 0.51 | 414 (3.5) | 415.33 | 0.84 |
| | | | 2op | 416 (4) | 416.1 | 0.31 | 416 (4) | 416.1 | 0.31 | 414 (3.5) | 414.7 | 0.65 |
| | 50 | 0 | rnd | 417 (4.25) | 417.27 | 0.45 | 417 (4.25) | 417.27 | 0.45 | 415 (3.75) | 416.03 | 0.32 |
| | | | 2op | 415 (3.75) | 415.97 | 0.32 | 415 (3.75) | 415.97 | 0.32 | 414 (3.5) | 414.9 | 0.55 |
| | | 1 | rnd | 417 (4.25) | 417.27 | 0.45 | 417 (4.25) | 417.27 | 0.45 | 414 (3.5) | 415.2 | 0.71 |
| | | | 2op | 415 (3.75) | 415.97 | 0.32 | 415 (3.75) | 415.97 | 0.32 | 413 (3.25) | 414.87 | 0.78 |

Table A.32: $u1000_10$: TransRRGA – Perfect Score is 400

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 418 (4.24) | 419.33 | 0.66 | 418 (4.24) | 418.83 | 0.53 | 417 (3.99) | 418.33 | 0.66 |
| | | | 2op | 417 (3.99) | 418.3 | 0.7 | 416 (3.74) | 417.83 | 0.53 | 417 (3.99) | 417.63 | 0.49 |
| | | 1 | rnd | 418 (4.24) | 419.33 | 0.66 | 417 (3.99) | 417.67 | 0.66 | 416 (3.74) | 417.83 | 0.79 |
| | | | 2op | 417 (3.99) | 418.3 | 0.7 | 417 (3.99) | 417.23 | 0.43 | 416 (3.74) | 416.93 | 0.64 |
| | 50 | 0 | rnd | 417 (3.99) | 418.83 | 0.65 | 417 (3.99) | 417.93 | 0.52 | 416 (3.74) | 417.73 | 0.69 |
| | | | 2op | 416 (3.74) | 417.7 | 0.75 | 415 (3.49) | 417.17 | 0.7 | 416 (3.74) | 417.03 | 0.61 |
| | | 1 | rnd | 417 (3.99) | 418.83 | 0.65 | 416 (3.74) | 417.5 | 0.78 | 416 (3.74) | 417.27 | 0.74 |
| | | | 2op | 416 (3.74) | 417.7 | 0.75 | 416 (3.74) | 416.87 | 0.57 | 416 (3.74) | 416.73 | 0.64 |
| 51 | 20 | 0 | rnd | 418 (4.24) | 418.8 | 0.61 | 418 (4.24) | 418.8 | 0.61 | 417 (3.99) | 418.27 | 0.69 |
| | | | 2op | 416 (3.74) | 417.63 | 0.56 | 416 (3.74) | 417.63 | 0.56 | 416 (3.74) | 417.37 | 0.61 |
| | | 1 | rnd | 418 (4.24) | 418.8 | 0.61 | 418 (4.24) | 418.8 | 0.61 | 416 (3.74) | 417.57 | 0.68 |
| | | | 2op | 416 (3.74) | 417.63 | 0.56 | 416 (3.74) | 417.63 | 0.56 | 415 (3.49) | 417.03 | 0.67 |
| | 50 | 0 | rnd | 416 (3.74) | 417.33 | 0.71 | 416 (3.74) | 417.33 | 0.71 | 416 (3.74) | 417.03 | 0.49 |
| | | | 2op | 416 (3.74) | 417 | 0.74 | 416 (3.74) | 417 | 0.74 | 415 (3.49) | 416.4 | 0.56 |
| | | 1 | rnd | 416 (3.74) | 417.33 | 0.71 | 416 (3.74) | 417.33 | 0.71 | 416 (3.74) | 417.07 | 0.58 |
| | | | 2op | 416 (3.74) | 417 | 0.74 | 416 (3.74) | 417 | 0.74 | 415 (3.49) | 416.33 | 0.66 |

Table A.33: $u1000_1 1$: BasicRRGA – Perfect Score is 401

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 420 (4.74) | 420.8 | 0.48 | 419 (4.49) | 420.03 | 0.49 | 418 (4.24) | 418.9 | 0.55 |
| | | | 2op | 418 (4.24) | 419.43 | 0.68 | 418 (4.24) | 418.87 | 0.43 | 417 (3.99) | 418.07 | 0.37 |
| | | 1 | rnd | 420 (4.74) | 420.8 | 0.48 | 417 (3.99) | 418.13 | 0.82 | 416 (3.74) | 417.6 | 0.67 |
| | | | 2op | 418 (4.24) | 419.43 | 0.68 | 416 (3.74) | 417.13 | 0.68 | 416 (3.74) | 417.1 | 0.66 |
| | 50 | 0 | rnd | 420 (4.74) | 420.57 | 0.5 | 419 (4.49) | 420 | 0.37 | 418 (4.24) | 418.87 | 0.51 |
| | | | 2op | 419 (4.49) | 419.53 | 0.57 | 418 (4.24) | 418.53 | 0.51 | 417 (3.99) | 417.8 | 0.41 |
| | | 1 | rnd | 420 (4.74) | 420.57 | 0.5 | 416 (3.74) | 417.8 | 0.89 | 417 (3.99) | 417.67 | 0.55 |
| | | | 2op | 419 (4.49) | 419.53 | 0.57 | 416 (3.74) | 417.23 | 0.63 | 416 (3.74) | 416.9 | 0.61 |
| 51 | 20 | 0 | rnd | 420 (4.74) | 420.3 | 0.47 | 420 (4.74) | 420.3 | 0.47 | 418 (4.24) | 418.9 | 0.48 |
| | | | 2op | 418 (4.24) | 418.77 | 0.43 | 418 (4.24) | 418.77 | 0.43 | 417 (3.99) | 417.6 | 0.56 |
| | | 1 | rnd | 420 (4.74) | 420.3 | 0.47 | 420 (4.74) | 420.3 | 0.47 | 417 (3.99) | 417.7 | 0.65 |
| | | | 2op | 418 (4.24) | 418.77 | 0.43 | 418 (4.24) | 418.77 | 0.43 | 416 (3.74) | 416.7 | 0.7 |
| | 50 | 0 | rnd | 419 (4.49) | 420.13 | 0.43 | 419 (4.49) | 420.13 | 0.43 | 417 (3.99) | 418.6 | 0.56 |
| | | | 2op | 418 (4.24) | 418.8 | 0.41 | 418 (4.24) | 418.8 | 0.41 | 416 (3.74) | 417.37 | 0.56 |
| | | 1 | rnd | 419 (4.49) | 420.13 | 0.43 | 419 (4.49) | 420.13 | 0.43 | 416 (3.74) | 417.43 | 0.73 |
| | | | 2op | 418 (4.24) | 418.8 | 0.41 | 418 (4.24) | 418.8 | 0.41 | 415 (3.49) | 416.77 | 0.82 |

Table A.34: $u1000_1 1$: TransRRGA – Perfect Score is 401

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 408 (3.82) | 409.8 | 0.66 | 408 (3.82) | 409.57 | 0.68 | 408 (3.82) | 408.9 | 0.66 |
| | | | 2op | 407 (3.56) | 407.87 | 0.51 | 406 (3.31) | 407.27 | 0.52 | 407 (3.56) | 407.67 | 0.48 |
| | | 1 | rnd | 408 (3.82) | 409.8 | 0.66 | 406 (3.31) | 407.57 | 0.86 | 406 (3.31) | 407.2 | 0.61 |
| | | | 2op | 407 (3.56) | 407.87 | 0.51 | 406 (3.31) | 406.73 | 0.45 | 405 (3.05) | 406.77 | 0.5 |
| | 50 | 0 | rnd | 407 (3.56) | 409.1 | 0.76 | 408 (3.82) | 408.77 | 0.63 | 407 (3.56) | 408.4 | 0.56 |
| | | | 2op | 407 (3.56) | 407.63 | 0.49 | 406 (3.31) | 407.07 | 0.58 | 406 (3.31) | 407.3 | 0.6 |
| | | 1 | rnd | 407 (3.56) | 409.1 | 0.76 | 406 (3.31) | 407.43 | 0.86 | 406 (3.31) | 407.3 | 0.7 |
| | | | 2op | 407 (3.56) | 407.63 | 0.49 | 405 (3.05) | 406.47 | 0.57 | 406 (3.31) | 406.67 | 0.55 |
| 51 | 20 | 0 | rnd | 408 (3.82) | 409.2 | 0.66 | 408 (3.82) | 409.2 | 0.66 | 408 (3.82) | 408.8 | 0.61 |
| | | | 2op | 406 (3.31) | 407.23 | 0.73 | 406 (3.31) | 407.23 | 0.73 | 406 (3.31) | 407.2 | 0.48 |
| | | 1 | rnd | 408 (3.82) | 409.2 | 0.66 | 408 (3.82) | 409.2 | 0.66 | 406 (3.31) | 407.37 | 0.72 |
| | | | 2op | 406 (3.31) | 407.23 | 0.73 | 406 (3.31) | 407.23 | 0.73 | 406 (3.31) | 406.67 | 0.61 |
| | 50 | 0 | rnd | 407 (3.56) | 408.03 | 0.61 | 407 (3.56) | 408.03 | 0.61 | 406 (3.31) | 407.77 | 0.86 |
| | | | 2op | 405 (3.05) | 406.47 | 0.57 | 405 (3.05) | 406.47 | 0.57 | 406 (3.31) | 406.57 | 0.5 |
| | | 1 | rnd | 407 (3.56) | 408.03 | 0.61 | 407 (3.56) | 408.03 | 0.61 | 406 (3.31) | 407.23 | 0.77 |
| | | | 2op | 405 (3.05) | 406.47 | 0.57 | 405 (3.05) | 406.47 | 0.57 | 405 (3.05) | 406.17 | 0.59 |

Table A.35: $u1000_12$: BasicRRGA – Perfect Score is 393

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 410 (4.33) | 411.7 | 0.65 | 409 (4.07) | 410.63 | 0.67 | 409 (4.07) | 409.77 | 0.5 |
| | | | 2op | 408 (3.82) | 408.5 | 0.51 | 407 (3.56) | 408.37 | 0.56 | 407 (3.56) | 407.97 | 0.32 |
| | | 1 | rnd | 410 (4.33) | 411.7 | 0.65 | 406 (3.31) | 407.37 | 0.67 | 406 (3.31) | 407.33 | 0.71 |
| | | | 2op | 408 (3.82) | 408.5 | 0.51 | 406 (3.31) | 406.97 | 0.56 | 406 (3.31) | 406.83 | 0.53 |
| | 50 | 0 | rnd | 411 (4.58) | 411.67 | 0.55 | 409 (4.07) | 410.7 | 0.65 | 409 (4.07) | 409.3 | 0.47 |
| | | | 2op | 408 (3.82) | 408.5 | 0.51 | 407 (3.56) | 408.07 | 0.52 | 407 (3.56) | 407.77 | 0.43 |
| | | 1 | rnd | 411 (4.58) | 411.67 | 0.55 | 406 (3.31) | 407.27 | 0.74 | 406 (3.31) | 407.27 | 0.58 |
| | | | 2op | 408 (3.82) | 408.5 | 0.51 | 406 (3.31) | 407.03 | 0.61 | 406 (3.31) | 406.8 | 0.55 |
| 51 | 20 | 0 | rnd | 410 (4.33) | 410.97 | 0.18 | 410 (4.33) | 410.97 | 0.18 | 408 (3.82) | 409.23 | 0.68 |
| | | | 2op | 408 (3.82) | 408 | 0 | 408 (3.82) | 408 | 0 | 406 (3.31) | 407.2 | 0.55 |
| | | 1 | rnd | 410 (4.33) | 410.97 | 0.18 | 410 (4.33) | 410.97 | 0.18 | 406 (3.31) | 407.17 | 0.65 |
| | | | 2op | 408 (3.82) | 408 | 0 | 408 (3.82) | 408 | 0 | 405 (3.05) | 406.67 | 0.71 |
| | 50 | 0 | rnd | 410 (4.33) | 410.93 | 0.45 | 410 (4.33) | 410.93 | 0.45 | 408 (3.82) | 409 | 0.53 |
| | | | 2op | 407 (3.56) | 408 | 0.26 | 407 (3.56) | 408 | 0.26 | 406 (3.31) | 407.1 | 0.61 |
| | | 1 | rnd | 410 (4.33) | 410.93 | 0.45 | 410 (4.33) | 410.93 | 0.45 | 405 (3.05) | 407 | 0.79 |
| | | | 2op | 407 (3.56) | 408 | 0.26 | 407 (3.56) | 408 | 0.26 | 406 (3.31) | 406.43 | 0.5 |

Table A.36: $u1000_12$: TransRRGA – Perfect Score is 393

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 411 (3.79) | 412.03 | 0.49 | 410 (3.54) | 411.53 | 0.63 | 411 (3.79) | 411.47 | 0.51 |
| | | | 2op | 410 (3.54) | 410.6 | 0.56 | 410 (3.54) | 410.33 | 0.48 | 410 (3.54) | 410.7 | 0.47 |
| | | 1 | rnd | 411 (3.79) | 412.03 | 0.49 | 410 (3.54) | 411.33 | 0.66 | 410 (3.54) | 410.83 | 0.53 |
| | | | 2op | 410 (3.54) | 410.6 | 0.56 | 409 (3.28) | 410 | 0.53 | 409 (3.28) | 410.03 | 0.67 |
| | 50 | 0 | rnd | 410 (3.54) | 411.4 | 0.67 | 410 (3.54) | 410.93 | 0.52 | 410 (3.54) | 410.87 | 0.51 |
| | | | 2op | 409 (3.28) | 410.2 | 0.55 | 409 (3.28) | 410.03 | 0.49 | 409 (3.28) | 410.1 | 0.48 |
| | | 1 | rnd | 410 (3.54) | 411.4 | 0.67 | 409 (3.28) | 410.8 | 0.71 | 409 (3.28) | 410.6 | 0.62 |
| | | | 2op | 409 (3.28) | 410.2 | 0.55 | 409 (3.28) | 409.97 | 0.41 | 409 (3.28) | 409.93 | 0.52 |
| 51 | 20 | 0 | rnd | 411 (3.79) | 411.6 | 0.56 | 411 (3.79) | 411.6 | 0.56 | 410 (3.54) | 410.87 | 0.57 |
| | | | 2op | 409 (3.28) | 410.07 | 0.64 | 409 (3.28) | 410.07 | 0.64 | 409 (3.28) | 410.03 | 0.49 |
| | | 1 | rnd | 411 (3.79) | 411.6 | 0.56 | 411 (3.79) | 411.6 | 0.56 | 410 (3.54) | 410.63 | 0.61 |
| | | | 2op | 409 (3.28) | 410.07 | 0.64 | 409 (3.28) | 410.07 | 0.64 | 408 (3.03) | 409.73 | 0.64 |
| | 50 | 0 | rnd | 409 (3.28) | 410.83 | 0.75 | 409 (3.28) | 410.83 | 0.75 | 409 (3.28) | 410.33 | 0.55 |
| | | | 2op | 409 (3.28) | 409.8 | 0.48 | 409 (3.28) | 409.8 | 0.48 | 409 (3.28) | 409.67 | 0.48 |
| | | 1 | rnd | 409 (3.28) | 410.83 | 0.75 | 409 (3.28) | 410.83 | 0.75 | 409 (3.28) | 410.27 | 0.64 |
| | | | 2op | 409 (3.28) | 409.8 | 0.48 | 409 (3.28) | 409.8 | 0.48 | 408 (3.03) | 409.37 | 0.61 |

Table A.37: $u1000_13$: BasicRRGA – Perfect Score is 396

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 413 (4.29) | 413.47 | 0.51 | 412 (4.04) | 412.73 | 0.45 | 411 (3.79) | 411.67 | 0.61 |
| | | | 2op | 410 (3.54) | 411 | 0.37 | 410 (3.54) | 410.63 | 0.49 | 410 (3.54) | 410.43 | 0.5 |
| | | 1 | rnd | 413 (4.29) | 413.47 | 0.51 | 410 (3.54) | 411.17 | 0.59 | 409 (3.28) | 410.93 | 0.69 |
| | | | 2op | 410 (3.54) | 411 | 0.37 | 409 (3.28) | 410 | 0.45 | 409 (3.28) | 410.07 | 0.52 |
| | 50 | 0 | rnd | 413 (4.29) | 413.67 | 0.48 | 411 (3.79) | 412.63 | 0.56 | 411 (3.79) | 411.67 | 0.48 |
| | | | 2op | 410 (3.54) | 410.9 | 0.31 | 410 (3.54) | 410.5 | 0.57 | 410 (3.54) | 410.3 | 0.47 |
| | | 1 | rnd | 413 (4.29) | 413.67 | 0.48 | 410 (3.54) | 411.2 | 0.66 | 410 (3.54) | 411.03 | 0.49 |
| | | | 2op | 410 (3.54) | 410.9 | 0.31 | 409 (3.28) | 410.17 | 0.53 | 409 (3.28) | 409.77 | 0.5 |
| 51 | 20 | 0 | rnd | 412 (4.04) | 413.03 | 0.32 | 412 (4.04) | 413.03 | 0.32 | 410 (3.54) | 411.3 | 0.6 |
| | | | 2op | 410 (3.54) | 410.73 | 0.45 | 410 (3.54) | 410.73 | 0.45 | 408 (3.03) | 409.67 | 0.55 |
| | | 1 | rnd | 412 (4.04) | 413.03 | 0.32 | 412 (4.04) | 413.03 | 0.32 | 409 (3.28) | 410.8 | 0.66 |
| | | | 2op | 410 (3.54) | 410.73 | 0.45 | 410 (3.54) | 410.73 | 0.45 | 409 (3.28) | 409.67 | 0.48 |
| | 50 | 0 | rnd | 412 (4.04) | 412.77 | 0.43 | 412 (4.04) | 412.77 | 0.43 | 410 (3.54) | 411.23 | 0.57 |
| | | | 2op | 410 (3.54) | 410.7 | 0.47 | 410 (3.54) | 410.7 | 0.47 | 409 (3.28) | 409.77 | 0.5 |
| | | 1 | rnd | 412 (4.04) | 412.77 | 0.43 | 412 (4.04) | 412.77 | 0.43 | 410 (3.54) | 410.87 | 0.35 |
| | | | 2op | 410 (3.54) | 410.7 | 0.47 | 410 (3.54) | 410.7 | 0.47 | 408 (3.03) | 409.53 | 0.57 |

Table A.38: $u1000_13$: TransRRGA – Perfect Score is 396

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 410 (4.06) | 412.1 | 0.66 | 409 (3.81) | 411.5 | 0.73 | 410 (4.06) | 411.23 | 0.63 |
| | | | 2op | 411 (4.31) | 411.57 | 0.5 | 410 (4.06) | 410.9 | 0.61 | 410 (4.06) | 410.83 | 0.65 |
| | | 1 | rnd | 410 (4.06) | 412.1 | 0.66 | 410 (4.06) | 410.93 | 0.69 | 409 (3.81) | 410.7 | 0.79 |
| | | | 2op | 411 (4.31) | 411.57 | 0.5 | 409 (3.81) | 410.27 | 0.74 | 408 (3.55) | 410 | 0.74 |
| | 50 | 0 | rnd | 410 (4.06) | 411.3 | 0.84 | 409 (3.81) | 410.67 | 0.66 | 409 (3.81) | 410.63 | 0.72 |
| | | | 2op | 410 (4.06) | 410.9 | 0.71 | 409 (3.81) | 410.3 | 0.53 | 409 (3.81) | 410.3 | 0.53 |
| | | 1 | rnd | 410 (4.06) | 411.3 | 0.84 | 409 (3.81) | 410.37 | 0.76 | 409 (3.81) | 410.33 | 0.71 |
| | | | 2op | 410 (4.06) | 410.9 | 0.71 | 409 (3.81) | 410.2 | 0.61 | 409 (3.81) | 410 | 0.69 |
| 51 | 20 | 0 | rnd | 410 (4.06) | 411.4 | 0.67 | 410 (4.06) | 411.4 | 0.67 | 410 (4.06) | 410.97 | 0.41 |
| | | | 2op | 410 (4.06) | 410.9 | 0.48 | 410 (4.06) | 410.9 | 0.48 | 409 (3.81) | 410.6 | 0.56 |
| | | 1 | rnd | 410 (4.06) | 411.4 | 0.67 | 410 (4.06) | 411.4 | 0.67 | 409 (3.81) | 410.57 | 0.63 |
| | | | 2op | 410 (4.06) | 410.9 | 0.48 | 410 (4.06) | 410.9 | 0.48 | 409 (3.81) | 410.07 | 0.83 |
| | 50 | 0 | rnd | 409 (3.81) | 410.4 | 0.67 | 409 (3.81) | 410.4 | 0.67 | 409 (3.81) | 410.17 | 0.7 |
| | | | 2op | 409 (3.81) | 409.93 | 0.52 | 409 (3.81) | 409.93 | 0.52 | 408 (3.55) | 409.47 | 0.73 |
| | | 1 | rnd | 409 (3.81) | 410.4 | 0.67 | 409 (3.81) | 410.4 | 0.67 | 409 (3.81) | 410.03 | 0.61 |
| | | | 2op | 409 (3.81) | 409.93 | 0.52 | 409 (3.81) | 409.93 | 0.52 | 408 (3.55) | 409.53 | 0.68 |

Table A.39: $u1000_14$: BasicRRGA – Perfect Score is 394

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 413 (4.82) | 413.53 | 0.51 | 411 (4.31) | 412.67 | 0.61 | 411 (4.31) | 411.7 | 0.47 |
| | | | 2op | 412 (4.57) | 413.27 | 0.64 | 411 (4.31) | 412.13 | 0.57 | 410 (4.06) | 411.07 | 0.52 |
| | | 1 | rnd | 413 (4.82) | 413.53 | 0.51 | 410 (4.06) | 411.37 | 0.67 | 409 (3.81) | 410.93 | 0.78 |
| | | | 2op | 412 (4.57) | 413.27 | 0.64 | 408 (3.55) | 409.93 | 0.87 | 409 (3.81) | 409.87 | 0.63 |
| | 50 | 0 | rnd | 413 (4.82) | 413.4 | 0.5 | 411 (4.31) | 412.6 | 0.62 | 411 (4.31) | 411.33 | 0.48 |
| | | | 2op | 412 (4.57) | 413.2 | 0.55 | 411 (4.31) | 412 | 0.74 | 410 (4.06) | 410.87 | 0.43 |
| | | 1 | rnd | 413 (4.82) | 413.4 | 0.5 | 410 (4.06) | 411.2 | 0.85 | 410 (4.06) | 410.83 | 0.59 |
| | | | 2op | 412 (4.57) | 413.2 | 0.55 | 409 (3.81) | 410.2 | 0.89 | 408 (3.55) | 409.83 | 0.7 |
| 51 | 20 | 0 | rnd | 412 (4.57) | 412.97 | 0.41 | 412 (4.57) | 412.97 | 0.41 | 410 (4.06) | 411.27 | 0.58 |
| | | | 2op | 411 (4.31) | 412.1 | 0.61 | 411 (4.31) | 412.1 | 0.61 | 410 (4.06) | 410.6 | 0.5 |
| | | 1 | rnd | 412 (4.57) | 412.97 | 0.41 | 412 (4.57) | 412.97 | 0.41 | 410 (4.06) | 410.67 | 0.66 |
| | | | 2op | 411 (4.31) | 412.1 | 0.61 | 411 (4.31) | 412.1 | 0.61 | 408 (3.55) | 409.8 | 0.81 |
| | 50 | 0 | rnd | 412 (4.57) | 412.93 | 0.37 | 412 (4.57) | 412.93 | 0.37 | 410 (4.06) | 411 | 0.59 |
| | | | 2op | 412 (4.57) | 412.27 | 0.45 | 412 (4.57) | 412.27 | 0.45 | 409 (3.81) | 410.4 | 0.56 |
| | | 1 | rnd | 412 (4.57) | 412.93 | 0.37 | 412 (4.57) | 412.93 | 0.37 | 410 (4.06) | 410.73 | 0.74 |
| | | | 2op | 412 (4.57) | 412.27 | 0.45 | 412 (4.57) | 412.27 | 0.45 | 409 (3.81) | 409.73 | 0.78 |

Table A.40: $u1000_14$: TransRRGA – Perfect Score is 394

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 418 (3.98) | 419.2 | 0.55 | 418 (3.98) | 419.03 | 0.56 | 418 (3.98) | 418.93 | 0.52 |
| | | | 2op | 418 (3.98) | 419.1 | 0.61 | 418 (3.98) | 418.77 | 0.5 | 417 (3.73) | 418.33 | 0.61 |
| | | 1 | rnd | 418 (3.98) | 419.2 | 0.55 | 417 (3.73) | 418.53 | 0.68 | 417 (3.73) | 418.1 | 0.71 |
| | | | 2op | 418 (3.98) | 419.1 | 0.61 | 416 (3.48) | 417.8 | 0.81 | 416 (3.48) | 417.77 | 0.63 |
| | 50 | 0 | rnd | 417 (3.73) | 418.77 | 0.77 | 417 (3.73) | 418.43 | 0.63 | 417 (3.73) | 418.33 | 0.66 |
| | | | 2op | 418 (3.98) | 418.53 | 0.51 | 417 (3.73) | 418.1 | 0.55 | 417 (3.73) | 417.97 | 0.49 |
| | | 1 | rnd | 417 (3.73) | 418.77 | 0.77 | 417 (3.73) | 418.13 | 0.51 | 417 (3.73) | 418.13 | 0.51 |
| | | | 2op | 418 (3.98) | 418.53 | 0.51 | 416 (3.48) | 417.57 | 0.82 | 416 (3.48) | 417.53 | 0.68 |
| 51 | 20 | 0 | rnd | 418 (3.98) | 419.03 | 0.49 | 418 (3.98) | 419.03 | 0.49 | 418 (3.98) | 418.7 | 0.47 |
| | | | 2op | 417 (3.73) | 418.63 | 0.56 | 417 (3.73) | 418.63 | 0.56 | 417 (3.73) | 418.37 | 0.56 |
| | | 1 | rnd | 418 (3.98) | 419.03 | 0.49 | 418 (3.98) | 419.03 | 0.49 | 417 (3.73) | 418.23 | 0.57 |
| | | | 2op | 417 (3.73) | 418.63 | 0.56 | 417 (3.73) | 418.63 | 0.56 | 417 (3.73) | 417.57 | 0.57 |
| | 50 | 0 | rnd | 417 (3.73) | 417.93 | 0.64 | 417 (3.73) | 417.93 | 0.64 | 417 (3.73) | 417.8 | 0.55 |
| | | | 2op | 416 (3.48) | 417.53 | 0.68 | 416 (3.48) | 417.53 | 0.68 | 417 (3.73) | 417.43 | 0.5 |
| | | 1 | rnd | 417 (3.73) | 417.93 | 0.64 | 417 (3.73) | 417.93 | 0.64 | 416 (3.48) | 417.7 | 0.65 |
| | | | 2op | 416 (3.48) | 417.53 | 0.68 | 416 (3.48) | 417.53 | 0.68 | 416 (3.48) | 417.4 | 0.77 |

Table A.41: $u1000_15$: BasicRRGA – Perfect Score is 402

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 420 (4.48) | 420.63 | 0.56 | 419 (4.23) | 419.97 | 0.49 | 419 (4.23) | 419.27 | 0.45 |
| | | | 2op | 420 (4.48) | 420.9 | 0.31 | 419 (4.23) | 419.97 | 0.56 | 418 (3.98) | 419.13 | 0.51 |
| | | 1 | rnd | 420 (4.48) | 420.63 | 0.56 | 417 (3.73) | 418.5 | 0.63 | 417 (3.73) | 418.43 | 0.63 |
| | | | 2op | 420 (4.48) | 420.9 | 0.31 | 417 (3.73) | 418.73 | 1.46 | 417 (3.73) | 417.83 | 0.87 |
| | 50 | 0 | rnd | 420 (4.48) | 420.4 | 0.5 | 419 (4.23) | 419.83 | 0.38 | 419 (4.23) | 419.23 | 0.43 |
| | | | 2op | 420 (4.48) | 420.7 | 0.47 | 419 (4.23) | 420 | 0.74 | 418 (3.98) | 418.73 | 0.45 |
| | | 1 | rnd | 420 (4.48) | 420.4 | 0.5 | 417 (3.73) | 418.67 | 0.76 | 417 (3.73) | 418.13 | 0.68 |
| | | | 2op | 420 (4.48) | 420.7 | 0.47 | 417 (3.73) | 418.93 | 1.62 | 416 (3.48) | 417.7 | 0.7 |
| 51 | 20 | 0 | rnd | 419 (4.23) | 419.97 | 0.18 | 419 (4.23) | 419.97 | 0.18 | 418 (3.98) | 418.93 | 0.58 |
| | | | 2op | 419 (4.23) | 420.07 | 0.37 | 419 (4.23) | 420.07 | 0.37 | 417 (3.73) | 418.83 | 0.53 |
| | | 1 | rnd | 419 (4.23) | 419.97 | 0.18 | 419 (4.23) | 419.97 | 0.18 | 417 (3.73) | 418.67 | 0.76 |
| | | | 2op | 419 (4.23) | 420.07 | 0.37 | 419 (4.23) | 420.07 | 0.37 | 416 (3.48) | 417.63 | 0.76 |
| | 50 | 0 | rnd | 420 (4.48) | 420 | 0 | 420 (4.48) | 420 | 0 | 418 (3.98) | 418.87 | 0.35 |
| | | | 2op | 419 (4.23) | 420.13 | 0.43 | 419 (4.23) | 420.13 | 0.43 | 417 (3.73) | 418.57 | 0.57 |
| | | 1 | rnd | 420 (4.48) | 420 | 0 | 420 (4.48) | 420 | 0 | 417 (3.73) | 418.43 | 0.82 |
| | | | 2op | 419 (4.23) | 420.13 | 0.43 | 419 (4.23) | 420.13 | 0.43 | 417 (3.73) | 417.63 | 0.61 |

Table A.42: $u1000_15$: TransRRGA – Perfect Score is 402

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 420 (3.96) | 421.3 | 0.65 | 419 (3.71) | 420.57 | 0.77 | 419 (3.71) | 420.33 | 0.66 |
| | | | 2op | 418 (3.47) | 419.17 | 0.59 | 418 (3.47) | 419.03 | 0.41 | 418 (3.47) | 418.87 | 0.35 |
| | | 1 | rnd | 420 (3.96) | 421.3 | 0.65 | 418 (3.47) | 419.23 | 0.86 | 417 (3.22) | 418.8 | 0.71 |
| | | | 2op | 418 (3.47) | 419.17 | 0.59 | 418 (3.47) | 418.4 | 0.5 | 418 (3.47) | 418.7 | 0.47 |
| | 50 | 0 | rnd | 419 (3.71) | 420.43 | 0.68 | 419 (3.71) | 419.83 | 0.7 | 418 (3.47) | 419.43 | 0.73 |
| | | | 2op | 418 (3.47) | 418.73 | 0.52 | 417 (3.22) | 418.47 | 0.57 | 418 (3.47) | 418.67 | 0.48 |
| | | 1 | rnd | 419 (3.71) | 420.43 | 0.68 | 418 (3.47) | 419.07 | 0.74 | 417 (3.22) | 418.53 | 0.63 |
| | | | 2op | 418 (3.47) | 418.73 | 0.52 | 418 (3.47) | 418.37 | 0.49 | 417 (3.22) | 418.4 | 0.62 |
| 51 | 20 | 0 | rnd | 419 (3.71) | 420.77 | 0.82 | 419 (3.71) | 420.77 | 0.82 | 419 (3.71) | 420 | 0.53 |
| | | | 2op | 418 (3.47) | 418.9 | 0.48 | 418 (3.47) | 418.9 | 0.48 | 417 (3.22) | 418.5 | 0.57 |
| | | 1 | rnd | 419 (3.71) | 420.77 | 0.82 | 419 (3.71) | 420.77 | 0.82 | 417 (3.22) | 418.93 | 0.78 |
| | | | 2op | 418 (3.47) | 418.9 | 0.48 | 418 (3.47) | 418.9 | 0.48 | 418 (3.47) | 418.5 | 0.51 |
| | 50 | 0 | rnd | 418 (3.47) | 419.37 | 0.72 | 418 (3.47) | 419.37 | 0.72 | 418 (3.47) | 418.87 | 0.82 |
| | | | 2op | 417 (3.22) | 418.27 | 0.58 | 417 (3.22) | 418.27 | 0.58 | 417 (3.22) | 418.03 | 0.41 |
| | | 1 | rnd | 418 (3.47) | 419.37 | 0.72 | 418 (3.47) | 419.37 | 0.72 | 417 (3.22) | 418.63 | 0.67 |
| | | | 2op | 417 (3.22) | 418.27 | 0.58 | 417 (3.22) | 418.27 | 0.58 | 417 (3.22) | 417.77 | 0.43 |

Table A.43: $u1000_16$: BasicRRGA – Perfect Score is 404

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 422 (4.46) | 422.73 | 0.45 | 421 (4.21) | 422 | 0.45 | 420 (3.96) | 421.07 | 0.45 |
| | | | 2op | 420 (3.96) | 420.8 | 0.41 | 419 (3.71) | 420.2 | 0.55 | 419 (3.71) | 419.8 | 0.41 |
| | | 1 | rnd | 422 (4.46) | 422.73 | 0.45 | 418 (3.47) | 418.67 | 0.61 | 418 (3.47) | 418.83 | 0.79 |
| | | | 2op | 420 (3.96) | 420.8 | 0.41 | 417 (3.22) | 418.53 | 0.57 | 417 (3.22) | 418.4 | 0.56 |
| | 50 | 0 | rnd | 421 (4.21) | 422.6 | 0.56 | 421 (4.21) | 422.1 | 0.48 | 420 (3.96) | 421 | 0.53 |
| | | | 2op | 420 (3.96) | 420.83 | 0.38 | 419 (3.71) | 420.17 | 0.46 | 419 (3.71) | 419.43 | 0.5 |
| | | 1 | rnd | 421 (4.21) | 422.6 | 0.56 | 417 (3.22) | 418.6 | 0.77 | 418 (3.47) | 418.77 | 0.73 |
| | | | 2op | 420 (3.96) | 420.83 | 0.38 | 417 (3.22) | 418.53 | 0.63 | 417 (3.22) | 418.37 | 0.56 |
| 51 | 20 | 0 | rnd | 422 (4.46) | 422.23 | 0.43 | 422 (4.46) | 422.23 | 0.43 | 420 (3.96) | 420.9 | 0.48 |
| | | | 2op | 419 (3.71) | 420.13 | 0.43 | 419 (3.71) | 420.13 | 0.43 | 418 (3.47) | 419.13 | 0.63 |
| | | 1 | rnd | 422 (4.46) | 422.23 | 0.43 | 422 (4.46) | 422.23 | 0.43 | 417 (3.22) | 418.8 | 0.92 |
| | | | 2op | 419 (3.71) | 420.13 | 0.43 | 419 (3.71) | 420.13 | 0.43 | 417 (3.22) | 418.2 | 0.66 |
| | 50 | 0 | rnd | 421 (4.21) | 422.03 | 0.32 | 421 (4.21) | 422.03 | 0.32 | 420 (3.96) | 420.97 | 0.49 |
| | | | 2op | 420 (3.96) | 420.1 | 0.31 | 420 (3.96) | 420.1 | 0.31 | 418 (3.47) | 419.03 | 0.41 |
| | | 1 | rnd | 421 (4.21) | 422.03 | 0.32 | 421 (4.21) | 422.03 | 0.32 | 417 (3.22) | 418.93 | 1.05 |
| | | | 2op | 420 (3.96) | 420.1 | 0.31 | 420 (3.96) | 420.1 | 0.31 | 417 (3.22) | 418 | 0.64 |

Table A.44: $u1000_16$: TransRRGA – Perfect Score is 404

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 419 (3.71) | 420.17 | 0.53 | 418 (3.47) | 419.7 | 0.7 | 418 (3.47) | 419.6 | 0.56 |
| | | | 2op | 420 (3.96) | 420.8 | 0.61 | 419 (3.71) | 420.33 | 0.66 | 420 (3.96) | 420.4 | 0.5 |
| | | 1 | rnd | 419 (3.71) | 420.17 | 0.53 | 418 (3.47) | 419.5 | 0.57 | 418 (3.47) | 419.43 | 0.63 |
| | | | 2op | 420 (3.96) | 420.8 | 0.61 | 418 (3.47) | 419.4 | 0.67 | 418 (3.47) | 419.13 | 0.57 |
| | 50 | 0 | rnd | 418 (3.47) | 419.43 | 0.57 | 418 (3.47) | 419.43 | 0.57 | 418 (3.47) | 419.07 | 0.52 |
| | | | 2op | 419 (3.71) | 420.4 | 0.56 | 419 (3.71) | 419.77 | 0.68 | 418 (3.47) | 419.97 | 0.76 |
| | | 1 | rnd | 418 (3.47) | 419.43 | 0.57 | 418 (3.47) | 419.17 | 0.65 | 418 (3.47) | 418.93 | 0.64 |
| | | | 2op | 419 (3.71) | 420.4 | 0.56 | 418 (3.47) | 419.1 | 0.71 | 418 (3.47) | 419 | 0.59 |
| 51 | 20 | 0 | rnd | 418 (3.47) | 419.5 | 0.57 | 418 (3.47) | 419.5 | 0.57 | 418 (3.47) | 419.23 | 0.68 |
| | | | 2op | 419 (3.71) | 420.3 | 0.65 | 419 (3.71) | 420.3 | 0.65 | 419 (3.71) | 419.83 | 0.65 |
| | | 1 | rnd | 418 (3.47) | 419.5 | 0.57 | 418 (3.47) | 419.5 | 0.57 | 418 (3.47) | 418.8 | 0.66 |
| | | | 2op | 419 (3.71) | 420.3 | 0.65 | 419 (3.71) | 420.3 | 0.65 | 418 (3.47) | 419.17 | 0.75 |
| | 50 | 0 | rnd | 417 (3.22) | 418.8 | 0.66 | 417 (3.22) | 418.8 | 0.66 | 417 (3.22) | 418.47 | 0.63 |
| | | | 2op | 418 (3.47) | 419.27 | 0.74 | 418 (3.47) | 419.27 | 0.74 | 418 (3.47) | 419.07 | 0.64 |
| | | 1 | rnd | 417 (3.22) | 418.8 | 0.66 | 417 (3.22) | 418.8 | 0.66 | 417 (3.22) | 418.53 | 0.68 |
| | | | 2op | 418 (3.47) | 419.27 | 0.74 | 418 (3.47) | 419.27 | 0.74 | 418 (3.47) | 418.67 | 0.61 |

Table A.45: $u1000_17$: BasicRRGA – Perfect Score is 404

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 420 (3.96) | 420.87 | 0.35 | 420 (3.96) | 420.53 | 0.51 | 419 (3.71) | 419.97 | 0.32 |
| | | | 2op | 422 (4.46) | 422.47 | 0.51 | 421 (4.21) | 422.2 | 0.55 | 421 (4.21) | 421.47 | 0.51 |
| | | 1 | rnd | 420 (3.96) | 420.87 | 0.35 | 419 (3.71) | 419.87 | 0.57 | 418 (3.47) | 419.63 | 0.56 |
| | | | 2op | 422 (4.46) | 422.47 | 0.51 | 418 (3.47) | 419.2 | 0.66 | 418 (3.47) | 418.97 | 0.67 |
| | 50 | 0 | rnd | 420 (3.96) | 420.93 | 0.25 | 420 (3.96) | 420.47 | 0.51 | 419 (3.71) | 419.87 | 0.35 |
| | | | 2op | 422 (4.46) | 422.33 | 0.48 | 421 (4.21) | 421.7 | 0.53 | 421 (4.21) | 421.37 | 0.49 |
| | | 1 | rnd | 420 (3.96) | 420.93 | 0.25 | 419 (3.71) | 419.73 | 0.52 | 418 (3.47) | 419.33 | 0.61 |
| | | | 2op | 422 (4.46) | 422.33 | 0.48 | 418 (3.47) | 419 | 0.69 | 418 (3.47) | 419.07 | 0.37 |
| 51 | 20 | 0 | rnd | 420 (3.96) | 420.37 | 0.49 | 420 (3.96) | 420.37 | 0.49 | 419 (3.71) | 419.6 | 0.5 |
| | | | 2op | 421 (4.21) | 421.87 | 0.43 | 421 (4.21) | 421.87 | 0.43 | 420 (3.96) | 420.93 | 0.45 |
| | | 1 | rnd | 420 (3.96) | 420.37 | 0.49 | 420 (3.96) | 420.37 | 0.49 | 418 (3.47) | 419.6 | 0.56 |
| | | | 2op | 421 (4.21) | 421.87 | 0.43 | 421 (4.21) | 421.87 | 0.43 | 418 (3.47) | 418.77 | 0.57 |
| | 50 | 0 | rnd | 420 (3.96) | 420.7 | 0.47 | 420 (3.96) | 420.7 | 0.47 | 419 (3.71) | 419.73 | 0.45 |
| | | | 2op | 421 (4.21) | 421.73 | 0.45 | 421 (4.21) | 421.73 | 0.45 | 420 (3.96) | 420.87 | 0.51 |
| | | 1 | rnd | 420 (3.96) | 420.7 | 0.47 | 420 (3.96) | 420.7 | 0.47 | 419 (3.71) | 419.33 | 0.48 |
| | | | 2op | 421 (4.21) | 421.73 | 0.45 | 421 (4.21) | 421.73 | 0.45 | 418 (3.47) | 418.83 | 0.53 |

Table A.46: $u1000_17$: TransRRGA – Perfect Score is 404

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 415 (4.01) | 415.93 | 0.58 | 415 (4.01) | 415.7 | 0.47 | 415 (4.01) | 415.53 | 0.51 |
| | | | 2op | 413 (3.51) | 414.73 | 0.58 | 413 (3.51) | 414.57 | 0.63 | 414 (3.76) | 414.6 | 0.5 |
| | | 1 | rnd | 415 (4.01) | 415.93 | 0.58 | 413 (3.51) | 414.07 | 0.69 | 413 (3.51) | 414.07 | 0.52 |
| | | | 2op | 413 (3.51) | 414.73 | 0.58 | 413 (3.51) | 414.03 | 0.72 | 413 (3.51) | 413.8 | 0.66 |
| | 50 | 0 | rnd | 414 (3.76) | 415.5 | 0.63 | 413 (3.51) | 414.93 | 0.78 | 414 (3.76) | 414.87 | 0.57 |
| | | | 2op | 413 (3.51) | 414.5 | 0.57 | 413 (3.51) | 414.2 | 0.66 | 413 (3.51) | 413.97 | 0.56 |
| | | 1 | rnd | 414 (3.76) | 415.5 | 0.63 | 413 (3.51) | 414.03 | 0.67 | 413 (3.51) | 414.07 | 0.64 |
| | | | 2op | 413 (3.51) | 414.5 | 0.57 | 413 (3.51) | 413.73 | 0.52 | 413 (3.51) | 413.67 | 0.61 |
| 51 | 20 | 0 | rnd | 415 (4.01) | 415.5 | 0.51 | 415 (4.01) | 415.5 | 0.51 | 414 (3.76) | 415.4 | 0.56 |
| | | | 2op | 414 (3.76) | 414.27 | 0.45 | 414 (3.76) | 414.27 | 0.45 | 413 (3.51) | 414.17 | 0.46 |
| | | 1 | rnd | 415 (4.01) | 415.5 | 0.51 | 415 (4.01) | 415.5 | 0.51 | 413 (3.51) | 413.97 | 0.67 |
| | | | 2op | 414 (3.76) | 414.27 | 0.45 | 414 (3.76) | 414.27 | 0.45 | 412 (3.26) | 413.53 | 0.63 |
| | 50 | 0 | rnd | 414 (3.76) | 414.47 | 0.51 | 414 (3.76) | 414.47 | 0.51 | 413 (3.51) | 414.2 | 0.71 |
| | | | 2op | 413 (3.51) | 413.87 | 0.57 | 413 (3.51) | 413.87 | 0.57 | 413 (3.51) | 413.7 | 0.47 |
| | | 1 | rnd | 414 (3.76) | 414.47 | 0.51 | 414 (3.76) | 414.47 | 0.51 | 413 (3.51) | 413.57 | 0.5 |
| | | | 2op | 413 (3.51) | 413.87 | 0.57 | 413 (3.51) | 413.87 | 0.57 | 412 (3.26) | 413.27 | 0.69 |

Table A.47: $u1000_18$: BasicRRGA – Perfect Score is 399

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 417 (4.51) | 417.43 | 0.57 | 416 (4.26) | 416.93 | 0.45 | 415 (4.01) | 416.07 | 0.37 |
| | | | 2op | 415 (4.01) | 415.8 | 0.41 | 414 (3.76) | 415.47 | 0.57 | 414 (3.76) | 414.9 | 0.4 |
| | | 1 | rnd | 417 (4.51) | 417.43 | 0.57 | 412 (3.26) | 413.83 | 0.7 | 412 (3.26) | 413.63 | 0.72 |
| | | | 2op | 415 (4.01) | 415.8 | 0.41 | 413 (3.51) | 413.97 | 0.76 | 412 (3.26) | 413.9 | 0.61 |
| | 50 | 0 | rnd | 417 (4.51) | 417.6 | 0.5 | 415 (4.01) | 416.53 | 0.57 | 415 (4.01) | 415.8 | 0.41 |
| | | | 2op | 415 (4.01) | 415.73 | 0.45 | 414 (3.76) | 415.27 | 0.58 | 414 (3.76) | 414.77 | 0.43 |
| | | 1 | rnd | 417 (4.51) | 417.6 | 0.5 | 413 (3.51) | 414.17 | 0.65 | 413 (3.51) | 413.87 | 0.68 |
| | | | 2op | 415 (4.01) | 415.73 | 0.45 | 412 (3.26) | 413.67 | 0.8 | 413 (3.51) | 413.87 | 0.73 |
| 51 | 20 | 0 | rnd | 415 (4.01) | 416.9 | 0.4 | 415 (4.01) | 416.9 | 0.4 | 414 (3.76) | 415.33 | 0.55 |
| | | | 2op | 415 (4.01) | 415.5 | 0.51 | 415 (4.01) | 415.5 | 0.51 | 413 (3.51) | 414.23 | 0.63 |
| | | 1 | rnd | 415 (4.01) | 416.9 | 0.4 | 415 (4.01) | 416.9 | 0.4 | 412 (3.26) | 413.77 | 0.73 |
| | | | 2op | 415 (4.01) | 415.5 | 0.51 | 415 (4.01) | 415.5 | 0.51 | 412 (3.26) | 413.43 | 0.63 |
| | 50 | 0 | rnd | 416 (4.26) | 416.8 | 0.41 | 416 (4.26) | 416.8 | 0.41 | 414 (3.76) | 415.23 | 0.5 |
| | | | 2op | 415 (4.01) | 415.2 | 0.41 | 415 (4.01) | 415.2 | 0.41 | 413 (3.51) | 414.17 | 0.46 |
| | | 1 | rnd | 416 (4.26) | 416.8 | 0.41 | 416 (4.26) | 416.8 | 0.41 | 413 (3.51) | 413.63 | 0.56 |
| | | | 2op | 415 (4.01) | 415.2 | 0.41 | 415 (4.01) | 415.2 | 0.41 | 412 (3.26) | 413.37 | 0.89 |

Table A.48: $u1000_18$: TransRRGA – Perfect Score is 399

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 415 (3.75) | 416.7 | 0.6 | 415 (3.75) | 416.2 | 0.48 | 415 (3.75) | 416.1 | 0.48 |
| | | | 2op | 415 (3.75) | 415.53 | 0.57 | 415 (3.75) | 415.43 | 0.5 | 414 (3.5) | 415.1 | 0.48 |
| | | 1 | rnd | 415 (3.75) | 416.7 | 0.6 | 414 (3.5) | 415.67 | 0.76 | 414 (3.5) | 415.7 | 0.6 |
| | | | 2op | 415 (3.75) | 415.53 | 0.57 | 413 (3.25) | 414.73 | 0.64 | 413 (3.25) | 414.53 | 0.68 |
| | 50 | 0 | rnd | 414 (3.5) | 416 | 0.64 | 414 (3.5) | 415.4 | 0.72 | 414 (3.5) | 415.5 | 0.63 |
| | | | 2op | 414 (3.5) | 415.1 | 0.66 | 414 (3.5) | 415 | 0.45 | 414 (3.5) | 414.6 | 0.62 |
| | | 1 | rnd | 414 (3.5) | 416 | 0.64 | 414 (3.5) | 415.2 | 0.66 | 414 (3.5) | 415.07 | 0.74 |
| | | | 2op | 414 (3.5) | 415.1 | 0.66 | 414 (3.5) | 414.63 | 0.49 | 413 (3.25) | 414.5 | 0.57 |
| 51 | 20 | 0 | rnd | 416 (4) | 416.33 | 0.48 | 416 (4) | 416.33 | 0.48 | 415 (3.75) | 415.97 | 0.56 |
| | | | 2op | 414 (3.5) | 415.3 | 0.6 | 414 (3.5) | 415.3 | 0.6 | 414 (3.5) | 414.8 | 0.55 |
| | | 1 | rnd | 416 (4) | 416.33 | 0.48 | 416 (4) | 416.33 | 0.48 | 414 (3.5) | 415.33 | 0.71 |
| | | | 2op | 414 (3.5) | 415.3 | 0.6 | 414 (3.5) | 415.3 | 0.6 | 414 (3.5) | 414.73 | 0.45 |
| | 50 | 0 | rnd | 414 (3.5) | 414.97 | 0.61 | 414 (3.5) | 414.97 | 0.61 | 414 (3.5) | 415 | 0.59 |
| | | | 2op | 413 (3.25) | 414.47 | 0.57 | 413 (3.25) | 414.47 | 0.57 | 413 (3.25) | 414.2 | 0.61 |
| | | 1 | rnd | 414 (3.5) | 414.97 | 0.61 | 414 (3.5) | 414.97 | 0.61 | 413 (3.25) | 414.7 | 0.75 |
| | | | 2op | 413 (3.25) | 414.47 | 0.57 | 413 (3.25) | 414.47 | 0.57 | 413 (3.25) | 413.9 | 0.66 |

Table A.49: $u1000_19$: BasicRRGA – Perfect Score is 400

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 417 (4.25) | 417.9 | 0.61 | 416 (4) | 417.13 | 0.43 | 416 (4) | 416.7 | 0.47 |
| | | | 2op | 416 (4) | 417.07 | 0.52 | 415 (3.75) | 416.33 | 0.66 | 415 (3.75) | 415.4 | 0.5 |
| | | 1 | rnd | 417 (4.25) | 417.9 | 0.61 | 414 (3.5) | 415.73 | 0.74 | 414 (3.5) | 415.53 | 0.73 |
| | | | 2op | 416 (4) | 417.07 | 0.52 | 413 (3.25) | 414.63 | 0.76 | 413 (3.25) | 414.63 | 0.56 |
| | 50 | 0 | rnd | 417 (4.25) | 417.77 | 0.43 | 416 (4) | 417.07 | 0.37 | 415 (3.75) | 416.33 | 0.55 |
| | | | 2op | 416 (4) | 417.03 | 0.56 | 415 (3.75) | 416.07 | 0.52 | 414 (3.5) | 415.07 | 0.37 |
| | | 1 | rnd | 417 (4.25) | 417.77 | 0.43 | 415 (3.75) | 415.77 | 0.68 | 414 (3.5) | 415.4 | 0.62 |
| | | | 2op | 416 (4) | 417.03 | 0.56 | 413 (3.25) | 414.7 | 0.84 | 414 (3.5) | 414.7 | 0.6 |
| 51 | 20 | 0 | rnd | 417 (4.25) | 417.37 | 0.49 | 417 (4.25) | 417.37 | 0.49 | 415 (3.75) | 416.13 | 0.63 |
| | | | 2op | 415 (3.75) | 416.33 | 0.61 | 415 (3.75) | 416.33 | 0.61 | 414 (3.5) | 415.07 | 0.45 |
| | | 1 | rnd | 417 (4.25) | 417.37 | 0.49 | 417 (4.25) | 417.37 | 0.49 | 415 (3.75) | 415.77 | 0.5 |
| | | | 2op | 415 (3.75) | 416.33 | 0.61 | 415 (3.75) | 416.33 | 0.61 | 413 (3.25) | 414.53 | 0.63 |
| | 50 | 0 | rnd | 417 (4.25) | 417.33 | 0.48 | 417 (4.25) | 417.33 | 0.48 | 415 (3.75) | 416.13 | 0.57 |
| | | | 2op | 415 (3.75) | 416.13 | 0.51 | 415 (3.75) | 416.13 | 0.51 | 414 (3.5) | 414.87 | 0.43 |
| | | 1 | rnd | 417 (4.25) | 417.33 | 0.48 | 417 (4.25) | 417.33 | 0.48 | 414 (3.5) | 415.53 | 0.63 |
| | | | 2op | 415 (3.75) | 416.13 | 0.51 | 415 (3.75) | 416.13 | 0.51 | 413 (3.25) | 414.67 | 0.55 |

Table A.50: $u1000_19$: TransRRGA – Perfect Score is 400

### A.2.2 hard28 Instance Results

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 62 (0) | 62.9 | 0.31 | 62 (0) | 62.9 | 0.31 | 62 (0) | 62.93 | 0.25 |
| | | 1 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 62 (0) | 62.9 | 0.31 | 62 (0) | 62.1 | 0.31 | 62 (0) | 62 | 0 |
| | 50 | 0 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 62 (0) | 62.57 | 0.5 | 62 (0) | 62.5 | 0.51 | 62 (0) | 62.57 | 0.5 |
| | | 1 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 62 (0) | 62.57 | 0.5 | 62 (0) | 62.13 | 0.35 | 62 (0) | 62.17 | 0.38 |
| 51 | 20 | 0 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 62 (0) | 62.4 | 0.5 | 62 (0) | 62.57 | 0.5 | 62 (0) | 62.6 | 0.5 |
| | | 1 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 62 (0) | 62.4 | 0.5 | 62 (0) | 62.17 | 0.38 | 62 (0) | 62.1 | 0.31 |
| | 50 | 0 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 62 (0) | 62.23 | 0.43 | 62 (0) | 62.03 | 0.18 | 62 (0) | 62.1 | 0.31 |
| | | 1 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 62 (0) | 62.23 | 0.43 | 62 (0) | 62 | 0 | 62 (0) | 62.2 | 0.41 |

Table A.51: $h1$: BasicRRGA – Perfect Score is 62

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 65 (4.84) | 65 | 0 | 64 (3.23) | 64.73 | 0.45 | 63 (1.61) | 63.97 | 0.18 |
| | | 1 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 65 (4.84) | 65 | 0 | 62 (0) | 64 | 1.44 | 62 (0) | 62 | 0 |
| | 50 | 0 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 65 (4.84) | 65 | 0 | 64 (3.23) | 64.33 | 0.48 | 63 (1.61) | 63.9 | 0.31 |
| | | 1 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 65 (4.84) | 65 | 0 | 62 (0) | 63 | 1.44 | 62 (0) | 62 | 0 |
| 51 | 20 | 0 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 65 (4.84) | 65 | 0 | 65 (4.84) | 65 | 0 | 64 (3.23) | 64 | 0 |
| | | 1 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 65 (4.84) | 65 | 0 | 65 (4.84) | 65 | 0 | 62 (0) | 62 | 0 |
| | 50 | 0 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 65 (4.84) | 65 | 0 | 65 (4.84) | 65 | 0 | 63 (1.61) | 63.9 | 0.31 |
| | | 1 | rnd | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 | 62 (0) | 62 | 0 |
| | | | 2op | 65 (4.84) | 65 | 0 | 65 (4.84) | 65 | 0 | 62 (0) | 62 | 0 |

Table A.52: $h1$: TransRRGA – Perfect Score is 62

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 61 (1.67) | 61.97 | 0.18 | 61 (1.67) | 61.73 | 0.45 | 61 (1.67) | 61.87 | 0.35 |
| | | 1 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 61 (1.67) | 61.97 | 0.18 | 61 (1.67) | 61.67 | 0.48 | 61 (1.67) | 61.9 | 0.31 |
| | 50 | 0 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 62 (3.33) | 62 | 0 | 61 (1.67) | 61.63 | 0.49 | 61 (1.67) | 61.87 | 0.35 |
| | | 1 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 62 (3.33) | 62 | 0 | 61 (1.67) | 61.73 | 0.45 | 61 (1.67) | 61.83 | 0.38 |
| 51 | 20 | 0 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 61 (1.67) | 61.77 | 0.43 | 61 (1.67) | 61.87 | 0.35 | 61 (1.67) | 61.87 | 0.35 |
| | | 1 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 61 (1.67) | 61.77 | 0.43 | 61 (1.67) | 61.83 | 0.38 | 61 (1.67) | 61.83 | 0.38 |
| | 50 | 0 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 61 (1.67) | 61.9 | 0.31 | 61 (1.67) | 61.9 | 0.31 | 61 (1.67) | 61.8 | 0.41 |
| | | 1 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 61 (1.67) | 61.9 | 0.31 | 61 (1.67) | 61.9 | 0.31 | 61 (1.67) | 61.87 | 0.35 |

Table A.53: $h2$: BasicRRGA – Perfect Score is 60

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 67 (11.67) | 67.03 | 0.18 | 64 (6.67) | 64.87 | 0.57 | 63 (5) | 63.9 | 0.31 |
| | | 1 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 67 (11.67) | 67.03 | 0.18 | 61 (1.67) | 61.83 | 0.38 | 61 (1.67) | 61.67 | 0.48 |
| | 50 | 0 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 67 (11.67) | 67.03 | 0.18 | 64 (6.67) | 64.67 | 0.48 | 63 (5) | 63.7 | 0.47 |
| | | 1 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 67 (11.67) | 67.03 | 0.18 | 61 (1.67) | 61.67 | 0.48 | 61 (1.67) | 61.73 | 0.45 |
| 51 | 20 | 0 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 67 (11.67) | 67 | 0 | 66 (10) | 66.03 | 0.18 | 63 (5) | 63.17 | 0.38 |
| | | 1 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 67 (11.67) | 67 | 0 | 61 (1.67) | 61.8 | 0.41 | 61 (1.67) | 61.7 | 0.47 |
| | 50 | 0 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 66 (10) | 66.97 | 0.18 | 65 (8.33) | 66.03 | 0.32 | 63 (5) | 63.23 | 0.43 |
| | | 1 | rnd | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 | 61 (1.67) | 61 | 0 |
| | | | 2op | 66 (10) | 66.97 | 0.18 | 61 (1.67) | 61.83 | 0.38 | 61 (1.67) | 61.6 | 0.5 |

Table A.54: $h2$: TransRRGA – Perfect Score is 60

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 60 (1.69) | 60.07 | 0.25 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | 1 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 60 (1.69) | 60.07 | 0.25 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | 50 | 0 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | 1 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| 51 | 20 | 0 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | 1 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | 50 | 0 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | 1 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |

Table A.55: $h3$: BasicRRGA – Perfect Score is 59

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 66 (11.86) | 66 | 0 | 65 (10.17) | 65.57 | 0.5 | 65 (10.17) | 65 | 0 |
| | | 1 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 66 (11.86) | 66 | 0 | 60 (1.69) | 63.17 | 3.02 | 60 (1.69) | 60 | 0 |
| | 50 | 0 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 66 (11.86) | 66 | 0 | 65 (10.17) | 65.07 | 0.25 | 65 (10.17) | 65 | 0 |
| | | 1 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 66 (11.86) | 66 | 0 | 60 (1.69) | 60.97 | 2.2 | 60 (1.69) | 60 | 0 |
| 51 | 20 | 0 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 66 (11.86) | 66 | 0 | 66 (11.86) | 66 | 0 | 65 (10.17) | 65 | 0 |
| | | 1 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 66 (11.86) | 66 | 0 | 66 (11.86) | 66 | 0 | 60 (1.69) | 60 | 0 |
| | 50 | 0 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 66 (11.86) | 66 | 0 | 66 (11.86) | 66 | 0 | 65 (10.17) | 65 | 0 |
| | | 1 | rnd | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 | 60 (1.69) | 60 | 0 |
| | | | 2op | 66 (11.86) | 66 | 0 | 66 (11.86) | 66 | 0 | 60 (1.69) | 60 | 0 |

Table A.56: $h3$: TransRRGA – Perfect Score is 59

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.5 | 0.51 | 63 (1.61) | 63.43 | 0.5 | 63 (1.61) | 63.53 | 0.51 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.5 | 0.51 | 63 (1.61) | 63.37 | 0.49 | 63 (1.61) | 63.17 | 0.38 |
| | 50 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.37 | 0.49 | 63 (1.61) | 63.27 | 0.45 | 63 (1.61) | 63.4 | 0.5 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.37 | 0.49 | 63 (1.61) | 63.27 | 0.45 | 63 (1.61) | 63.23 | 0.43 |
| 51 | 20 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.23 | 0.43 | 63 (1.61) | 63.17 | 0.38 | 63 (1.61) | 63.17 | 0.38 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.23 | 0.43 | 63 (1.61) | 63.2 | 0.41 | 63 (1.61) | 63.2 | 0.41 |
| | 50 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.03 | 0.18 | 63 (1.61) | 63.1 | 0.31 | 63 (1.61) | 63 | 0 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.03 | 0.18 | 63 (1.61) | 63.1 | 0.31 | 63 (1.61) | 63 | 0 |

Table A.57: $h4$: BasicRRGA – Perfect Score is 62

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 70 (12.9) | 70 | 0 | 69 (11.29) | 69 | 0 | 68 (9.68) | 68.8 | 0.41 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 70 (12.9) | 70 | 0 | 63 (1.61) | 63.07 | 0.25 | 63 (1.61) | 63.07 | 0.25 |
| | 50 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 70 (12.9) | 70 | 0 | 68 (9.68) | 68.97 | 0.18 | 68 (9.68) | 68.67 | 0.48 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 70 (12.9) | 70 | 0 | 63 (1.61) | 63.1 | 0.31 | 63 (1.61) | 63.03 | 0.18 |
| 51 | 20 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 70 (12.9) | 70 | 0 | 69 (11.29) | 69.6 | 0.5 | 68 (9.68) | 68.47 | 0.51 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 70 (12.9) | 70 | 0 | 63 (1.61) | 67.33 | 3.37 | 63 (1.61) | 63 | 0 |
| | 50 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 70 (12.9) | 70 | 0 | 69 (11.29) | 69.67 | 0.48 | 68 (9.68) | 68.1 | 0.31 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 70 (12.9) | 70 | 0 | 63 (1.61) | 67.17 | 3.46 | 63 (1.61) | 63 | 0 |

Table A.58: $h4$: TransRRGA – Perfect Score is 62

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | 1 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | 50 | 0 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | 1 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| 51 | 20 | 0 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | 1 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | 50 | 0 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | 1 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |

Table A.59: $h5$: BasicRRGA – Perfect Score is 58

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 |
| | | 1 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 |
| | 50 | 0 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 |
| | | 1 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 |
| 51 | 20 | 0 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 |
| | | 1 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 |
| | 50 | 0 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 |
| | | 1 | rnd | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 | 59 (1.72) | 59 | 0 |
| | | | 2op | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 | 61 (5.17) | 61 | 0 |

Table A.60: $h5$: TransRRGA – Perfect Score is 58

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65.67 | 0.48 | 65 (1.56) | 65.53 | 0.51 | 65 (1.56) | 65.53 | 0.51 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65.67 | 0.48 | 65 (1.56) | 65.33 | 0.48 | 65 (1.56) | 65.37 | 0.49 |
| | 50 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65.53 | 0.51 | 65 (1.56) | 65.63 | 0.49 | 65 (1.56) | 65.53 | 0.51 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65.53 | 0.51 | 65 (1.56) | 65.63 | 0.49 | 65 (1.56) | 65.57 | 0.5 |
| 51 | 20 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65.43 | 0.5 | 65 (1.56) | 65.53 | 0.51 | 65 (1.56) | 65.2 | 0.41 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65.43 | 0.5 | 65 (1.56) | 65.47 | 0.51 | 65 (1.56) | 65.47 | 0.51 |
| | 50 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65.3 | 0.47 | 65 (1.56) | 65.37 | 0.49 | 65 (1.56) | 65.2 | 0.41 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65.3 | 0.47 | 65 (1.56) | 65.37 | 0.49 | 65 (1.56) | 65.2 | 0.41 |

Table A.61: $h6$: BasicRRGA – Perfect Score is 64

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 71 (10.94) | 71 | 0 | 71 (10.94) | 71 | 0 | 70 (9.38) | 70.97 | 0.18 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 71 (10.94) | 71 | 0 | 71 (10.94) | 71 | 0 | 67 (4.69) | 70.87 | 0.73 |
| | 50 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 71 (10.94) | 71 | 0 | 71 (10.94) | 71 | 0 | 70 (9.38) | 70.9 | 0.31 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 71 (10.94) | 71 | 0 | 71 (10.94) | 71 | 0 | 65 (1.56) | 70.4 | 1.83 |
| 51 | 20 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 71 (10.94) | 71 | 0 | 71 (10.94) | 71 | 0 | 70 (9.38) | 70.83 | 0.38 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 71 (10.94) | 71 | 0 | 71 (10.94) | 71 | 0 | 65 (1.56) | 70.4 | 1.83 |
| | 50 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 71 (10.94) | 71 | 0 | 71 (10.94) | 71 | 0 | 70 (9.38) | 70.9 | 0.31 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 71 (10.94) | 71 | 0 | 71 (10.94) | 71 | 0 | 65 (1.56) | 70.2 | 2.07 |

Table A.62: $h6$: TransRRGA – Perfect Score is 64

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.33 | 0.48 | 63 (1.61) | 63.17 | 0.38 | 63 (1.61) | 63.23 | 0.43 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.33 | 0.48 | 63 (1.61) | 63.3 | 0.47 | 63 (1.61) | 63.07 | 0.25 |
| | 50 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.27 | 0.45 | 63 (1.61) | 63.17 | 0.38 | 63 (1.61) | 63.27 | 0.45 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.27 | 0.45 | 63 (1.61) | 63.2 | 0.41 | 63 (1.61) | 63.23 | 0.43 |
| 51 | 20 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.1 | 0.31 | 63 (1.61) | 63.03 | 0.18 | 63 (1.61) | 63.1 | 0.31 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63.1 | 0.31 | 63 (1.61) | 63.07 | 0.25 | 63 (1.61) | 63.2 | 0.41 |
| | 50 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |

Table A.63: $h7$: BasicRRGA – Perfect Score is 62

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 71 (14.52) | 71 | 0 | 70 (12.9) | 70.47 | 0.51 | 70 (12.9) | 70 | 0 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 71 (14.52) | 71 | 0 | 63 (1.61) | 66.07 | 3.77 | 63 (1.61) | 63 | 0 |
| | 50 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 71 (14.52) | 71 | 0 | 70 (12.9) | 70.17 | 0.38 | 69 (11.29) | 69.93 | 0.25 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 71 (14.52) | 71 | 0 | 63 (1.61) | 65.07 | 3.49 | 63 (1.61) | 63 | 0 |
| 51 | 20 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 71 (14.52) | 71 | 0 | 71 (14.52) | 71 | 0 | 70 (12.9) | 70 | 0 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 71 (14.52) | 71 | 0 | 71 (14.52) | 71 | 0 | 63 (1.61) | 63.03 | 0.18 |
| | 50 | 0 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 71 (14.52) | 71 | 0 | 70 (12.9) | 70.93 | 0.25 | 69 (11.29) | 69.93 | 0.25 |
| | | 1 | rnd | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 | 63 (1.61) | 63 | 0 |
| | | | 2op | 71 (14.52) | 71 | 0 | 63 (1.61) | 70.47 | 2.03 | 63 (1.61) | 63.03 | 0.18 |

Table A.64: $h7$: TransRRGA – Perfect Score is 62

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 64 (1.59) | 64.03 | 0.18 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64.03 | 0.18 |
| | | 1 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 64 (1.59) | 64.03 | 0.18 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | 50 | 0 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 64 (1.59) | 64 | 0 | 64 (1.59) | 64.03 | 0.18 | 64 (1.59) | 64.03 | 0.18 |
| | | 1 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| 51 | 20 | 0 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | 1 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | 50 | 0 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | 1 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |

Table A.65: $h8$: BasicRRGA – Perfect Score is 63

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 66 (4.76) | 66 | 0 | 65 (3.17) | 65.03 | 0.18 | 64 (1.59) | 64.93 | 0.25 |
| | | 1 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 66 (4.76) | 66 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | 50 | 0 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 66 (4.76) | 66 | 0 | 65 (3.17) | 65 | 0 | 65 (3.17) | 65 | 0 |
| | | 1 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 66 (4.76) | 66 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| 51 | 20 | 0 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 66 (4.76) | 66 | 0 | 65 (3.17) | 65.9 | 0.31 | 64 (1.59) | 64.97 | 0.18 |
| | | 1 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 66 (4.76) | 66 | 0 | 64 (1.59) | 65.77 | 0.63 | 64 (1.59) | 64 | 0 |
| | 50 | 0 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 66 (4.76) | 66 | 0 | 65 (3.17) | 65.8 | 0.41 | 64 (1.59) | 64.93 | 0.25 |
| | | 1 | rnd | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 | 64 (1.59) | 64 | 0 |
| | | | 2op | 66 (4.76) | 66 | 0 | 64 (1.59) | 65.6 | 0.77 | 64 (1.59) | 64 | 0 |

Table A.66: $h8$: TransRRGA – Perfect Score is 63

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.77 | 0.43 | 68 (1.49) | 68.57 | 0.5 | 68 (1.49) | 68.57 | 0.5 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.77 | 0.43 | 68 (1.49) | 68.57 | 0.5 | 68 (1.49) | 68.37 | 0.49 |
| | 50 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.33 | 0.48 | 68 (1.49) | 68.37 | 0.49 | 68 (1.49) | 68.47 | 0.51 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.33 | 0.48 | 68 (1.49) | 68.2 | 0.41 | 68 (1.49) | 68.47 | 0.51 |
| 51 | 20 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.3 | 0.47 | 68 (1.49) | 68.17 | 0.38 | 68 (1.49) | 68.27 | 0.45 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.3 | 0.47 | 68 (1.49) | 68.4 | 0.5 | 68 (1.49) | 68.27 | 0.45 |
| | 50 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.13 | 0.35 | 68 (1.49) | 68.17 | 0.38 | 68 (1.49) | 68.03 | 0.18 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.13 | 0.35 | 68 (1.49) | 68.17 | 0.38 | 68 (1.49) | 68.03 | 0.18 |

Table A.67: $h9$: BasicRRGA – Perfect Score is 67

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 80 (19.4) | 80.97 | 0.18 | 80 (19.4) | 80 | 0 | 79 (17.91) | 79.9 | 0.31 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 80 (19.4) | 80.97 | 0.18 | 68 (1.49) | 69.57 | 1.1 | 68 (1.49) | 69.87 | 0.97 |
| | 50 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 81 (20.9) | 81 | 0 | 80 (19.4) | 80 | 0 | 79 (17.91) | 79.87 | 0.35 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 81 (20.9) | 81 | 0 | 68 (1.49) | 69.63 | 0.89 | 68 (1.49) | 69.73 | 1.01 |
| 51 | 20 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 80 (19.4) | 80.9 | 0.31 | 80 (19.4) | 80 | 0 | 79 (17.91) | 79.87 | 0.35 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 80 (19.4) | 80.9 | 0.31 | 68 (1.49) | 70.27 | 2.3 | 68 (1.49) | 69.73 | 0.94 |
| | 50 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 80 (19.4) | 80.9 | 0.31 | 80 (19.4) | 80 | 0 | 79 (17.91) | 79.73 | 0.45 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 80 (19.4) | 80.9 | 0.31 | 68 (1.49) | 69.8 | 1 | 68 (1.49) | 69.83 | 1.05 |

Table A.68: $h9$: TransRRGA – Perfect Score is 67

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | 50 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| 51 | 20 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | 50 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |

Table A.69: $h10$: BasicRRGA – Perfect Score is 64

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 66 (3.12) | 66 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 66 (3.12) | 66 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | 50 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 66 (3.12) | 66 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 66 (3.12) | 66 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| 51 | 20 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 66 (3.12) | 66 | 0 | 65 (1.56) | 65.8 | 0.41 | 65 (1.56) | 65 | 0 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 66 (3.12) | 66 | 0 | 65 (1.56) | 65.8 | 0.41 | 65 (1.56) | 65 | 0 |
| | 50 | 0 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 66 (3.12) | 66 | 0 | 65 (1.56) | 65.7 | 0.47 | 65 (1.56) | 65 | 0 |
| | | 1 | rnd | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 | 65 (1.56) | 65 | 0 |
| | | | 2op | 66 (3.12) | 66 | 0 | 65 (1.56) | 65.7 | 0.47 | 65 (1.56) | 65 | 0 |

Table A.70: $h10$: TransRRGA – Perfect Score is 64

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.1 | 0.31 | 68 (1.49) | 68.03 | 0.18 | 68 (1.49) | 68 | 0 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68.1 | 0.31 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | 50 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| 51 | 20 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | 50 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |

Table A.71: $h11$: BasicRRGA – Perfect Score is 67

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 69 (2.99) | 69.13 | 0.35 | 69 (2.99) | 69 | 0 | 69 (2.99) | 69 | 0 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 69 (2.99) | 69.13 | 0.35 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | 50 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 69 (2.99) | 69.17 | 0.38 | 69 (2.99) | 69 | 0 | 68 (1.49) | 68.97 | 0.18 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 69 (2.99) | 69.17 | 0.38 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| 51 | 20 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 69 (2.99) | 69 | 0 | 69 (2.99) | 69 | 0 | 68 (1.49) | 68.83 | 0.38 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 69 (2.99) | 69 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | 50 | 0 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 69 (2.99) | 69 | 0 | 69 (2.99) | 69 | 0 | 68 (1.49) | 68.77 | 0.43 |
| | | 1 | rnd | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |
| | | | 2op | 69 (2.99) | 69 | 0 | 68 (1.49) | 68 | 0 | 68 (1.49) | 68 | 0 |

Table A.72: $h11$: TransRRGA – Perfect Score is 67

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 69 (1.47) | 69.03 | 0.18 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69.03 | 0.18 |
| | | 1 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 69 (1.47) | 69.03 | 0.18 | 69 (1.47) | 69.03 | 0.18 | 69 (1.47) | 69 | 0 |
| | 50 | 0 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | 1 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| 51 | 20 | 0 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69.03 | 0.18 |
| | | 1 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | 50 | 0 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | 1 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |

Table A.73: $h12$: BasicRRGA – Perfect Score is 68

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 73 (7.35) | 73 | 0 | 70 (2.94) | 71 | 0.53 | 70 (2.94) | 70 | 0 |
| | | 1 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 73 (7.35) | 73 | 0 | 69 (1.47) | 69.03 | 0.18 | 69 (1.47) | 69.07 | 0.25 |
| | 50 | 0 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 72 (5.88) | 72.97 | 0.18 | 70 (2.94) | 70.83 | 0.38 | 70 (2.94) | 70 | 0 |
| | | 1 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 72 (5.88) | 72.97 | 0.18 | 69 (1.47) | 69.03 | 0.18 | 69 (1.47) | 69.1 | 0.31 |
| 51 | 20 | 0 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 72 (5.88) | 72.9 | 0.31 | 71 (4.41) | 71.93 | 0.25 | 70 (2.94) | 70 | 0 |
| | | 1 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 72 (5.88) | 72.9 | 0.31 | 69 (1.47) | 69.07 | 0.25 | 69 (1.47) | 69.07 | 0.25 |
| | 50 | 0 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 72 (5.88) | 72.8 | 0.41 | 71 (4.41) | 71.93 | 0.25 | 70 (2.94) | 70 | 0 |
| | | 1 | rnd | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 | 69 (1.47) | 69 | 0 |
| | | | 2op | 72 (5.88) | 72.8 | 0.41 | 69 (1.47) | 69.07 | 0.25 | 69 (1.47) | 69.2 | 0.41 |

Table A.74: $h12$: TransRRGA – Perfect Score is 68

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.97 | 0.32 | 72 (1.41) | 72.8 | 0.41 | 72 (1.41) | 72.8 | 0.41 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.97 | 0.32 | 72 (1.41) | 72.77 | 0.43 | 72 (1.41) | 72.4 | 0.5 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.97 | 0.18 | 72 (1.41) | 72.83 | 0.38 | 72 (1.41) | 72.9 | 0.31 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.97 | 0.18 | 72 (1.41) | 72.83 | 0.38 | 72 (1.41) | 72.83 | 0.38 |
| 51 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.7 | 0.47 | 72 (1.41) | 72.7 | 0.47 | 72 (1.41) | 72.73 | 0.45 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.7 | 0.47 | 72 (1.41) | 72.7 | 0.47 | 72 (1.41) | 72.73 | 0.45 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.63 | 0.49 | 72 (1.41) | 72.47 | 0.51 | 72 (1.41) | 72.53 | 0.51 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.63 | 0.49 | 72 (1.41) | 72.47 | 0.51 | 72 (1.41) | 72.53 | 0.51 |

Table A.75: $h13$: BasicRRGA – Perfect Score is 71

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 82 (15.49) | 82 | 0 | 81 (14.08) | 81.43 | 0.5 | 81 (14.08) | 81 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 82 (15.49) | 82 | 0 | 72 (1.41) | 78.83 | 4.52 | 72 (1.41) | 72.67 | 0.92 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 82 (15.49) | 82 | 0 | 81 (14.08) | 81.23 | 0.43 | 81 (14.08) | 81 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 82 (15.49) | 82 | 0 | 72 (1.41) | 74.23 | 3.64 | 72 (1.41) | 72.53 | 0.73 |
| 51 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 82 (15.49) | 82 | 0 | 82 (15.49) | 82 | 0 | 81 (14.08) | 81 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 82 (15.49) | 82 | 0 | 82 (15.49) | 82 | 0 | 72 (1.41) | 72.83 | 0.99 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 82 (15.49) | 82 | 0 | 81 (14.08) | 81.93 | 0.25 | 81 (14.08) | 81 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 82 (15.49) | 82 | 0 | 72 (1.41) | 81.27 | 2.53 | 72 (1.41) | 72.67 | 0.88 |

Table A.76: $h13$: TransRRGA – Perfect Score is 71

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.93 | 0.25 | 73 (1.39) | 73.9 | 0.31 | 74 (2.78) | 74 | 0 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.93 | 0.25 | 73 (1.39) | 73.6 | 0.5 | 73 (1.39) | 73.33 | 0.48 |
| | 50 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.93 | 0.25 | 73 (1.39) | 73.83 | 0.38 | 73 (1.39) | 73.9 | 0.31 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.93 | 0.25 | 73 (1.39) | 73.9 | 0.31 | 73 (1.39) | 73.57 | 0.5 |
| 51 | 20 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.67 | 0.48 | 73 (1.39) | 73.77 | 0.43 | 73 (1.39) | 73.83 | 0.38 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.67 | 0.48 | 73 (1.39) | 73.63 | 0.49 | 73 (1.39) | 73.47 | 0.51 |
| | 50 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.73 | 0.45 | 73 (1.39) | 73.67 | 0.48 | 73 (1.39) | 73.6 | 0.5 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.73 | 0.45 | 73 (1.39) | 73.73 | 0.45 | 73 (1.39) | 73.63 | 0.49 |

Table A.77: $h14$: BasicRRGA – Perfect Score is 72

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 82 (13.89) | 82.97 | 0.18 | 82 (13.89) | 82 | 0 | 82 (13.89) | 82 | 0 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 82 (13.89) | 82.97 | 0.18 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | 50 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 83 (15.28) | 83 | 0 | 82 (13.89) | 82 | 0 | 82 (13.89) | 82 | 0 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 83 (15.28) | 83 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| 51 | 20 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 82 (13.89) | 82.93 | 0.25 | 82 (13.89) | 82.23 | 0.43 | 82 (13.89) | 82 | 0 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 82 (13.89) | 82.93 | 0.25 | 73 (1.39) | 75.6 | 4.39 | 73 (1.39) | 73 | 0 |
| | 50 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 82 (13.89) | 82.97 | 0.18 | 82 (13.89) | 82.13 | 0.35 | 81 (12.5) | 81.93 | 0.25 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 82 (13.89) | 82.97 | 0.18 | 73 (1.39) | 74.93 | 3.94 | 73 (1.39) | 73 | 0 |

Table A.78: $h14$: TransRRGA – Perfect Score is 72

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 77 (1.32) | 77 | 0 | 76 (0) | 76.93 | 0.25 | 77 (1.32) | 77 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 77 (1.32) | 77 | 0 | 76 (0) | 76.83 | 0.38 | 76 (0) | 76.77 | 0.43 |
| | 50 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.97 | 0.18 | 76 (0) | 76.97 | 0.18 | 77 (1.32) | 77 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.97 | 0.18 | 76 (0) | 76.97 | 0.18 | 76 (0) | 76.93 | 0.25 |
| 51 | 20 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.97 | 0.18 | 76 (0) | 76.9 | 0.31 | 76 (0) | 76.93 | 0.25 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.97 | 0.18 | 76 (0) | 76.9 | 0.31 | 76 (0) | 76.73 | 0.45 |
| | 50 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.93 | 0.25 | 76 (0) | 76.9 | 0.31 | 77 (1.32) | 77 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.93 | 0.25 | 76 (0) | 76.9 | 0.31 | 77 (1.32) | 77 | 0 |

Table A.79: $h15$: BasicRRGA – Perfect Score is 76

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 85 (11.84) | 85.97 | 0.18 | 85 (11.84) | 85 | 0 | 85 (11.84) | 85 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 85 (11.84) | 85.97 | 0.18 | 76 (0) | 76.23 | 0.63 | 76 (0) | 76.23 | 0.63 |
| | 50 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 85 (11.84) | 85.97 | 0.18 | 85 (11.84) | 85 | 0 | 85 (11.84) | 85 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 85 (11.84) | 85.97 | 0.18 | 76 (0) | 76.23 | 0.63 | 76 (0) | 76.23 | 0.63 |
| 51 | 20 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 85 (11.84) | 85.57 | 0.5 | 85 (11.84) | 85 | 0 | 85 (11.84) | 85 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 85 (11.84) | 85.57 | 0.5 | 76 (0) | 76.53 | 0.9 | 76 (0) | 76.23 | 0.57 |
| | 50 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 85 (11.84) | 85.47 | 0.51 | 85 (11.84) | 85 | 0 | 85 (11.84) | 85 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 85 (11.84) | 85.47 | 0.51 | 76 (0) | 76.4 | 0.81 | 76 (0) | 76.2 | 0.61 |

Table A.80: $h15$: TransRRGA – Perfect Score is 76

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 73 (2.82) | 73.03 | 0.18 | 73 (2.82) | 73.03 | 0.18 | 72 (1.41) | 72.93 | 0.25 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 73 (2.82) | 73.03 | 0.18 | 72 (1.41) | 72.83 | 0.38 | 72 (1.41) | 72.67 | 0.48 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.97 | 0.18 | 73 (2.82) | 73 | 0 | 72 (1.41) | 72.97 | 0.18 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.97 | 0.18 | 73 (2.82) | 73 | 0 | 72 (1.41) | 72.9 | 0.31 |
| 51 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.97 | 0.18 | 72 (1.41) | 72.87 | 0.35 | 73 (2.82) | 73 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.97 | 0.18 | 72 (1.41) | 72.87 | 0.35 | 72 (1.41) | 72.87 | 0.35 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.87 | 0.35 | 72 (1.41) | 72.83 | 0.38 | 72 (1.41) | 72.87 | 0.35 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.87 | 0.35 | 72 (1.41) | 72.83 | 0.38 | 72 (1.41) | 72.83 | 0.38 |

Table A.81: $h16$: BasicRRGA – Perfect Score is 71

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 83 (16.9) | 83.4 | 0.5 | 82 (15.49) | 82.87 | 0.35 | 82 (15.49) | 82 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 83 (16.9) | 83.4 | 0.5 | 72 (1.41) | 73.07 | 1.01 | 72 (1.41) | 73 | 0.83 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 83 (16.9) | 83.6 | 0.5 | 82 (15.49) | 82.7 | 0.47 | 82 (15.49) | 82 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 83 (16.9) | 83.6 | 0.5 | 72 (1.41) | 73.33 | 1.03 | 72 (1.41) | 73.07 | 0.87 |
| 51 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 83 (16.9) | 83.13 | 0.35 | 83 (16.9) | 83 | 0 | 81 (14.08) | 81.97 | 0.18 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 83 (16.9) | 83.13 | 0.35 | 72 (1.41) | 73.03 | 0.93 | 72 (1.41) | 73.3 | 0.92 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 83 (16.9) | 83.03 | 0.18 | 83 (16.9) | 83 | 0 | 81 (14.08) | 81.97 | 0.18 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 83 (16.9) | 83.03 | 0.18 | 72 (1.41) | 73.13 | 1.01 | 72 (1.41) | 73.17 | 0.79 |

Table A.82: $h16$: TransRRGA – Perfect Score is 71

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 76 (2.7) | 76.13 | 0.35 | 76 (2.7) | 76 | 0 | 76 (2.7) | 76 | 0 |
| | | 1 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 76 (2.7) | 76.13 | 0.35 | 75 (1.35) | 75.9 | 0.31 | 75 (1.35) | 75.73 | 0.45 |
| | 50 | 0 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 75 (1.35) | 75.97 | 0.18 | 76 (2.7) | 76 | 0 | 75 (1.35) | 75.97 | 0.18 |
| | | 1 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 75 (1.35) | 75.97 | 0.18 | 76 (2.7) | 76 | 0 | 75 (1.35) | 75.9 | 0.31 |
| 51 | 20 | 0 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 76 (2.7) | 76 | 0 | 76 (2.7) | 76 | 0 | 76 (2.7) | 76 | 0 |
| | | 1 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 76 (2.7) | 76 | 0 | 75 (1.35) | 75.97 | 0.18 | 75 (1.35) | 75.9 | 0.31 |
| | 50 | 0 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 76 (2.7) | 76 | 0 | 76 (2.7) | 76 | 0 | 75 (1.35) | 75.97 | 0.18 |
| | | 1 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 76 (2.7) | 76 | 0 | 76 (2.7) | 76 | 0 | 75 (1.35) | 75.97 | 0.18 |

Table A.83: $h17$: BasicRRGA – Perfect Score is 74

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 85 (14.86) | 85 | 0 | 84 (13.51) | 84.97 | 0.18 | 84 (13.51) | 84.63 | 0.49 |
| | | 1 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 85 (14.86) | 85 | 0 | 75 (1.35) | 84.67 | 1.83 | 75 (1.35) | 82 | 4.66 |
| | 50 | 0 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 85 (14.86) | 85 | 0 | 84 (13.51) | 84.87 | 0.35 | 84 (13.51) | 84.3 | 0.47 |
| | | 1 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 85 (14.86) | 85 | 0 | 75 (1.35) | 84.33 | 2.54 | 75 (1.35) | 77 | 4.07 |
| 51 | 20 | 0 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 85 (14.86) | 85 | 0 | 85 (14.86) | 85 | 0 | 84 (13.51) | 84.03 | 0.18 |
| | | 1 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 85 (14.86) | 85 | 0 | 85 (14.86) | 85 | 0 | 75 (1.35) | 75.33 | 1.83 |
| | 50 | 0 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 85 (14.86) | 85 | 0 | 85 (14.86) | 85 | 0 | 84 (13.51) | 84 | 0 |
| | | 1 | rnd | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 | 75 (1.35) | 75 | 0 |
| | | | 2op | 85 (14.86) | 85 | 0 | 85 (14.86) | 85 | 0 | 75 (1.35) | 75 | 0 |

Table A.84: $h17$: TransRRGA – Perfect Score is 74

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 77.07 | 0.37 | 76 (0) | 76.93 | 0.25 | 76 (0) | 76.97 | 0.18 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 77.07 | 0.37 | 76 (0) | 76.93 | 0.25 | 76 (0) | 76.73 | 0.45 |
| | 50 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.93 | 0.25 | 76 (0) | 76.8 | 0.41 | 76 (0) | 76.97 | 0.18 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.93 | 0.25 | 76 (0) | 76.8 | 0.41 | 76 (0) | 76.83 | 0.38 |
| 51 | 20 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.87 | 0.35 | 76 (0) | 76.93 | 0.25 | 76 (0) | 76.83 | 0.38 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.87 | 0.35 | 76 (0) | 76.93 | 0.25 | 76 (0) | 76.87 | 0.35 |
| | 50 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.83 | 0.38 | 76 (0) | 76.8 | 0.41 | 76 (0) | 76.8 | 0.41 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 76 (0) | 76.83 | 0.38 | 76 (0) | 76.8 | 0.41 | 76 (0) | 76.83 | 0.38 |

Table A.85: $h18$: BasicRRGA – Perfect Score is 76

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 |
| | 50 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 |
| 51 | 20 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 |
| | 50 | 0 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 |
| | | 1 | rnd | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 | 76 (0) | 76 | 0 |
| | | | 2op | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 | 84 (10.53) | 84 | 0 |

Table A.86: $h18$: TransRRGA – Perfect Score is 76

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | 1 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | 50 | 0 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | 1 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| 51 | 20 | 0 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | 1 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | 50 | 0 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | 1 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |

Table A.87: $h19$: BasicRRGA – Perfect Score is 77

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77.73 | 0.45 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | 1 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77.73 | 0.45 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | 50 | 0 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77.7 | 0.47 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | 1 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77.7 | 0.47 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| 51 | 20 | 0 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77.27 | 0.45 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | 1 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77.27 | 0.45 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | 50 | 0 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77.1 | 0.31 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | 1 | rnd | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |
| | | | 2op | 77 (0) | 77.1 | 0.31 | 77 (0) | 77 | 0 | 77 (0) | 77 | 0 |

Table A.88: $h19$: TransRRGA – Perfect Score is 77

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 74 (1.37) | 74.93 | 0.25 | 74 (1.37) | 74.77 | 0.43 | 74 (1.37) | 74.83 | 0.38 |
| | | 1 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 74 (1.37) | 74.93 | 0.25 | 74 (1.37) | 74.77 | 0.43 | 74 (1.37) | 74.77 | 0.43 |
| | 50 | 0 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 74 (1.37) | 74.73 | 0.45 | 74 (1.37) | 74.83 | 0.38 | 74 (1.37) | 74.77 | 0.43 |
| | | 1 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 74 (1.37) | 74.73 | 0.45 | 74 (1.37) | 74.83 | 0.38 | 74 (1.37) | 74.9 | 0.31 |
| 51 | 20 | 0 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 74 (1.37) | 74.8 | 0.41 | 74 (1.37) | 74.67 | 0.48 | 74 (1.37) | 74.63 | 0.49 |
| | | 1 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 74 (1.37) | 74.8 | 0.41 | 74 (1.37) | 74.67 | 0.48 | 74 (1.37) | 74.53 | 0.51 |
| | 50 | 0 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 74 (1.37) | 74.6 | 0.5 | 74 (1.37) | 74.57 | 0.5 | 74 (1.37) | 74.57 | 0.5 |
| | | 1 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 74 (1.37) | 74.6 | 0.5 | 74 (1.37) | 74.53 | 0.51 | 74 (1.37) | 74.57 | 0.5 |

Table A.89: $h20$: BasicRRGA – Perfect Score is 73

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 80 (9.59) | 80.97 | 0.18 | 78 (6.85) | 78.9 | 0.48 | 76 (4.11) | 77.63 | 0.76 |
| | | 1 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 80 (9.59) | 80.97 | 0.18 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | 50 | 0 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 80 (9.59) | 80.93 | 0.25 | 78 (6.85) | 78.8 | 0.48 | 76 (4.11) | 77.17 | 0.53 |
| | | 1 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 80 (9.59) | 80.93 | 0.25 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| 51 | 20 | 0 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 80 (9.59) | 80.53 | 0.51 | 79 (8.22) | 79.87 | 0.35 | 76 (4.11) | 76.93 | 0.52 |
| | | 1 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 80 (9.59) | 80.53 | 0.51 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | 50 | 0 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 80 (9.59) | 80.6 | 0.5 | 79 (8.22) | 79.9 | 0.31 | 76 (4.11) | 76.8 | 0.41 |
| | | 1 | rnd | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |
| | | | 2op | 80 (9.59) | 80.6 | 0.5 | 74 (1.37) | 74 | 0 | 74 (1.37) | 74 | 0 |

Table A.90: $h20$: TransRRGA – Perfect Score is 73

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.57 | 0.5 | 73 (1.39) | 73.37 | 0.49 | 73 (1.39) | 73.2 | 0.41 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.57 | 0.5 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | 50 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.4 | 0.5 | 73 (1.39) | 73.2 | 0.41 | 73 (1.39) | 73.23 | 0.43 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.4 | 0.5 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73.03 | 0.18 |
| 51 | 20 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.13 | 0.35 | 73 (1.39) | 73.23 | 0.43 | 73 (1.39) | 73.03 | 0.18 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.13 | 0.35 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73.03 | 0.18 |
| | 50 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.2 | 0.41 | 73 (1.39) | 73.03 | 0.18 | 73 (1.39) | 73 | 0 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 73 (1.39) | 73.2 | 0.41 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |

Table A.91: $h21$: BasicRRGA – Perfect Score is 72

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 74 (2.78) | 74.97 | 0.18 | 74 (2.78) | 74 | 0 | 73 (1.39) | 73.93 | 0.25 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 74 (2.78) | 74.97 | 0.18 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | 50 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 74 (2.78) | 74.97 | 0.18 | 73 (1.39) | 73.97 | 0.18 | 73 (1.39) | 73.97 | 0.18 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 74 (2.78) | 74.97 | 0.18 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| 51 | 20 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 74 (2.78) | 74.63 | 0.49 | 74 (2.78) | 74 | 0 | 73 (1.39) | 73.57 | 0.5 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 74 (2.78) | 74.63 | 0.49 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | 50 | 0 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 74 (2.78) | 74.73 | 0.45 | 74 (2.78) | 74 | 0 | 73 (1.39) | 73.27 | 0.45 |
| | | 1 | rnd | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |
| | | | 2op | 74 (2.78) | 74.73 | 0.45 | 73 (1.39) | 73 | 0 | 73 (1.39) | 73 | 0 |

Table A.92: $h21$: TransRRGA – Perfect Score is 72

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.8 | 0.41 | 72 (1.41) | 72.5 | 0.51 | 72 (1.41) | 72.5 | 0.51 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.8 | 0.41 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.13 | 0.35 | 72 (1.41) | 72.17 | 0.38 | 72 (1.41) | 72.07 | 0.25 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.13 | 0.35 | 72 (1.41) | 72.07 | 0.25 | 72 (1.41) | 72.07 | 0.25 |
| 51 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.13 | 0.35 | 72 (1.41) | 72.07 | 0.25 | 72 (1.41) | 72.17 | 0.38 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.13 | 0.35 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.07 | 0.25 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 72 (1.41) | 72.07 | 0.25 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |

Table A.93: $h22$: BasicRRGA – Perfect Score is 71

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 |
| 51 | 20 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 | 73 (2.82) | 73.97 | 0.18 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 | 72 (1.41) | 73.93 | 0.37 |
| | 50 | 0 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 | 73 (2.82) | 73.73 | 0.45 |
| | | 1 | rnd | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 | 72 (1.41) | 72 | 0 |
| | | | 2op | 74 (4.23) | 74 | 0 | 74 (4.23) | 74 | 0 | 72 (1.41) | 73.47 | 0.9 |

Table A.94: $h22$: TransRRGA – Perfect Score is 71

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 |
| | | 1 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 |
| | 50 | 0 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 |
| | | 1 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 | 76 (1.33) | 76.97 | 0.18 |
| 51 | 20 | 0 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 |
| | | 1 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 | 76 (1.33) | 76.97 | 0.18 |
| | 50 | 0 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 |
| | | 1 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 | 77 (2.67) | 77 | 0 |

Table A.95: $h23$: BasicRRGA – Perfect Score is 75

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 84 (12) | 84.03 | 0.18 | 82 (9.33) | 82.87 | 0.35 | 80 (6.67) | 80.87 | 0.73 |
| | | 1 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 84 (12) | 84.03 | 0.18 | 76 (1.33) | 76.03 | 0.18 | 76 (1.33) | 76.13 | 0.35 |
| | 50 | 0 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 84 (12) | 84.03 | 0.18 | 81 (8) | 82.5 | 0.57 | 80 (6.67) | 80.7 | 0.75 |
| | | 1 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 84 (12) | 84.03 | 0.18 | 76 (1.33) | 76.1 | 0.31 | 76 (1.33) | 76.3 | 0.47 |
| 51 | 20 | 0 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 83 (10.67) | 83.93 | 0.25 | 83 (10.67) | 83.13 | 0.35 | 79 (5.33) | 79.97 | 0.67 |
| | | 1 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 83 (10.67) | 83.93 | 0.25 | 76 (1.33) | 76.03 | 0.18 | 76 (1.33) | 76.03 | 0.18 |
| | 50 | 0 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 83 (10.67) | 83.97 | 0.18 | 83 (10.67) | 83.17 | 0.38 | 78 (4) | 79.7 | 0.79 |
| | | 1 | rnd | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 | 76 (1.33) | 76 | 0 |
| | | | 2op | 83 (10.67) | 83.97 | 0.18 | 76 (1.33) | 76.17 | 0.38 | 76 (1.33) | 76.13 | 0.35 |

Table A.96: $h23$: TransRRGA – Perfect Score is 75

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 85 (1.19) | 85.47 | 0.51 | 85 (1.19) | 85.2 | 0.41 | 85 (1.19) | 85.23 | 0.43 |
| | | 1 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 85 (1.19) | 85.47 | 0.51 | 84 (0) | 85.1 | 0.4 | 84 (0) | 84.97 | 0.18 |
| | 50 | 0 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 85 (1.19) | 85.03 | 0.18 | 85 (1.19) | 85 | 0 | 85 (1.19) | 85 | 0 |
| | | 1 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 85 (1.19) | 85.03 | 0.18 | 85 (1.19) | 85 | 0 | 85 (1.19) | 85.03 | 0.18 |
| 51 | 20 | 0 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 85 (1.19) | 85.03 | 0.18 | 85 (1.19) | 85 | 0 | 85 (1.19) | 85 | 0 |
| | | 1 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 85 (1.19) | 85.03 | 0.18 | 85 (1.19) | 85 | 0 | 85 (1.19) | 85 | 0 |
| | 50 | 0 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 85 (1.19) | 85 | 0 | 85 (1.19) | 85 | 0 | 85 (1.19) | 85 | 0 |
| | | 1 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 85 (1.19) | 85 | 0 | 85 (1.19) | 85 | 0 | 85 (1.19) | 85 | 0 |

Table A.97: $h24$: BasicRRGA – Perfect Score is 84

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 95 (13.1) | 95 | 0 | 94 (11.9) | 94.9 | 0.31 | 93 (10.71) | 93.97 | 0.18 |
| | | 1 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 95 (13.1) | 95 | 0 | 84 (0) | 93.97 | 3.16 | 84 (0) | 84.47 | 0.51 |
| | 50 | 0 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 95 (13.1) | 95 | 0 | 94 (11.9) | 94.63 | 0.49 | 93 (10.71) | 93.77 | 0.43 |
| | | 1 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 95 (13.1) | 95 | 0 | 84 (0) | 92.5 | 4.61 | 84 (0) | 84.37 | 0.49 |
| 51 | 20 | 0 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 95 (13.1) | 95 | 0 | 95 (13.1) | 95 | 0 | 93 (10.71) | 93.87 | 0.35 |
| | | 1 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 95 (13.1) | 95 | 0 | 95 (13.1) | 95 | 0 | 84 (0) | 84.57 | 0.77 |
| | 50 | 0 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 95 (13.1) | 95 | 0 | 95 (13.1) | 95 | 0 | 93 (10.71) | 93.53 | 0.51 |
| | | 1 | rnd | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 | 84 (0) | 84 | 0 |
| | | | 2op | 95 (13.1) | 95 | 0 | 95 (13.1) | 95 | 0 | 84 (0) | 84.37 | 0.56 |

Table A.98: $h24$: TransRRGA – Perfect Score is 84

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82.03 | 0.18 | 82 (2.5) | 82.03 | 0.18 | 82 (2.5) | 82 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82.03 | 0.18 | 82 (2.5) | 82.03 | 0.18 | 82 (2.5) | 82 | 0 |
| | 50 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| 51 | 20 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| | 50 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |

Table A.99: $h25$: BasicRRGA – Perfect Score is 80

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 92 (15) | 92.7 | 0.47 | 92 (15) | 92 | 0 | 91 (13.75) | 91.97 | 0.18 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 92 (15) | 92.7 | 0.47 | 81 (1.25) | 81.6 | 0.81 | 81 (1.25) | 81.67 | 0.84 |
| | 50 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 92 (15) | 92.7 | 0.47 | 92 (15) | 92 | 0 | 91 (13.75) | 91.83 | 0.38 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 92 (15) | 92.7 | 0.47 | 81 (1.25) | 81.67 | 0.71 | 81 (1.25) | 81.63 | 0.72 |
| 51 | 20 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 92 (15) | 92.27 | 0.45 | 92 (15) | 92 | 0 | 91 (13.75) | 91.3 | 0.47 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 92 (15) | 92.27 | 0.45 | 81 (1.25) | 81.77 | 1.01 | 81 (1.25) | 81.73 | 0.83 |
| | 50 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 92 (15) | 92.27 | 0.45 | 92 (15) | 92 | 0 | 91 (13.75) | 91.2 | 0.41 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 92 (15) | 92.27 | 0.45 | 81 (1.25) | 81.73 | 0.87 | 81 (1.25) | 81.5 | 0.68 |

Table A.100: $h25$: TransRRGA – Perfect Score is 80

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82.03 | 0.18 | 82 (2.5) | 82.03 | 0.18 | 82 (2.5) | 82 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82.03 | 0.18 | 82 (2.5) | 82 | 0 | 81 (1.25) | 81.93 | 0.25 |
| | 50 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| 51 | 20 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| | 50 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 | 82 (2.5) | 82 | 0 |

Table A.101: $h26$: BasicRRGA – Perfect Score is 80

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 94 (17.5) | 94.83 | 0.38 | 93 (16.25) | 93.8 | 0.41 | 93 (16.25) | 93.07 | 0.25 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 94 (17.5) | 94.83 | 0.38 | 81 (1.25) | 83.03 | 1.1 | 81 (1.25) | 82.43 | 1.07 |
| | 50 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 94 (17.5) | 94.6 | 0.5 | 93 (16.25) | 93.6 | 0.5 | 92 (15) | 92.97 | 0.18 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 94 (17.5) | 94.6 | 0.5 | 81 (1.25) | 82.43 | 1.14 | 81 (1.25) | 82.47 | 1.25 |
| 51 | 20 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 94 (17.5) | 94.07 | 0.25 | 94 (17.5) | 94 | 0 | 93 (16.25) | 93 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 94 (17.5) | 94.07 | 0.25 | 81 (1.25) | 83.23 | 1.04 | 81 (1.25) | 82.9 | 1.27 |
| | 50 | 0 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 94 (17.5) | 94.13 | 0.35 | 94 (17.5) | 94 | 0 | 93 (16.25) | 93 | 0 |
| | | 1 | rnd | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 | 81 (1.25) | 81 | 0 |
| | | | 2op | 94 (17.5) | 94.13 | 0.35 | 81 (1.25) | 82.9 | 1.24 | 81 (1.25) | 82.5 | 1.22 |

Table A.102: $h26$: TransRRGA – Perfect Score is 80

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 84 (1.2) | 84.83 | 0.38 | 84 (1.2) | 84.93 | 0.25 | 84 (1.2) | 85 | 0.26 |
| | | 1 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 84 (1.2) | 84.83 | 0.38 | 84 (1.2) | 84.9 | 0.31 | 84 (1.2) | 84.73 | 0.52 |
| | 50 | 0 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 85 (2.41) | 85 | 0 | 84 (1.2) | 84.97 | 0.18 | 85 (2.41) | 85 | 0 |
| | | 1 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 85 (2.41) | 85 | 0 | 84 (1.2) | 84.97 | 0.18 | 84 (1.2) | 84.9 | 0.31 |
| 51 | 20 | 0 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 84 (1.2) | 84.93 | 0.25 | 85 (2.41) | 85 | 0 | 84 (1.2) | 84.97 | 0.18 |
| | | 1 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 84 (1.2) | 84.93 | 0.25 | 85 (2.41) | 85 | 0 | 84 (1.2) | 84.97 | 0.18 |
| | 50 | 0 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 84 (1.2) | 84.97 | 0.18 | 84 (1.2) | 84.97 | 0.18 | 84 (1.2) | 84.9 | 0.31 |
| | | 1 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 84 (1.2) | 84.97 | 0.18 | 84 (1.2) | 84.97 | 0.18 | 84 (1.2) | 84.9 | 0.31 |

Table A.103: $h27$: BasicRRGA – Perfect Score is 83

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 93 (12.05) | 93 | 0 | 92 (10.84) | 92.3 | 0.47 | 92 (10.84) | 92 | 0 |
| | | 1 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 93 (12.05) | 93 | 0 | 84 (1.2) | 86.87 | 3.38 | 84 (1.2) | 85.07 | 0.37 |
| | 50 | 0 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 93 (12.05) | 93 | 0 | 92 (10.84) | 92.07 | 0.25 | 91 (9.64) | 91.93 | 0.25 |
| | | 1 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 93 (12.05) | 93 | 0 | 84 (1.2) | 85.5 | 1.59 | 84 (1.2) | 85.2 | 0.85 |
| 51 | 20 | 0 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 93 (12.05) | 93 | 0 | 92 (10.84) | 92.97 | 0.18 | 91 (9.64) | 91.97 | 0.18 |
| | | 1 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 93 (12.05) | 93 | 0 | 92 (10.84) | 92.97 | 0.18 | 84 (1.2) | 85.2 | 0.76 |
| | 50 | 0 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 93 (12.05) | 93 | 0 | 92 (10.84) | 92.97 | 0.18 | 91 (9.64) | 91.93 | 0.25 |
| | | 1 | rnd | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 | 84 (1.2) | 84 | 0 |
| | | | 2op | 93 (12.05) | 93 | 0 | 85 (2.41) | 92.73 | 1.46 | 84 (1.2) | 85.13 | 0.57 |

Table A.104: $h27$: TransRRGA – Perfect Score is 83

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 82 (1.23) | 82.93 | 0.25 | 82 (1.23) | 82.77 | 0.43 | 82 (1.23) | 82.97 | 0.18 |
| | | 1 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 82 (1.23) | 82.93 | 0.25 | 82 (1.23) | 82.83 | 0.38 | 82 (1.23) | 82.7 | 0.47 |
| | 50 | 0 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 82 (1.23) | 82.9 | 0.31 | 82 (1.23) | 82.87 | 0.35 | 82 (1.23) | 82.97 | 0.18 |
| | | 1 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 82 (1.23) | 82.9 | 0.31 | 82 (1.23) | 82.87 | 0.35 | 82 (1.23) | 82.87 | 0.35 |
| 51 | 20 | 0 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 82 (1.23) | 82.8 | 0.41 | 82 (1.23) | 82.9 | 0.31 | 83 (2.47) | 83 | 0 |
| | | 1 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 82 (1.23) | 82.8 | 0.41 | 82 (1.23) | 82.9 | 0.31 | 83 (2.47) | 83 | 0 |
| | 50 | 0 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 82 (1.23) | 82.87 | 0.35 | 82 (1.23) | 82.93 | 0.25 | 82 (1.23) | 82.87 | 0.35 |
| | | 1 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 82 (1.23) | 82.87 | 0.35 | 82 (1.23) | 82.83 | 0.38 | 82 (1.23) | 82.87 | 0.35 |

Table A.105: $h28$: BasicRRGA – Perfect Score is 81

| Parameters | | | | Basic | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Me | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | 0 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 88 (8.64) | 88.33 | 0.48 | 88 (8.64) | 88 | 0 | 88 (8.64) | 88 | 0 |
| | | 1 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 88 (8.64) | 88.33 | 0.48 | 82 (1.23) | 82.3 | 0.47 | 82 (1.23) | 82.3 | 0.47 |
| | 50 | 0 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 88 (8.64) | 88.63 | 0.49 | 88 (8.64) | 88 | 0 | 88 (8.64) | 88 | 0 |
| | | 1 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 88 (8.64) | 88.63 | 0.49 | 82 (1.23) | 82.27 | 0.45 | 82 (1.23) | 82.27 | 0.52 |
| 51 | 20 | 0 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 88 (8.64) | 88 | 0 | 88 (8.64) | 88 | 0 | 88 (8.64) | 88 | 0 |
| | | 1 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 88 (8.64) | 88 | 0 | 82 (1.23) | 82.17 | 0.38 | 82 (1.23) | 82.17 | 0.38 |
| | 50 | 0 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 88 (8.64) | 88 | 0 | 88 (8.64) | 88 | 0 | 87 (7.41) | 87.97 | 0.18 |
| | | 1 | rnd | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 | 82 (1.23) | 82 | 0 |
| | | | 2op | 88 (8.64) | 88 | 0 | 82 (1.23) | 82.2 | 0.41 | 82 (1.23) | 82.23 | 0.43 |

Table A.106: $h28$: TransRRGA – Perfect Score is 81

## A.3 Graph Colouring Problem

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6 | 6.93 | 0.25 | 6 | 6.9 | 0.31 | 6 | 6.73 | 0.45 | 6 | 6.33 | 0.48 |
| | | 2op | 7 | 7 | 0 | 7 | 7 | 0 | 6 | 6.93 | 0.25 | 6 | 6.53 | 0.51 |
| | 50 | rnd | 6 | 6.5 | 0.51 | 6 | 6.6 | 0.5 | 6 | 6.3 | 0.47 | 6 | 6.03 | 0.18 |
| | | 2op | 6 | 6.97 | 0.18 | 6 | 6.87 | 0.35 | 6 | 6.8 | 0.41 | 6 | 6.1 | 0.31 |
| 51 | 20 | rnd | 6 | 6.67 | 0.48 | 6 | 6.67 | 0.48 | 6 | 6.77 | 0.43 | 6 | 6.53 | 0.51 |
| | | 2op | 6 | 6.93 | 0.25 | 6 | 6.93 | 0.25 | 6 | 6.9 | 0.31 | 6 | 6.73 | 0.45 |
| | 50 | rnd | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| | | 2op | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6.07 | 0.25 |

Table A.107: $DSJC125.1$: basicRR – Lower Bound is 5

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7 | 7 | 0 | 7 | 7 | 0 | 7 | 7 | 0 | 6 | 6.87 | 0.35 |
| | | 2op | 7 | 7 | 0 | 7 | 7 | 0 | 7 | 7 | 0 | 6 | 6.97 | 0.18 |
| | 50 | rnd | 7 | 7 | 0 | 7 | 7 | 0 | 6 | 6.97 | 0.18 | 6 | 6.93 | 0.25 |
| | | 2op | 7 | 7 | 0 | 7 | 7 | 0 | 7 | 7 | 0 | 6 | 6.8 | 0.41 |
| 51 | 20 | rnd | 7 | 7 | 0 | 7 | 7 | 0 | 7 | 7 | 0 | 6 | 6.97 | 0.18 |
| | | 2op | 7 | 7 | 0 | 7 | 7 | 0 | 7 | 7 | 0 | 7 | 7 | 0 |
| | 50 | rnd | 7 | 7 | 0 | 7 | 7 | 0 | 7 | 7 | 0 | 6 | 6.77 | 0.43 |
| | | 2op | 7 | 7 | 0 | 7 | 7 | 0 | 7 | 7 | 0 | 6 | 6.97 | 0.18 |

Table A.108: $DSJC125.1$: transRR – Lower Bound is 5

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 20 | 21.4 | 0.56 | 20 | 21.03 | 0.41 | 20 | 20.4 | 0.5 | 20 | 20.43 | 0.5 |
| | | 2op | 21 | 21.23 | 0.43 | 20 | 21 | 0.26 | 20 | 20.67 | 0.48 | 19 | 20.63 | 0.56 |
| | 50 | rnd | 20 | 21.13 | 0.43 | 20 | 20.63 | 0.49 | 19 | 20.33 | 0.55 | 19 | 20.1 | 0.4 |
| | | 2op | 20 | 20.77 | 0.57 | 20 | 20.63 | 0.49 | 19 | 20.23 | 0.5 | 19 | 20.2 | 0.48 |
| 51 | 20 | rnd | 20 | 21.1 | 0.61 | 20 | 21.1 | 0.61 | 20 | 20.9 | 0.48 | 20 | 20.57 | 0.5 |
| | | 2op | 20 | 21.07 | 0.52 | 20 | 21.07 | 0.52 | 20 | 20.8 | 0.55 | 20 | 20.33 | 0.48 |
| | 50 | rnd | 20 | 20.83 | 0.38 | 20 | 20.83 | 0.38 | 20 | 20.3 | 0.47 | 19 | 20.13 | 0.43 |
| | | 2op | 20 | 20.6 | 0.5 | 20 | 20.6 | 0.5 | 19 | 20.13 | 0.43 | 20 | 20.17 | 0.38 |

Table A.109: $DSJC125.5$: basicRR – Lower Bound is 17

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22 | 22.53 | 0.51 | 21 | 21.9 | 0.48 | 21 | 21.5 | 0.51 | 20 | 20.93 | 0.25 |
| | | 2op | 21 | 21.97 | 0.18 | 21 | 21.93 | 0.25 | 21 | 21.4 | 0.5 | 20 | 20.93 | 0.25 |
| | 50 | rnd | 21 | 22.3 | 0.53 | 21 | 21.87 | 0.35 | 21 | 21.53 | 0.51 | 20 | 20.7 | 0.47 |
| | | 2op | 21 | 21.93 | 0.25 | 21 | 21.83 | 0.38 | 20 | 21.3 | 0.53 | 20 | 20.77 | 0.43 |
| 51 | 20 | rnd | 21 | 22.13 | 0.43 | 21 | 22.13 | 0.43 | 21 | 21.77 | 0.43 | 20 | 21.1 | 0.4 |
| | | 2op | 21 | 21.97 | 0.18 | 21 | 21.97 | 0.18 | 21 | 21.7 | 0.47 | 20 | 20.93 | 0.37 |
| | 50 | rnd | 21 | 21.97 | 0.32 | 21 | 21.97 | 0.32 | 21 | 21.67 | 0.48 | 20 | 21.1 | 0.4 |
| | | 2op | 22 | 22 | 0 | 22 | 22 | 0 | 20 | 21.53 | 0.57 | 20 | 21.07 | 0.37 |

Table A.110: $DSJC125.5$: transRR – Lower Bound is 17

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46 | 47.63 | 0.72 | 45 | 47.13 | 0.86 | 46 | 46.97 | 0.61 | 45 | 45.93 | 0.52 |
| | | 2op | 46 | 47.8 | 0.66 | 46 | 47.13 | 0.73 | 45 | 46.73 | 0.74 | 45 | 45.67 | 0.55 |
| | 50 | rnd | 46 | 47.23 | 0.9 | 45 | 46.67 | 0.92 | 45 | 46.53 | 0.57 | 45 | 45.6 | 0.5 |
| | | 2op | 46 | 47.3 | 0.7 | 46 | 46.87 | 0.63 | 45 | 46.43 | 0.73 | 45 | 45.6 | 0.5 |
| 51 | 20 | rnd | 46 | 47.37 | 0.89 | 46 | 47.37 | 0.89 | 45 | 47.23 | 0.9 | 46 | 47 | 0.83 |
| | | 2op | 46 | 47.33 | 0.76 | 46 | 47.33 | 0.76 | 46 | 46.97 | 0.67 | 46 | 47.27 | 0.58 |
| | 50 | rnd | 44 | 46.2 | 0.85 | 44 | 46.2 | 0.85 | 45 | 46.2 | 0.71 | 45 | 46.2 | 0.61 |
| | | 2op | 46 | 46.9 | 0.55 | 46 | 46.9 | 0.55 | 45 | 46.47 | 0.73 | 45 | 46.4 | 0.72 |

Table A.111: $DSJC125.9$: basicRR – Lower Bound is 44

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 51 | 52.5 | 0.9 | 49 | 50.87 | 0.9 | 48 | 49.67 | 0.84 | 46 | 47.2 | 0.76 |
| | | 2op | 48 | 48.97 | 0.18 | 48 | 48.83 | 0.38 | 47 | 48.6 | 0.56 | 46 | 47.17 | 0.59 |
| | 50 | rnd | 51 | 52.13 | 0.82 | 49 | 50.8 | 0.66 | 48 | 49.63 | 0.81 | 46 | 47.17 | 0.65 |
| | | 2op | 48 | 48.97 | 0.18 | 48 | 48.77 | 0.43 | 48 | 48.4 | 0.5 | 46 | 47.43 | 0.57 |
| 51 | 20 | rnd | 50 | 51.87 | 0.97 | 50 | 51.87 | 0.97 | 49 | 49.93 | 0.74 | 47 | 48.6 | 0.89 |
| | | 2op | 49 | 49 | 0 | 49 | 49 | 0 | 48 | 48.73 | 0.45 | 47 | 48.13 | 0.43 |
| | 50 | rnd | 49 | 51.53 | 0.86 | 49 | 51.53 | 0.86 | 48 | 49.73 | 0.69 | 48 | 48.53 | 0.78 |
| | | 2op | 49 | 49 | 0 | 49 | 49 | 0 | 48 | 48.73 | 0.45 | 47 | 48.13 | 0.51 |

Table A.112: $DSJC125.9$: transRR – Lower Bound is 44

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 10 | 10.97 | 0.18 |
| | | 2op | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 10 | 10.87 | 0.35 |
| | 50 | rnd | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 10 | 10.83 | 0.38 |
| | | 2op | 10 | 10.97 | 0.18 | 11 | 11 | 0 | 10 | 10.97 | 0.18 | 10 | 10.97 | 0.18 |
| 51 | 20 | rnd | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 |
| | | 2op | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 |
| | 50 | rnd | 11 | 11 | 0 | 11 | 11 | 0 | 10 | 10.97 | 0.18 | 11 | 11 | 0 |
| | | 2op | 11 | 11 | 0 | 11 | 11 | 0 | 10 | 10.93 | 0.25 | 10 | 10.93 | 0.25 |

Table A.113: $DSJC250.1$: basicRR – Lower Bound is 4

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11 | 11.73 | 0.45 | 11 | 11.23 | 0.43 | 11 | 11 | 0 | 11 | 11 | 0 |
| | | 2op | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 |
| | 50 | rnd | 11 | 11.33 | 0.48 | 11 | 11.13 | 0.35 | 11 | 11.03 | 0.18 | 11 | 11 | 0 |
| | | 2op | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 10 | 10.97 | 0.18 |
| 51 | 20 | rnd | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 |
| | | 2op | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 |
| | 50 | rnd | 11 | 11.03 | 0.18 | 11 | 11.03 | 0.18 | 11 | 11 | 0 | 11 | 11 | 0 |
| | | 2op | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 | 11 | 11 | 0 |

Table A.114: $DSJC250.1$: transRR – Lower Bound is 4

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 37 | 37.73 | 0.45 | 37 | 37.43 | 0.5 | 37 | 37.23 | 0.43 | 37 | 37.17 | 0.38 |
| | | 2op | 36 | 37.37 | 0.56 | 36 | 37.17 | 0.59 | 36 | 37.03 | 0.32 | 36 | 37.1 | 0.48 |
| | 50 | rnd | 36 | 37.43 | 0.63 | 36 | 37.17 | 0.53 | 36 | 36.73 | 0.45 | 35 | 36.77 | 0.5 |
| | | 2op | 36 | 37.13 | 0.78 | 36 | 36.8 | 0.55 | 36 | 36.53 | 0.51 | 36 | 36.83 | 0.38 |
| 51 | 20 | rnd | 37 | 37.63 | 0.56 | 37 | 37.63 | 0.56 | 36 | 37.07 | 0.52 | 36 | 36.73 | 0.45 |
| | | 2op | 36 | 37.43 | 0.57 | 36 | 37.43 | 0.57 | 36 | 36.97 | 0.49 | 35 | 36.6 | 0.56 |
| | 50 | rnd | 36 | 36.97 | 0.67 | 36 | 36.97 | 0.67 | 35 | 36.2 | 0.55 | 36 | 36.43 | 0.5 |
| | | 2op | 35 | 36.73 | 0.64 | 35 | 36.73 | 0.64 | 35 | 36.03 | 0.49 | 35 | 36.07 | 0.64 |

Table A.115: $DSJC250.5$: basicRR – Lower Bound is 26

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38 | 38.67 | 0.48 | 38 | 38.57 | 0.5 | 36 | 37.77 | 0.5 | 37 | 37.57 | 0.5 |
| | | 2op | 37 | 37.97 | 0.18 | 37 | 37.9 | 0.31 | 37 | 37.53 | 0.51 | 37 | 37.3 | 0.47 |
| | 50 | rnd | 37 | 38.57 | 0.57 | 37 | 38.17 | 0.46 | 37 | 37.63 | 0.61 | 37 | 37.07 | 0.25 |
| | | 2op | 37 | 37.97 | 0.18 | 37 | 37.97 | 0.18 | 36 | 37.17 | 0.46 | 36 | 36.9 | 0.4 |
| 51 | 20 | rnd | 37 | 38.23 | 0.63 | 37 | 38.23 | 0.63 | 37 | 37.9 | 0.48 | 37 | 37.4 | 0.5 |
| | | 2op | 37 | 37.97 | 0.18 | 37 | 37.97 | 0.18 | 37 | 37.67 | 0.48 | 36 | 37.17 | 0.46 |
| | 50 | rnd | 37 | 38.1 | 0.48 | 37 | 38.1 | 0.48 | 37 | 37.77 | 0.5 | 36 | 37.03 | 0.41 |
| | | 2op | 38 | 38 | 0 | 38 | 38 | 0 | 37 | 37.63 | 0.49 | 36 | 36.93 | 0.37 |

Table A.116: $DSJC250.5$: transRR – Lower Bound is 26

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 84 | 86.5 | 1.48 | 83 | 85.6 | 1.28 | 80 | 83.8 | 1.27 | 80 | 83.03 | 1.45 |
| | | 2op | 83 | 85.57 | 0.73 | 83 | 84.7 | 0.99 | 82 | 83.87 | 0.97 | 81 | 83.3 | 1.15 |
| | 50 | rnd | 83 | 85.87 | 1.28 | 82 | 84.53 | 1.25 | 80 | 82.4 | 1.04 | 80 | 82.07 | 1.46 |
| | | 2op | 82 | 85.13 | 1.31 | 83 | 84.2 | 0.85 | 80 | 82.67 | 1.21 | 80 | 81.97 | 0.89 |
| 51 | 20 | rnd | 83 | 85.87 | 1.28 | 83 | 85.87 | 1.28 | 82 | 84.8 | 1.27 | 81 | 84.37 | 1.33 |
| | | 2op | 84 | 85.13 | 0.68 | 84 | 85.13 | 0.68 | 83 | 84.73 | 0.64 | 83 | 84.67 | 0.76 |
| | 50 | rnd | 81 | 84.17 | 1.05 | 81 | 84.17 | 1.05 | 81 | 83.07 | 1.17 | 81 | 82.27 | 0.98 |
| | | 2op | 82 | 84.47 | 0.97 | 82 | 84.47 | 0.97 | 82 | 83.8 | 1 | 81 | 83.03 | 1.38 |

Table A.117: $DSJC250.9$: basicRR – Lower Bound is 72

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 88 | 91.33 | 1.45 | 88 | 89.9 | 0.99 | 85 | 87.7 | 1.18 | 83 | 85.23 | 1.04 |
| | | 2op | 87 | 87.5 | 0.51 | 85 | 87.17 | 0.59 | 83 | 86 | 1.14 | 82 | 84.4 | 1.1 |
| | 50 | rnd | 89 | 90.9 | 1.03 | 88 | 89.4 | 0.89 | 85 | 87.73 | 1.2 | 82 | 84.33 | 1.06 |
| | | 2op | 87 | 87.5 | 0.51 | 86 | 87.13 | 0.51 | 84 | 86 | 1.2 | 81 | 83.37 | 1.03 |
| 51 | 20 | rnd | 87 | 90.2 | 1.13 | 87 | 90.2 | 1.13 | 87 | 88.47 | 0.73 | 85 | 87.1 | 1.18 |
| | | 2op | 87 | 87.33 | 0.48 | 87 | 87.33 | 0.48 | 86 | 87 | 0.26 | 84 | 86.1 | 0.76 |
| | 50 | rnd | 88 | 89.73 | 0.94 | 88 | 89.73 | 0.94 | 87 | 88.4 | 0.81 | 86 | 87.1 | 0.66 |
| | | 2op | 87 | 87.4 | 0.5 | 87 | 87.4 | 0.5 | 84 | 86.77 | 0.63 | 85 | 86.13 | 0.73 |

Table A.118: $DSJC250.9$: transRR – Lower Bound is 72

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 41 | 42.1 | 0.48 | 41 | 41.83 | 0.53 | 40 | 41.73 | 0.52 | 41 | 41.87 | 0.35 |
| | | 2op | 41 | 42.4 | 0.62 | 41 | 41.8 | 0.55 | 41 | 41.67 | 0.48 | 41 | 41.8 | 0.41 |
| | 50 | rnd | 41 | 42 | 0.69 | 41 | 41.8 | 0.41 | 40 | 41.13 | 0.57 | 41 | 41.6 | 0.5 |
| | | 2op | 39 | 41.77 | 0.73 | 40 | 41.33 | 0.61 | 41 | 41.27 | 0.45 | 40 | 41.27 | 0.58 |
| 51 | 20 | rnd | 40 | 42.2 | 0.76 | 40 | 42.2 | 0.76 | 40 | 41.53 | 0.63 | 40 | 41.1 | 0.48 |
| | | 2op | 41 | 42.2 | 0.61 | 41 | 42.2 | 0.61 | 40 | 41.43 | 0.57 | 40 | 41.23 | 0.5 |
| | 50 | rnd | 40 | 41.37 | 0.56 | 40 | 41.37 | 0.56 | 39 | 40.6 | 0.62 | 39 | 40.8 | 0.48 |
| | | 2op | 40 | 41.2 | 0.71 | 40 | 41.2 | 0.71 | 40 | 40.7 | 0.47 | 39 | 40.83 | 0.46 |

Table A.119: $flat300_28_0$: basicRR – Lower Bound is 28

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 42 | 43.17 | 0.65 | 42 | 42.7 | 0.47 | 41 | 41.93 | 0.25 | 41 | 41.87 | 0.35 |
| | | 2op | 42 | 42.83 | 0.38 | 41 | 42.6 | 0.56 | 41 | 41.93 | 0.37 | 41 | 41.97 | 0.18 |
| | 50 | rnd | 42 | 42.77 | 0.57 | 42 | 42.43 | 0.5 | 41 | 41.63 | 0.49 | 41 | 41.67 | 0.48 |
| | | 2op | 42 | 42.67 | 0.48 | 41 | 42.27 | 0.69 | 40 | 41.5 | 0.57 | 41 | 41.43 | 0.5 |
| 51 | 20 | rnd | 42 | 42.87 | 0.43 | 42 | 42.87 | 0.43 | 41 | 42.27 | 0.58 | 40 | 41.7 | 0.53 |
| | | 2op | 42 | 42.9 | 0.31 | 42 | 42.9 | 0.31 | 41 | 42.07 | 0.45 | 41 | 41.63 | 0.49 |
| | 50 | rnd | 42 | 42.6 | 0.5 | 42 | 42.6 | 0.5 | 41 | 41.97 | 0.41 | 41 | 41.27 | 0.45 |
| | | 2op | 42 | 42.4 | 0.5 | 42 | 42.4 | 0.5 | 41 | 41.77 | 0.5 | 40 | 41.07 | 0.45 |

Table A.120: $flat300_28_0$: transRR – Lower Bound is 28

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12 | 12.93 | 0.25 | 12 | 12.9 | 0.31 | 12 | 12.9 | 0.31 | 12 | 12.7 | 0.47 |
| | | 2op | 12 | 12.83 | 0.38 | 12 | 12.73 | 0.45 | 12 | 12.8 | 0.41 | 12 | 12.83 | 0.38 |
| | 50 | rnd | 12 | 12.87 | 0.35 | 12 | 12.7 | 0.47 | 12 | 12.63 | 0.49 | 12 | 12.43 | 0.5 |
| | | 2op | 12 | 12.83 | 0.38 | 12 | 12.73 | 0.45 | 12 | 12.7 | 0.47 | 12 | 12.23 | 0.43 |
| 51 | 20 | rnd | 12 | 12.97 | 0.18 | 12 | 12.97 | 0.18 | 12 | 12.77 | 0.43 | 12 | 12.63 | 0.49 |
| | | 2op | 12 | 12.7 | 0.47 | 12 | 12.7 | 0.47 | 12 | 12.6 | 0.5 | 12 | 12.67 | 0.48 |
| | 50 | rnd | 12 | 12.8 | 0.41 | 12 | 12.8 | 0.41 | 12 | 12.87 | 0.35 | 12 | 12.67 | 0.48 |
| | | 2op | 12 | 12.83 | 0.38 | 12 | 12.83 | 0.38 | 12 | 12.67 | 0.48 | 12 | 12.47 | 0.51 |

Table A.121: $queen10_10$: basicRR – Lower Bound is 11

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13 | 13.3 | 0.47 | 13 | 13 | 0 | 12 | 12.97 | 0.18 | 12 | 12.93 | 0.25 |
| | | 2op | 12 | 12.97 | 0.18 | 13 | 13 | 0 | 12 | 12.9 | 0.31 | 12 | 12.93 | 0.25 |
| | 50 | rnd | 13 | 13.07 | 0.25 | 13 | 13 | 0 | 12 | 12.97 | 0.18 | 12 | 12.8 | 0.41 |
| | | 2op | 12 | 12.83 | 0.38 | 12 | 12.67 | 0.48 | 12 | 12.83 | 0.38 | 12 | 12.9 | 0.31 |
| 51 | 20 | rnd | 13 | 13.13 | 0.35 | 13 | 13.13 | 0.35 | 12 | 12.93 | 0.25 | 12 | 12.87 | 0.35 |
| | | 2op | 12 | 12.9 | 0.31 | 12 | 12.9 | 0.31 | 12 | 12.83 | 0.38 | 12 | 12.73 | 0.45 |
| | 50 | rnd | 13 | 13 | 0 | 13 | 13 | 0 | 12 | 12.87 | 0.35 | 12 | 12.77 | 0.43 |
| | | 2op | 12 | 12.5 | 0.51 | 12 | 12.5 | 0.51 | 12 | 12.63 | 0.49 | 12 | 12.73 | 0.45 |

Table A.122: $queen10_10$: transRR – Lower Bound is 11

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14 | 14.3 | 0.47 | 14 | 14 | 0 | 13 | 13.97 | 0.18 | 14 | 14 | 0 |
| | | 2op | 14 | 14 | 0 | 14 | 14 | 0 | 14 | 14 | 0 | 13 | 13.97 | 0.18 |
| | 50 | rnd | 14 | 14 | 0 | 14 | 14 | 0 | 13 | 13.97 | 0.18 | 14 | 14 | 0 |
| | | 2op | 13 | 13.97 | 0.18 | 14 | 14 | 0 | 13 | 13.97 | 0.18 | 13 | 13.97 | 0.18 |
| 51 | 20 | rnd | 14 | 14.27 | 0.45 | 14 | 14.27 | 0.45 | 14 | 14.03 | 0.18 | 14 | 14 | 0 |
| | | 2op | 14 | 14 | 0 | 14 | 14 | 0 | 14 | 14 | 0 | 13 | 13.97 | 0.18 |
| | 50 | rnd | 13 | 13.97 | 0.18 | 13 | 13.97 | 0.18 | 13 | 13.93 | 0.25 | 13 | 13.97 | 0.18 |
| | | 2op | 14 | 14 | 0 | 14 | 14 | 0 | 13 | 13.93 | 0.25 | 14 | 14 | 0 |

Table A.123: $queen11_1 1$: basicRR – Lower Bound is 11

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14 | 14.93 | 0.25 | 14 | 14.57 | 0.5 | 14 | 14.17 | 0.38 | 14 | 14 | 0 |
| | | 2op | 14 | 14 | 0 | 14 | 14 | 0 | 14 | 14 | 0 | 14 | 14 | 0 |
| | 50 | rnd | 14 | 14.83 | 0.38 | 14 | 14.2 | 0.41 | 14 | 14 | 0 | 14 | 14 | 0 |
| | | 2op | 14 | 14 | 0 | 13 | 13.97 | 0.18 | 13 | 13.97 | 0.18 | 14 | 14 | 0 |
| 51 | 20 | rnd | 14 | 14.87 | 0.35 | 14 | 14.87 | 0.35 | 14 | 14 | 0 | 14 | 14 | 0 |
| | | 2op | 14 | 14 | 0 | 14 | 14 | 0 | 14 | 14 | 0 | 14 | 14 | 0 |
| | 50 | rnd | 14 | 14.63 | 0.49 | 14 | 14.63 | 0.49 | 14 | 14 | 0 | 13 | 13.97 | 0.18 |
| | | 2op | 14 | 14 | 0 | 14 | 14 | 0 | 13 | 13.97 | 0.18 | 13 | 13.97 | 0.18 |

Table A.124: $queen11_1 1$: transRR – Lower Bound is 11

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15 | 15.97 | 0.18 | 15 | 15.67 | 0.48 | 15 | 15.2 | 0.41 | 15 | 15.17 | 0.38 |
| | | 2op | 15 | 15.37 | 0.49 | 15 | 15.17 | 0.38 | 15 | 15.2 | 0.41 | 15 | 15.07 | 0.25 |
| | 50 | rnd | 15 | 15.53 | 0.51 | 15 | 15.2 | 0.41 | 15 | 15.17 | 0.38 | 15 | 15 | 0 |
| | | 2op | 15 | 15.1 | 0.31 | 15 | 15.13 | 0.35 | 15 | 15 | 0 | 15 | 15.03 | 0.18 |
| 51 | 20 | rnd | 15 | 15.93 | 0.37 | 15 | 15.93 | 0.37 | 15 | 15.2 | 0.41 | 15 | 15.03 | 0.18 |
| | | 2op | 15 | 15.27 | 0.45 | 15 | 15.27 | 0.45 | 15 | 15.07 | 0.25 | 15 | 15 | 0 |
| | 50 | rnd | 15 | 15.23 | 0.43 | 15 | 15.23 | 0.43 | 15 | 15.2 | 0.41 | 14 | 15.03 | 0.32 |
| | | 2op | 15 | 15.2 | 0.41 | 15 | 15.2 | 0.41 | 15 | 15.13 | 0.35 | 15 | 15 | 0 |

Table A.125: $queen12_1 2$: basicRR – Lower Bound is 12

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16 | 16.47 | 0.51 | 16 | 16 | 0 | 15 | 15.93 | 0.25 | 15 | 15.33 | 0.48 |
| | | 2op | 15 | 15.67 | 0.48 | 15 | 15.37 | 0.49 | 15 | 15.7 | 0.47 | 15 | 15.4 | 0.5 |
| | 50 | rnd | 16 | 16.23 | 0.43 | 15 | 15.93 | 0.25 | 15 | 15.57 | 0.5 | 15 | 15.23 | 0.43 |
| | | 2op | 15 | 15.4 | 0.5 | 15 | 15.27 | 0.45 | 15 | 15.4 | 0.5 | 15 | 15.37 | 0.49 |
| 51 | 20 | rnd | 16 | 16.23 | 0.43 | 16 | 16.23 | 0.43 | 15 | 15.7 | 0.47 | 15 | 15.27 | 0.45 |
| | | 2op | 15 | 15.57 | 0.5 | 15 | 15.57 | 0.5 | 15 | 15.4 | 0.5 | 15 | 15.1 | 0.31 |
| | 50 | rnd | 15 | 16.03 | 0.32 | 15 | 16.03 | 0.32 | 15 | 15.37 | 0.49 | 15 | 15.17 | 0.38 |
| | | 2op | 15 | 15.1 | 0.31 | 15 | 15.1 | 0.31 | 15 | 15 | 0 | 15 | 15.03 | 0.18 |

Table A.126: $queen12_1 2$: transRR – Lower Bound is 12

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16 | 17.33 | 0.55 | 16 | 16.97 | 0.18 | 16 | 16.93 | 0.25 | 16 | 16.83 | 0.38 |
| | | 2op | 16 | 16.9 | 0.31 | 16 | 16.83 | 0.38 | 16 | 16.9 | 0.31 | 16 | 16.9 | 0.31 |
| | 50 | rnd | 17 | 17 | 0 | 16 | 16.9 | 0.31 | 16 | 16.63 | 0.49 | 16 | 16.57 | 0.5 |
| | | 2op | 16 | 16.87 | 0.35 | 16 | 16.63 | 0.49 | 16 | 16.7 | 0.47 | 16 | 16.63 | 0.49 |
| 51 | 20 | rnd | 16 | 17.1 | 0.48 | 16 | 17.1 | 0.48 | 16 | 16.83 | 0.38 | 16 | 16.8 | 0.41 |
| | | 2op | 16 | 16.93 | 0.25 | 16 | 16.93 | 0.25 | 16 | 16.67 | 0.48 | 16 | 16.6 | 0.5 |
| | 50 | rnd | 16 | 16.73 | 0.45 | 16 | 16.73 | 0.45 | 16 | 16.83 | 0.38 | 16 | 16.4 | 0.5 |
| | | 2op | 16 | 16.9 | 0.31 | 16 | 16.9 | 0.31 | 16 | 16.73 | 0.45 | 16 | 16.7 | 0.47 |

Table A.127: $queen13_1 3$: basicRR – Lower Bound is 13

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17 | 17.97 | 0.32 | 17 | 17.37 | 0.49 | 16 | 16.97 | 0.18 | 16 | 16.83 | 0.38 |
| | | 2op | 16 | 16.97 | 0.18 | 16 | 16.97 | 0.18 | 16 | 16.93 | 0.25 | 16 | 16.97 | 0.18 |
| | 50 | rnd | 17 | 17.9 | 0.31 | 17 | 17.03 | 0.18 | 16 | 16.9 | 0.31 | 16 | 16.83 | 0.38 |
| | | 2op | 16 | 16.9 | 0.31 | 16 | 16.9 | 0.31 | 16 | 16.97 | 0.18 | 16 | 16.93 | 0.25 |
| 51 | 20 | rnd | 17 | 17.83 | 0.38 | 17 | 17.83 | 0.38 | 16 | 16.97 | 0.18 | 16 | 16.7 | 0.47 |
| | | 2op | 16 | 16.97 | 0.18 | 16 | 16.97 | 0.18 | 16 | 16.87 | 0.35 | 16 | 16.67 | 0.48 |
| | 50 | rnd | 17 | 17.57 | 0.5 | 17 | 17.57 | 0.5 | 17 | 17 | 0 | 16 | 16.87 | 0.35 |
| | | 2op | 16 | 16.77 | 0.43 | 16 | 16.77 | 0.43 | 16 | 16.63 | 0.49 | 16 | 16.53 | 0.51 |

Table A.128: $queen13_1 3$: transRR – Lower Bound is 13

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18 | 19 | 0.26 | 18 | 18.3 | 0.47 | 18 | 18 | 0 | 18 | 18 | 0 |
| | | 2op | 18 | 18.03 | 0.18 | 18 | 18 | 0 | 18 | 18 | 0 | 17 | 17.97 | 0.18 |
| | 50 | rnd | 18 | 18.13 | 0.35 | 18 | 18 | 0 | 18 | 18 | 0 | 18 | 18 | 0 |
| | | 2op | 17 | 17.9 | 0.31 | 17 | 17.9 | 0.31 | 18 | 18 | 0 | 18 | 18 | 0 |
| 51 | 20 | rnd | 18 | 18.67 | 0.48 | 18 | 18.67 | 0.48 | 17 | 17.97 | 0.18 | 18 | 18 | 0 |
| | | 2op | 17 | 17.97 | 0.18 | 17 | 17.97 | 0.18 | 18 | 18 | 0 | 17 | 17.97 | 0.18 |
| | 50 | rnd | 18 | 18 | 0 | 18 | 18 | 0 | 17 | 17.9 | 0.31 | 17 | 17.97 | 0.18 |
| | | 2op | 17 | 17.97 | 0.18 | 17 | 17.97 | 0.18 | 17 | 17.97 | 0.18 | 17 | 17.97 | 0.18 |

Table A.129: $queen14_1 4$: basicRR – Lower Bound is 14

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19 | 19.4 | 0.5 | 18 | 18.93 | 0.25 | 18 | 18.17 | 0.38 | 18 | 18 | 0 |
| | | 2op | 18 | 18.27 | 0.45 | 18 | 18 | 0 | 18 | 18 | 0 | 18 | 18 | 0 |
| | 50 | rnd | 18 | 19.03 | 0.32 | 18 | 18.9 | 0.31 | 17 | 17.97 | 0.18 | 18 | 18 | 0 |
| | | 2op | 18 | 18 | 0 | 17 | 18 | 0.26 | 18 | 18 | 0 | 17 | 17.97 | 0.18 |
| 51 | 20 | rnd | 19 | 19.2 | 0.41 | 19 | 19.2 | 0.41 | 18 | 18.43 | 0.5 | 17 | 17.97 | 0.18 |
| | | 2op | 18 | 18.03 | 0.18 | 18 | 18.03 | 0.18 | 18 | 18 | 0 | 18 | 18 | 0 |
| | 50 | rnd | 18 | 18.97 | 0.32 | 18 | 18.97 | 0.32 | 17 | 18.07 | 0.37 | 17 | 17.97 | 0.18 |
| | | 2op | 17 | 17.97 | 0.18 | 17 | 17.97 | 0.18 | 17 | 17.9 | 0.31 | 18 | 18 | 0 |

Table A.130: $queen14_1 4$: transRR – Lower Bound is 14

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19 | 20.13 | 0.51 | 19 | 19.8 | 0.41 | 19 | 19.13 | 0.35 | 19 | 19 | 0 |
| | | 2op | 19 | 19.2 | 0.41 | 19 | 19.07 | 0.25 | 19 | 19 | 0 | 19 | 19 | 0 |
| | 50 | rnd | 19 | 19.73 | 0.45 | 19 | 19.23 | 0.43 | 19 | 19.03 | 0.18 | 19 | 19 | 0 |
| | | 2op | 19 | 19.13 | 0.35 | 19 | 19 | 0 | 19 | 19 | 0 | 19 | 19 | 0 |
| 51 | 20 | rnd | 19 | 19.87 | 0.57 | 19 | 19.87 | 0.57 | 19 | 19.2 | 0.41 | 18 | 18.97 | 0.18 |
| | | 2op | 19 | 19.37 | 0.49 | 19 | 19.37 | 0.49 | 19 | 19.1 | 0.31 | 19 | 19 | 0 |
| | 50 | rnd | 19 | 19.07 | 0.25 | 19 | 19.07 | 0.25 | 19 | 19.03 | 0.18 | 19 | 19 | 0 |
| | | 2op | 19 | 19 | 0 | 19 | 19 | 0 | 19 | 19 | 0 | 19 | 19 | 0 |

Table A.131: $queen15_15$: basicRR – Lower Bound is 15

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21 | 21.03 | 0.18 | 20 | 20.37 | 0.49 | 19 | 19.7 | 0.47 | 19 | 19.33 | 0.48 |
| | | 2op | 19 | 19.77 | 0.43 | 19 | 19.67 | 0.48 | 19 | 19.5 | 0.51 | 19 | 19.17 | 0.38 |
| | 50 | rnd | 20 | 20.87 | 0.35 | 20 | 20.07 | 0.25 | 19 | 19.7 | 0.47 | 19 | 19.1 | 0.31 |
| | | 2op | 19 | 19.47 | 0.51 | 19 | 19.2 | 0.41 | 19 | 19.4 | 0.5 | 19 | 19.13 | 0.35 |
| 51 | 20 | rnd | 20 | 20.87 | 0.35 | 20 | 20.87 | 0.35 | 20 | 20 | 0 | 19 | 19.2 | 0.41 |
| | | 2op | 19 | 19.67 | 0.48 | 19 | 19.67 | 0.48 | 19 | 19.33 | 0.48 | 19 | 19 | 0 |
| | 50 | rnd | 20 | 20.4 | 0.5 | 20 | 20.4 | 0.5 | 19 | 19.77 | 0.43 | 19 | 19.03 | 0.18 |
| | | 2op | 19 | 19.17 | 0.38 | 19 | 19.17 | 0.38 | 19 | 19 | 0 | 19 | 19 | 0 |

Table A.132: $queen15_15$: transRR – Lower Bound is 15

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 71 | 72.83 | 0.7 | 70 | 71.07 | 0.87 | 68 | 69.83 | 0.87 | 68 | 68.7 | 0.53 |
| | | 2op | 69 | 70.37 | 0.56 | 69 | 69.9 | 0.48 | 68 | 68.9 | 0.55 | 67 | 68.3 | 0.6 |
| | 50 | rnd | 69 | 71.17 | 0.87 | 68 | 69.93 | 0.69 | 68 | 68.97 | 0.56 | 67 | 68.2 | 0.48 |
| | | 2op | 69 | 69.83 | 0.59 | 68 | 69.43 | 0.57 | 68 | 68.37 | 0.49 | 67 | 68.03 | 0.32 |
| 51 | 20 | rnd | 70 | 71.57 | 0.86 | 70 | 71.57 | 0.86 | 70 | 70.73 | 0.69 | 69 | 69.83 | 0.79 |
| | | 2op | 69 | 70.17 | 0.59 | 69 | 70.17 | 0.59 | 69 | 69.47 | 0.51 | 68 | 69.03 | 0.56 |
| | 50 | rnd | 68 | 69.03 | 0.61 | 68 | 69.03 | 0.61 | 68 | 68.6 | 0.56 | 67 | 68.23 | 0.57 |
| | | 2op | 68 | 68.5 | 0.63 | 68 | 68.5 | 0.63 | 67 | 68.17 | 0.46 | 67 | 67.97 | 0.41 |

Table A.133: $r250.5$: basicRR – Lower Bound is 65

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 75 | 75.8 | 0.48 | 74 | 75 | 0.59 | 72 | 73.6 | 0.72 | 69 | 70.4 | 0.56 |
| | | 2op | 70 | 71.27 | 0.58 | 70 | 70.8 | 0.48 | 69 | 70.23 | 0.63 | 68 | 69.03 | 0.49 |
| | 50 | rnd | 75 | 75.47 | 0.51 | 73 | 74.73 | 0.64 | 72 | 73.67 | 0.66 | 69 | 70.3 | 0.53 |
| | | 2op | 70 | 71.13 | 0.51 | 70 | 70.73 | 0.45 | 69 | 70.13 | 0.43 | 68 | 69 | 0.59 |
| 51 | 20 | rnd | 74 | 75.07 | 0.58 | 74 | 75.07 | 0.58 | 73 | 74 | 0.53 | 71 | 72.27 | 0.58 |
| | | 2op | 70 | 70.83 | 0.53 | 70 | 70.83 | 0.53 | 70 | 70.23 | 0.43 | 69 | 69.67 | 0.55 |
| | 50 | rnd | 74 | 74.97 | 0.56 | 74 | 74.97 | 0.56 | 73 | 74.03 | 0.49 | 72 | 72.4 | 0.56 |
| | | 2op | 70 | 70.57 | 0.5 | 70 | 70.57 | 0.5 | 69 | 70.1 | 0.48 | 69 | 69.67 | 0.48 |

Table A.134: $r250.5$: transRR – Lower Bound is 65

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17 | 17.8 | 0.41 | 17 | 17.7 | 0.47 | 17 | 17.63 | 0.49 | 17 | 17.1 | 0.31 |
| | | 2op | 17 | 17.9 | 0.31 | 17 | 17.8 | 0.41 | 17 | 17.6 | 0.5 | 17 | 17.17 | 0.38 |
| | 50 | rnd | 17 | 17.83 | 0.38 | 17 | 17.67 | 0.48 | 17 | 17.27 | 0.45 | 17 | 17 | 0 |
| | | 2op | 17 | 17.63 | 0.49 | 17 | 17.47 | 0.51 | 17 | 17.13 | 0.35 | 17 | 17 | 0 |
| 51 | 20 | rnd | 17 | 17.93 | 0.25 | 17 | 17.93 | 0.25 | 17 | 17.73 | 0.45 | 17 | 17.53 | 0.51 |
| | | 2op | 17 | 17.8 | 0.41 | 17 | 17.8 | 0.41 | 17 | 17.8 | 0.41 | 17 | 17.43 | 0.5 |
| | 50 | rnd | 17 | 17.4 | 0.5 | 17 | 17.4 | 0.5 | 17 | 17.3 | 0.47 | 17 | 17.2 | 0.41 |
| | | 2op | 17 | 17.57 | 0.5 | 17 | 17.57 | 0.5 | 17 | 17.37 | 0.49 | 17 | 17.13 | 0.35 |

Table A.135: $DSJC500.1$: basicRR – Lower Bound is 9

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18 | 18.07 | 0.25 | 18 | 18 | 0 | 18 | 18 | 0 | 17 | 17.8 | 0.41 |
| | | 2op | 18 | 18 | 0 | 18 | 18 | 0 | 18 | 18 | 0 | 17 | 17.83 | 0.38 |
| | 50 | rnd | 18 | 18 | 0 | 18 | 18 | 0 | 17 | 17.93 | 0.25 | 17 | 17.93 | 0.25 |
| | | 2op | 18 | 18 | 0 | 18 | 18 | 0 | 18 | 18 | 0 | 17 | 17.83 | 0.38 |
| 51 | 20 | rnd | 18 | 18 | 0 | 18 | 18 | 0 | 18 | 18 | 0 | 17 | 17.93 | 0.25 |
| | | 2op | 18 | 18 | 0 | 18 | 18 | 0 | 18 | 18 | 0 | 18 | 18 | 0 |
| | 50 | rnd | 18 | 18 | 0 | 18 | 18 | 0 | 17 | 17.97 | 0.18 | 17 | 17.9 | 0.31 |
| | | 2op | 18 | 18 | 0 | 18 | 18 | 0 | 18 | 18 | 0 | 17 | 17.8 | 0.41 |

Table A.136: $DSJC500.1$: transRR – Lower Bound is 9

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 66 | 66.87 | 0.73 | 65 | 66.4 | 0.67 | 66 | 66.43 | 0.5 | 66 | 66.9 | 0.31 |
| | | 2op | 65 | 66.83 | 0.79 | 65 | 66.5 | 0.57 | 65 | 66.43 | 0.57 | 66 | 66.77 | 0.43 |
| | 50 | rnd | 65 | 66.3 | 0.6 | 65 | 66.17 | 0.53 | 65 | 65.83 | 0.46 | 65 | 66.37 | 0.56 |
| | | 2op | 65 | 66.47 | 0.68 | 65 | 66.17 | 0.46 | 65 | 65.93 | 0.45 | 66 | 66.43 | 0.5 |
| 51 | 20 | rnd | 65 | 66.8 | 0.71 | 65 | 66.8 | 0.71 | 65 | 66.1 | 0.61 | 65 | 66.17 | 0.46 |
| | | 2op | 65 | 66.87 | 0.68 | 65 | 66.87 | 0.68 | 65 | 66.4 | 0.56 | 65 | 65.97 | 0.41 |
| | 50 | rnd | 65 | 66.07 | 0.69 | 65 | 66.07 | 0.69 | 64 | 65.3 | 0.6 | 65 | 65.77 | 0.5 |
| | | 2op | 64 | 65.8 | 0.92 | 64 | 65.8 | 0.92 | 65 | 65.27 | 0.45 | 65 | 65.8 | 0.41 |

Table A.137: $DSJC500.5$: basicRR – Lower Bound is 43

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 67 | 67.97 | 0.67 | 66 | 67.67 | 0.66 | 66 | 67.13 | 0.57 | 66 | 67.17 | 0.53 |
| | | 2op | 67 | 67.9 | 0.31 | 66 | 67.63 | 0.61 | 66 | 66.93 | 0.52 | 66 | 66.93 | 0.25 |
| | 50 | rnd | 67 | 67.8 | 0.66 | 67 | 67.37 | 0.49 | 66 | 66.83 | 0.53 | 66 | 66.8 | 0.41 |
| | | 2op | 67 | 67.7 | 0.47 | 67 | 67.47 | 0.51 | 66 | 66.73 | 0.45 | 66 | 66.7 | 0.47 |
| 51 | 20 | rnd | 66 | 67.7 | 0.6 | 66 | 67.7 | 0.6 | 66 | 67.3 | 0.53 | 66 | 66.87 | 0.35 |
| | | 2op | 66 | 67.6 | 0.56 | 66 | 67.6 | 0.56 | 66 | 67.17 | 0.59 | 66 | 66.6 | 0.5 |
| | 50 | rnd | 66 | 67.27 | 0.58 | 66 | 67.27 | 0.58 | 66 | 66.87 | 0.51 | 66 | 66.47 | 0.51 |
| | | 2op | 66 | 67.4 | 0.56 | 66 | 67.4 | 0.56 | 66 | 66.7 | 0.53 | 65 | 66.2 | 0.55 |

Table A.138: $DSJC500.5$: transRR – Lower Bound is 43

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 29 | 29 | 0 | 28 | 28.97 | 0.18 | 29 | 29 | 0 | 29 | 29 | 0 |
| | | 2op | 29 | 29 | 0 | 29 | 29 | 0 | 28 | 28.9 | 0.31 | 29 | 29 | 0 |
| | 50 | rnd | 28 | 28.97 | 0.18 | 28 | 28.97 | 0.18 | 28 | 28.9 | 0.31 | 29 | 29 | 0 |
| | | 2op | 28 | 28.93 | 0.25 | 28 | 28.93 | 0.25 | 28 | 28.97 | 0.18 | 28 | 28.97 | 0.18 |
| 51 | 20 | rnd | 29 | 29 | 0 | 29 | 29 | 0 | 29 | 29 | 0 | 28 | 28.93 | 0.25 |
| | | 2op | 29 | 29 | 0 | 29 | 29 | 0 | 29 | 29 | 0 | 28 | 28.87 | 0.35 |
| | 50 | rnd | 28 | 28.97 | 0.18 | 28 | 28.97 | 0.18 | 28 | 28.93 | 0.25 | 28 | 28.83 | 0.38 |
| | | 2op | 29 | 29 | 0 | 29 | 29 | 0 | 28 | 28.97 | 0.18 | 28 | 28.8 | 0.41 |

Table A.139: $DSJC1000.1$: basicRR – Lower Bound is 10

| Parameters | | | Basic | | | after 10000 | | | after 1000 | | | after 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 29 | 29.77 | 0.43 | 29 | 29.53 | 0.51 | 29 | 29.27 | 0.45 | 29 | 29 | 0 |
| | | 2op | 29 | 29 | 0 | 29 | 29 | 0 | 29 | 29 | 0 | 29 | 29 | 0 |
| | 50 | rnd | 29 | 29.4 | 0.5 | 29 | 29.43 | 0.5 | 29 | 29.2 | 0.41 | 28 | 28.97 | 0.18 |
| | | 2op | 29 | 29 | 0 | 29 | 29 | 0 | 28 | 28.97 | 0.18 | 29 | 29 | 0 |
| 51 | 20 | rnd | 29 | 29.47 | 0.51 | 29 | 29.47 | 0.51 | 29 | 29.03 | 0.18 | 29 | 29 | 0 |
| | | 2op | 29 | 29 | 0 | 29 | 29 | 0 | 29 | 29 | 0 | 29 | 29 | 0 |
| | 50 | rnd | 29 | 29.1 | 0.31 | 29 | 29.1 | 0.31 | 29 | 29 | 0 | 29 | 29 | 0 |
| | | 2op | 29 | 29 | 0 | 29 | 29 | 0 | 29 | 29 | 0 | 28 | 28.97 | 0.18 |

Table A.140: $DSJC1000.1$: transRR – Lower Bound is 10

## A.4 Travelling Salesman Problem: Large Problem Instances

### A.4.1 Results With No Post Optimization

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| 51 | 500K | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |

Table A.141: *d*1291: basicRR With No Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 148689 | 150691.8 | 148689 | 150691.8 | 150852 | 267258.33 | 699976 | 756245.43 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 91661.8 | 482262 | 571090.53 |
| | 5M | rnd | 145213 | 147817.8 | 186521 | 206342.97 | 500832 | 541296.03 | 719188 | 809141.33 |
| | | 2op | 57789 | 57789 | 76468 | 82250.13 | 344336 | 378985.9 | 566915 | 644450.53 |
| 51 | 500K | rnd | 149071 | 150620.37 | 149071 | 150620.37 | 149071 | 150620.37 | 409544 | 459410.8 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 175979 | 200044.4 |
| | 5M | rnd | 145058 | 147527.4 | 145058 | 149576.37 | 307988 | 362047.1 | 617907 | 687466.4 |
| | | 2op | 57789 | 57789 | 57789 | 59035.07 | 117796 | 140902.5 | 463604 | 530872.97 |

Table A.142: *d*1291: transRR With No Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| 51 | 500K | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |

Table A.143: *d*1291: basicRR+RS With No Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 148309 | 150714.63 | 148309 | 150714.63 | 148309 | 150757.27 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 145019 | 147748.9 | 145318 | 148383.47 | 148092 | 150750.03 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| 51 | 500K | rnd | 149451 | 150649.53 | 149451 | 150649.53 | 149451 | 150649.53 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 144977 | 147112.17 | 144977 | 147129.03 | 146344 | 148327.3 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |

Table A.144: $d1291$: transRR+RS With No Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| 51 | 500K | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |

Table A.145: $d1291$: basicRR+IM With No Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 145840 | 148747.17 | 145840 | 148747.17 | 148558 | 150701.1 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| 51 | 500K | rnd | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |
| | 5M | rnd | 146763 | 149128.37 | 146763 | 149128.37 | 146763 | 149128.37 | 150852 | 150852 |
| | | 2op | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 | 57789 |

Table A.146: $d1291$: transRR+IM With No Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 201879 | 205642.13 | 201879 | 205642.13 | 201904 | 205699.63 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.147: *d*1655: basicRR With No Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 193091 | 197371.47 | 193091 | 197371.47 | 193091 | 223375.37 | 586958 | 636249.8 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 86551.1 | 562905 | 616054.73 |
| | 5M | rnd | 183751 | 189945.8 | 212149 | 225637.83 | 416730 | 450038.13 | 622655 | 689553.2 |
| | | 2op | 70594 | 70594 | 90869 | 96667.17 | 376213 | 413053.3 | 638230 | 710854.73 |
| 51 | 500K | rnd | 191818 | 196915.77 | 191818 | 196915.77 | 191818 | 196915.77 | 352435 | 400756.87 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 186003 | 206181.77 |
| | 5M | rnd | 186361 | 189727.93 | 186361 | 191988.33 | 296717 | 320996.4 | 523345 | 571433.63 |
| | | 2op | 70594 | 70594 | 70594 | 70917.5 | 134581 | 152492.53 | 526048 | 585563.27 |

Table A.148: *d*1655: transRR With No Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 203259 | 205810.27 | 203259 | 205810.27 | 203259 | 205829.07 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.149: *d*1655: basicRR+RS With No Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 193933 | 198455.27 | 193933 | 198455.27 | 193933 | 198794.17 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 187400 | 190677.93 | 187888 | 191704.87 | 193040 | 197981.27 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 193163 | 197157.3 | 193163 | 197157.3 | 193163 | 197157.3 | 194720 | 201326.3 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 184162 | 189852.03 | 182292 | 189421.97 | 187911 | 191948.03 | 194720 | 201326.3 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.150: $d1655$: transRR+RS With No Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.151: $d1655$: basicRR+IM With No Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 186189 | 190640.9 | 186189 | 190640.9 | 188067 | 193557.5 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 | 206052 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 187856 | 191875.17 | 187856 | 191875.17 | 187856 | 191875.17 | 204231 | 205991.3 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.152: $d1655$: transRR+IM With No Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 174955723 | 187977647.8 | 174955723 | 187977647.8 | 174955723 | 187977647.8 | 252112553 | 279322359.7 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 115304195 | 122865932.4 | 115304195 | 122865932.4 | 139517707 | 152736301.5 | 252112553 | 279322359.7 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 187167372 | 192884872.4 | 187167372 | 192884872.4 | 187167372 | 192884872.4 | 187167372 | 193455252.9 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 116833869 | 124656878.1 | 116833869 | 124656878.1 | 116833869 | 124656878.1 | 165042886 | 182419508.8 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.153: *dsj*1000: basicRR With No Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 360801045 | 369029062.5 | 360801045 | 369029062.5 | 368022025 | 463817294.3 | 495893428 | 523453830.8 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 33794834.43 | 133682864 | 157422710.7 |
| | 5M | rnd | 346474247 | 352357006.9 | 285554594 | 314185017.1 | 418582041 | 466020491.5 | 501392909 | 521408463.5 |
| | | 2op | 20935929 | 20948693.83 | 25299894 | 26793895.7 | 82723769 | 93818733.7 | 146750884 | 177378671.9 |
| 51 | 500K | rnd | 360698981 | 368749278.2 | 360698981 | 368749278.2 | 360698981 | 368749278.2 | 469790884 | 510331330.6 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 53544994 | 58932440.07 |
| | 5M | rnd | 345842368 | 353753850.8 | 345842368 | 357075639.7 | 279297168 | 417945097.2 | 475862012 | 505961551.1 |
| | | 2op | 20938699 | 20948786.17 | 20949134 | 21260900.07 | 39201257 | 45053698.33 | 112521240 | 132490125.4 |

Table A.154: *dsj*1000: transRR With No Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 178311636 | 187949114.3 | 178311636 | 187949114.3 | 178311636 | 187949114.3 | 242126379 | 274509796.4 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 115491657 | 122343051.6 | 115491657 | 122343051.6 | 137352063 | 154253678 | 242126379 | 274509796.4 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 186111023 | 193117020.7 | 186111023 | 193117020.7 | 186111023 | 193117020.7 | 186111023 | 194822683.4 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 113526287 | 124263363.2 | 113526287 | 124263363.2 | 113526287 | 124263363.2 | 159479796 | 182921385 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.155: *dsj*1000: basicRR+RS With No Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 355371097 | 368193052 | 355371097 | 368193052 | 357263364 | 373388330.3 | 399992316 | 418293651.5 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 337199038 | 352716557.6 | 313125497 | 323721543.1 | 357263364 | 373388330.3 | 399992316 | 418293651.5 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 361369807 | 368543689.9 | 361369807 | 368543689.9 | 361369807 | 368543689.9 | 374109058 | 384050005.9 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 344704755 | 352153193.1 | 344704755 | 352048773.4 | 243653589 | 345033475.4 | 374109058 | 384050005.9 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.156: *dsj*1000: transRR+RS With No Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 278248867 | 285319242.1 | 278248867 | 285319242.1 | 278248867 | 285319242.1 | 282409344 | 300212028.2 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 162238194 | 168296986.3 | 162238194 | 168296986.3 | 162238194 | 168296986.3 | 278427621 | 299979219.2 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 301734981 | 309118588.5 | 301734981 | 309118588.5 | 301734981 | 309118588.5 | 301734981 | 309118588.5 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 176470806 | 181124969.1 | 176470806 | 181124969.1 | 176470806 | 181124969.1 | 185861715 | 267005763.6 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.157: *dsj*1000: basicRR+IM With No Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 392065015 | 398896050.3 | 392065015 | 398896050.3 | 392065015 | 398896050.3 | 413999495 | 433339794.9 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 346961571 | 357963110.6 | 346961571 | 357963110.6 | 360723884 | 370574205 | 413999495 | 433339794.9 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 403568044 | 408145152.3 | 403568044 | 408145152.3 | 403568044 | 408145152.3 | 403568044 | 408145152.3 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 354799725 | 361000963.6 | 354799725 | 361000963.6 | 354799725 | 361000963.6 | 387737885 | 407893312.7 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.158: *dsj*1000: transRR+IM With No Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 159331 | 167577.63 | 159331 | 167577.63 | 159331 | 167714.63 | 172735 | 172735 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 102134 | 108054.6 | 102134 | 108054.6 | 128228 | 142634.1 | 172735 | 172735 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 145758 | 155504.47 | 145758 | 155504.47 | 145758 | 155504.47 | 146125 | 166045.03 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 99232 | 105129.77 | 99232 | 105129.77 | 99232 | 105381.5 | 145563 | 165748.27 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.159: $fl1400$: basicRR With No Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 127075 | 131791.47 | 127075 | 131791.47 | 130759 | 189001.9 | 493778 | 547819.3 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 32210.6 | 182224 | 221123 |
| | 5M | rnd | 123193 | 128889.13 | 109896 | 132738.13 | 276336 | 313154.23 | 550954 | 588009.7 |
| | | 2op | 21672 | 21672 | 25424 | 27630.1 | 76904 | 96362.3 | 203731 | 264635.1 |
| 51 | 500K | rnd | 125200 | 131696.1 | 125200 | 131696.1 | 125200 | 131696.1 | 251587 | 296642.47 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 49076 | 58509.7 |
| | 5M | rnd | 121759 | 128969.2 | 121759 | 129807.43 | 176645 | 199440.23 | 411951 | 457979.77 |
| | | 2op | 21672 | 21672 | 21672 | 22075.17 | 40220 | 49156.33 | 119840 | 158766.07 |

Table A.160: $fl1400$: transRR With No Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 161976 | 167783.37 | 161976 | 167783.37 | 161976 | 167783.37 | 172735 | 172735 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 103991 | 108330.43 | 103991 | 108330.43 | 128633 | 142222.1 | 172735 | 172735 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 149301 | 156737.47 | 149301 | 156737.47 | 149301 | 156737.47 | 149631 | 166694.17 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 97537 | 104524.73 | 97537 | 104524.73 | 98093 | 104583.17 | 146171 | 166429.37 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.161: $fl1400$: basicRR+RS With No Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 126096 | 132545.43 | 126096 | 132545.43 | 126169 | 133223.93 | 134642 | 143539.53 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 123977 | 129992.07 | 115061 | 121566.7 | 126169 | 133223.93 | 134642 | 143539.53 |
| | | 2op | 21670 | 21671.93 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 127490 | 131886.37 | 127490 | 131886.37 | 127490 | 131886.37 | 129025 | 133829.97 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 124802 | 129084.03 | 120750 | 126432.23 | 117134 | 127267.4 | 129025 | 133829.97 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.162: $fl1400$: transRR+RS With No Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 172735 | 172735 | 172735 | 172735 | 172735 | 172735 | 172735 | 172735 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 122751 | 127269.13 | 122751 | 127269.13 | 122751 | 129355.47 | 172735 | 172735 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 169976 | 172643.03 | 169976 | 172643.03 | 169976 | 172643.03 | 169976 | 172643.03 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 127248 | 132522.4 | 127248 | 132522.4 | 127248 | 132522.4 | 158519 | 170997.87 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.163: $fl1400$: basicRR+IM With No Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 133857 | 136846.37 | 133857 | 136846.37 | 133857 | 136846.37 | 136967 | 141983.83 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 125290 | 127513.47 | 125290 | 127513.47 | 126362 | 128861.9 | 136967 | 141983.83 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 137185 | 139268 | 137185 | 139268 | 137185 | 139268 | 137185 | 139268 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 124485 | 127518.6 | 124485 | 127518.6 | 124485 | 127518.6 | 131813 | 138106.57 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.164: $fl1400$: transRR+IM With No Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| 51 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |

Table A.165: $fl1577$: basicRR With No Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 98834.83 | 504607 | 558651.03 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 39821.93 | 301260 | 361482.53 |
| | 5M | rnd | 51304 | 51304 | 66345 | 73411.83 | 299056 | 356089.8 | 554281 | 602664.73 |
| | | 2op | 23918 | 23962.47 | 31701 | 34533.13 | 189030 | 206020.3 | 336632 | 410417.33 |
| 51 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 160531 | 201062.23 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 71195 | 81410.77 |
| | 5M | rnd | 51304 | 51304 | 51304 | 52113.17 | 115651 | 151030.8 | 450698 | 487723.67 |
| | | 2op | 23911 | 23961.1 | 23947 | 24629.13 | 50077 | 59427.83 | 264711 | 315208.23 |

Table A.166: $fl1577$: transRR With No Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| 51 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |

Table A.167: $fl1577$: basicRR+RS With No Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 50658 | 51282.47 | 50860 | 51289.2 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23890 | 23959.13 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| 51 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23959 | 23964.8 | 23959 | 23964.8 | 23965 | 23965 | 23965 | 23965 |

Table A.168: $fl1577$: transRR+RS With No Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| 51 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |

Table A.169: $fl1577$: basicRR+IM With No Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| 51 | 500K | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |
| | 5M | rnd | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 | 51304 |
| | | 2op | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 | 23965 |

Table A.170: $fl1577$: transRR+IM With No Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 386383 | 399215.1 | 386383 | 399215.1 | 386383 | 399215.1 | 551030 | 595544.07 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 233222 | 241586.3 | 233222 | 241586.3 | 293365 | 327818.33 | 551030 | 595544.07 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 384920 | 393721.9 | 384920 | 393721.9 | 384920 | 393721.9 | 384920 | 405111.17 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 228521 | 238857.83 | 228521 | 238857.83 | 228521 | 239162.37 | 368688 | 400748.73 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.171: *nrw*1379: basicRR With No Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 412066 | 424087.47 | 412066 | 424087.47 | 417220 | 565415.67 | 622015 | 665951.1 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 91686.63 | 384640 | 421307.27 |
| | 5M | rnd | 393958 | 402806.37 | 301226 | 332530.9 | 510912 | 584640.13 | 641780 | 673171.47 |
| | | 2op | 62317 | 62317 | 78840 | 83563 | 252770 | 300892.53 | 411639 | 463423.17 |
| 51 | 500K | rnd | 410915 | 425708.8 | 410915 | 425708.8 | 410915 | 425708.8 | 614879 | 658447 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 153037 | 171136.07 |
| | 5M | rnd | 388673 | 403896.37 | 388307 | 410168.4 | 277288 | 511591.73 | 592536 | 639513.53 |
| | | 2op | 62317 | 62317 | 62317 | 62724.83 | 117180 | 127481.73 | 355149 | 404004.3 |

Table A.172: *nrw*1379: transRR With No Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 383169 | 399791.23 | 383169 | 399791.23 | 383169 | 399791.23 | 537992 | 595409.8 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 232074 | 242352.1 | 232074 | 242352.1 | 296553 | 325450 | 537992 | 595409.8 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 383828 | 394482.33 | 383828 | 394482.33 | 383828 | 394482.33 | 383828 | 405158.07 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 230404 | 240217.2 | 230404 | 240217.2 | 230404 | 240217.2 | 357328 | 399660.33 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.173: *nrw*1379: basicRR+RS With No Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 407879 | 423791.7 | 407879 | 423791.7 | 408472 | 429527.67 | 474231 | 496587.17 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 386210 | 402631 | 320414 | 358154.2 | 408472 | 429423.73 | 474231 | 496587.17 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 411697 | 425463.83 | 411697 | 425463.83 | 411697 | 425463.83 | 421216 | 443045.1 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 393039 | 401853.23 | 363770 | 398592.6 | 398902 | 411929.63 | 421216 | 443045.1 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.174: *nrw*1379: transRR+RS With No Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 529832 | 543779.8 | 529832 | 543779.8 | 529832 | 543779.8 | 595176 | 643190.23 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 328937 | 340883.6 | 328937 | 340883.6 | 328937 | 342133.03 | 595176 | 635355.1 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 529842 | 541890.13 | 529842 | 541890.13 | 529842 | 541890.13 | 529842 | 541890.13 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 354426 | 361736.63 | 354426 | 361736.63 | 354426 | 361736.63 | 395078 | 436244.73 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.175: *nrw*1379: basicRR+IM With No Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 462395 | 468681.27 | 462395 | 468681.27 | 462395 | 468681.27 | 491761 | 511298.8 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 395092 | 407056.9 | 395092 | 407056.9 | 410729 | 423420.67 | 491761 | 511298.8 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 483437 | 488680.23 | 483437 | 488680.23 | 483437 | 488680.23 | 483437 | 488680.23 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 406010 | 413432.2 | 406010 | 413432.2 | 406010 | 413996.03 | 454744 | 488918.53 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.176: *nrw*1379: transRR+IM With No Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.177: *pcb*1173: basicRR With No Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 111333 | 113700.77 | 111333 | 113700.77 | 111847 | 166622.07 | 529081 | 586899.07 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 106088 | 418036 | 467476.6 |
| | 5M | rnd | 108104 | 110417.43 | 136795 | 145163.87 | 316182 | 371837.9 | 559661 | 650724.9 |
| | | 2op | 65114 | 65129.47 | 82062 | 86980.73 | 285533 | 312571.23 | 450347 | 528966.07 |
| 51 | 500K | rnd | 111142 | 113632.6 | 111142 | 113632.6 | 111142 | 113632.6 | 245098 | 281410.8 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 166313 | 186759.83 |
| | 5M | rnd | 108202 | 110297.4 | 108533 | 111601.63 | 194528 | 221565.1 | 433683 | 503607.83 |
| | | 2op | 65123 | 65129.7 | 65128 | 65702.5 | 124823 | 139224.5 | 385280 | 419449.37 |

Table A.178: *pcb*1173: transRR With No Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.179: *pcb*1173: basicRR+RS With No Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 111396 | 113639.1 | 111396 | 113639.1 | 111992 | 114327.7 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 108256 | 110203.67 | 108600 | 110700.6 | 111992 | 114297.5 | 123837 | 123837 |
| | | 2op | 65102 | 65129.07 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 112179 | 113752.5 | 112179 | 113752.5 | 112179 | 113752.5 | 114383 | 116959.9 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 108772 | 110623 | 105784 | 110326.53 | 109846 | 111779.93 | 114383 | 116959.9 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.180: *pcb*1173: transRR+RS With No Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.181: *pcb*1173: basicRR+IM With No Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 123803 | 123835.87 | 123803 | 123835.87 | 123803 | 123835.87 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 108878 | 111273.7 | 108878 | 111273.7 | 111153 | 113924.27 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 | 123837 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 109899 | 111409.93 | 109899 | 111409.93 | 109899 | 111409.93 | 120512 | 123248.7 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.182: *pcb*1173: transRR+IM With No Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |

Table A.183: *pr*1002: basicRR With No Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 327690 | 334608.2 | 327690 | 334608.2 | 331562 | 550163.07 | 1986013 | 2241443.97 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 487373.7 | 1907474 | 2172300.53 |
| | 5M | rnd | 321109 | 327801.63 | 395165 | 430234.83 | 1263163 | 1374698.33 | 2191310 | 2555430.2 |
| | | 2op | 285537 | 285537 | 356944 | 375776.5 | 1275650 | 1422920.53 | 2205464 | 2476215.9 |
| 51 | 500K | rnd | 324365 | 333325 | 324365 | 333325 | 324365 | 333325 | 840477 | 910713.9 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 742008 | 841117.83 |
| | 5M | rnd | 319482 | 326448.87 | 319482 | 339039.67 | 632032 | 719069.57 | 1621086 | 1895667.67 |
| | | 2op | 285412 | 285532.83 | 285537 | 291481.73 | 560029 | 621373.63 | 1778045 | 1959663 |

Table A.184: *pr*1002: transRR With No Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |

Table A.185: *pr*1002: basicRR+RS With No Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 329469 | 337223.2 | 329469 | 337223.2 | 331896 | 340102.8 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 322502 | 329157.33 | 323280 | 330896.97 | 331896 | 340098.1 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 329835 | 334323.07 | 329835 | 334323.07 | 329835 | 334323.07 | 336792 | 345193.63 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 323188 | 326668.97 | 323188 | 326534.57 | 326238 | 330045.43 | 336792 | 345193.63 |
| | | 2op | 285436 | 285533.63 | 285436 | 285533.63 | 285537 | 285537 | 285537 | 285537 |

Table A.186: *pr*1002: transRR+RS With No Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |

Table A.187: *pr*1002: basicRR+IM With No Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 321502 | 327262.37 | 321502 | 327262.37 | 332074 | 336959.8 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 323359 | 327754.9 | 323359 | 327754.9 | 323359 | 327754.9 | 349403 | 349403 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |

Table A.188: *pr*1002: transRR+IM With No Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2688350 | 2760100.27 | 2688350 | 2760100.27 | 2688350 | 2760100.27 | 3231694 | 3231694 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 1701731 | 1760215 | 1701731 | 1760215 | 2153966 | 2357086.87 | 3231694 | 3231694 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 2590651 | 2695793.8 | 2590651 | 2695793.8 | 2590651 | 2695793.8 | 2644064 | 2839534.83 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 1673152 | 1734794.63 | 1673152 | 1734794.63 | 1687501 | 1735292.23 | 2584959 | 2827187.87 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |

Table A.189: *rl*1304: basicRR With No Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2680765 | 2749575.93 | 2680765 | 2749575.93 | 2715628 | 3322183.83 | 7356105 | 7646888.13 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 476608.27 | 2812311 | 3090174.97 |
| | 5M | rnd | 2637593 | 2685625.07 | 3125368 | 3440703.63 | 5698963 | 6050902.67 | 7536575 | 7822021.4 |
| | | 2op | 287064 | 287158.3 | 360690 | 398456.67 | 1850494 | 2027784.77 | 3171654 | 3443041.87 |
| 51 | 500K | rnd | 2701233 | 2767161.23 | 2701233 | 2767161.23 | 2701233 | 2767161.23 | 5079977 | 5658872.23 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 852794 | 1013744.3 |
| | 5M | rnd | 2624770 | 2692390.8 | 2624770 | 2713990.83 | 4351907 | 4654952.57 | 7050045 | 7294566.07 |
| | | 2op | 286868 | 287141.97 | 286868 | 289622.6 | 624175 | 699332.07 | 2437972 | 2810556.5 |

Table A.190: *rl*1304: transRR With No Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2683430 | 2776478.93 | 2683430 | 2776478.93 | 2683430 | 2776478.93 | 3231694 | 3231694 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 1697494 | 1757377.9 | 1697494 | 1757377.9 | 2114838 | 2343272.2 | 3231694 | 3231694 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 2545119 | 2682550.17 | 2545119 | 2682550.17 | 2545119 | 2682550.17 | 2659192 | 2863530.83 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 1649870 | 1728320.83 | 1649870 | 1728320.83 | 1649870 | 1728381.2 | 2544722 | 2848132.97 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |

Table A.191: *rl*1304: basicRR+RS With No Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2678998 | 2753768.9 | 2678998 | 2753768.9 | 2683164 | 2761602.17 | 2932427 | 3092481.43 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 2615827 | 2682453.03 | 2622685 | 2693430.9 | 2680107 | 2755803.63 | 2932427 | 3092481.43 |
| | | 2op | 286864 | 287152.83 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 2682858 | 2752107.13 | 2682858 | 2752107.13 | 2682858 | 2752107.13 | 2696813 | 2796179.47 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 2600362 | 2683456.27 | 2568058 | 2675580.37 | 2657163 | 2702778.87 | 2696813 | 2796179.47 |
| | | 2op | 286544 | 287132.3 | 286681 | 287136.87 | 287163 | 287163 | 287163 | 287163 |

Table A.192: *rl*1304: transRR+RS With No Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 3231694 | 3231694 | 3231694 | 3231694 | 3231694 | 3231694 | 3231694 | 3231694 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 2268518 | 2360788.4 | 2268518 | 2360788.4 | 2303950 | 2407684.57 | 3231694 | 3231694 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 3231694 | 3231694 | 3231694 | 3231694 | 3231694 | 3231694 | 3231694 | 3231694 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 2413111 | 2499918.27 | 2413111 | 2499918.27 | 2413111 | 2499918.27 | 2844597 | 3146104.8 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |

Table A.193: *rl*1304: basicRR+IM With No Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2973047 | 3028338.13 | 2973047 | 3028338.13 | 2973047 | 3028338.13 | 3017559 | 3164905.57 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 2604671 | 2684910.17 | 2604671 | 2684910.17 | 2635677 | 2714650.03 | 2986328 | 3163864.53 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 3048529 | 3113967.73 | 3048529 | 3113967.73 | 3048529 | 3113967.73 | 3048529 | 3113967.73 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 2645418 | 2690722.27 | 2645418 | 2690722.27 | 2645418 | 2690722.27 | 2862051 | 3048877.37 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |

Table A.194: *rl*1304: transRR+IM With No Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2763827 | 2895121.07 | 2763827 | 2895121.07 | 2791341 | 2897212.5 | 3088190 | 3088190 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 1811023 | 1885893.37 | 1811023 | 1885893.37 | 2118521 | 2469266.5 | 3088190 | 3088190 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 2765001 | 2836881.07 | 2765001 | 2836881.07 | 2765001 | 2836881.07 | 2765001 | 2965853.93 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 1822244 | 1871204.1 | 1822244 | 1871204.1 | 1822244 | 1872696.1 | 2719600 | 2950839.2 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.195: *rl*1323: basicRR With No Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2718705 | 2780764.13 | 2718705 | 2780764.13 | 2718705 | 3483255.07 | 7851252 | 8196798.1 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 466259.03 | 2771805 | 3129412.23 |
| | 5M | rnd | 2671099 | 2719616.77 | 3164692 | 3437781.17 | 6349937 | 6546691.37 | 7938093 | 8292566.4 |
| | | 2op | 307805 | 307805 | 399804 | 428559.57 | 1844088 | 2056127.27 | 3217645 | 3455603.43 |
| 51 | 500K | rnd | 2733898 | 2774791.13 | 2733898 | 2774791.13 | 2733898 | 2774791.13 | 5179131 | 6186929.5 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 926676 | 1058449.83 |
| | 5M | rnd | 2664070 | 2711421.57 | 2664070 | 2731223.97 | 4626208 | 4907533.03 | 7437593 | 7804381.07 |
| | | 2op | 307631 | 307797.63 | 307805 | 312013.1 | 661650 | 738995.73 | 2619567 | 2884334.17 |

Table A.196: *rl*1323: transRR With No Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2808090 | 2914967.57 | 2808090 | 2914967.57 | 2808090 | 2914967.57 | 3088190 | 3088190 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 1834233 | 1891323.13 | 1834233 | 1891323.13 | 2249696 | 2434605.3 | 3088190 | 3088190 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 2785969 | 2846584.2 | 2785969 | 2846584.2 | 2785969 | 2846584.2 | 2785969 | 2960461.47 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 1794132 | 1867594.93 | 1794132 | 1867594.93 | 1794132 | 1867594.93 | 2742115 | 2946580.03 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.197: *rl*1323: basicRR+RS With No Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2703590 | 2776430.53 | 2703590 | 2776430.53 | 2719379 | 2784904.53 | 2997782 | 3073833.4 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 2650168 | 2712644.67 | 2667749 | 2724944 | 2714216 | 2780856.4 | 2997782 | 3073833.4 |
| | | 2op | 307707 | 307801.73 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 2729497 | 2783842.77 | 2729497 | 2783842.77 | 2729497 | 2783842.77 | 2755562 | 2821024.27 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 2643192 | 2714379.8 | 2599702 | 2707618.77 | 2668290 | 2737006.53 | 2755562 | 2821024.27 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.198: *rl*1323: transRR+RS With No Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 2459686 | 2505639.37 | 2459686 | 2505639.37 | 2460045 | 2545135.83 | 3088190 | 3088190 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 2579598 | 2647333.6 | 2579598 | 2647333.6 | 2579598 | 2647333.6 | 2938140 | 3081847.63 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.199: *rl*1323: basicRR+IM With No Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 3012518 | 3071469.5 | 3012518 | 3071469.5 | 3012518 | 3071469.5 | 3069218 | 3086551.93 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 2674518 | 2727623.07 | 2674518 | 2727623.07 | 2705986 | 2759434.4 | 3062975 | 3086312.3 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 | 3088190 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 2681944 | 2723862 | 2681944 | 2723862 | 2681944 | 2723862 | 2856360 | 3038887 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.200: *rl*1323: transRR+IM With No Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 4710935 | 4851555.07 | 4710935 | 4851555.07 | 4710935 | 4851555.07 | 6231431 | 6578445.9 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 2958463 | 3072377.23 | 2958463 | 3072377.23 | 3414403 | 3781458.27 | 6231431 | 6578445.9 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 4707797 | 4813981.63 | 4707797 | 4813981.63 | 4707797 | 4813981.63 | 4707797 | 4837199.87 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 2826526 | 3059448.63 | 2826526 | 3059448.63 | 2826526 | 3059448.63 | 4206971 | 4620366.4 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |

Table A.201: *rl*1889: basicRR With No Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 5223939 | 5333717.9 | 5223939 | 5333717.9 | 5223939 | 5558878.67 | 12148426 | 12393225.53 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 381704.73 | 3666503 | 4094549.67 |
| | 5M | rnd | 4984673 | 5127234.43 | 5076119 | 6224667.6 | 9434549 | 10109877 | 12185704 | 12606246.97 |
| | | 2op | 368831 | 368831 | 474922 | 505198.33 | 2519535 | 2834968.47 | 4227780 | 4540186.17 |
| 51 | 500K | rnd | 5218731 | 5331665.3 | 5218731 | 5331665.3 | 5218731 | 5331665.3 | 5257397 | 9077683.5 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 686197 | 1160473.97 |
| | 5M | rnd | 5010281 | 5115268.67 | 5010281 | 5115268.67 | 7449598 | 8069872.33 | 11539776 | 11869404.23 |
| | | 2op | 368698 | 368826.57 | 368698 | 368826.57 | 761358 | 855049.23 | 3637753 | 3899588.23 |

Table A.202: *rl*1889: transRR With No Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 4786943 | 4895281.33 | 4786943 | 4895281.33 | 4786943 | 4895281.33 | 6438202 | 6589149.63 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 2967192 | 3086205.5 | 2967192 | 3086205.5 | 3468374 | 3818608.3 | 6438202 | 6589149.63 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 4658169 | 4806602 | 4658169 | 4806602 | 4658169 | 4806602 | 4658169 | 4852429.27 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 2953265 | 3048170.97 | 2953265 | 3048170.97 | 2953265 | 3048170.97 | 4192294 | 4634581.4 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |

Table A.203: *rl*1889: basicRR+RS With No Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 5200112 | 5326916.63 | 5200112 | 5326916.63 | 5221008 | 5328972.93 | 5745371 | 5993039.57 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 4994641 | 5125073.83 | 5001842 | 5133413.53 | 5187316 | 5273682.07 | 5745371 | 5993039.57 |
| | | 2op | 368460 | 368809.4 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 5216539 | 5334591.87 | 5216539 | 5334591.87 | 5216539 | 5334591.87 | 5216539 | 5360955.87 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 5028413 | 5123618 | 5028413 | 5123618 | 5068380 | 5158264.87 | 5214137 | 5353378.93 |
| | | 2op | 368706 | 368826.83 | 368706 | 368826.83 | 368831 | 368831 | 368831 | 368831 |

Table A.204: *rl*1889: transRR+RS With No Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 6601280 | 6601280 | 6601280 | 6601280 | 6601280 | 6601280 | 6601280 | 6601280 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 4184227 | 4315614 | 4184227 | 4315614 | 4184227 | 4315614 | 6601280 | 6601280 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 6601280 | 6601280 | 6601280 | 6601280 | 6601280 | 6601280 | 6601280 | 6601280 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 4406336 | 4530703.07 | 4406336 | 4530703.07 | 4406336 | 4530703.07 | 4729587 | 5790207.4 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |

Table A.205: *rl*1889: basicRR+IM With No Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 5836493 | 5986159.77 | 5836493 | 5986159.77 | 5836493 | 5986159.77 | 5894232 | 6083419.8 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 5093064 | 5191771.53 | 5093064 | 5191771.53 | 5131798 | 5222593.87 | 5861899 | 6085765.17 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 6124751 | 6212022.77 | 6124751 | 6212022.77 | 6124751 | 6212022.77 | 6124751 | 6212022.77 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 5140353 | 5220256.5 | 5140353 | 5220256.5 | 5140353 | 5220256.5 | 5596542 | 6091162.03 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |

Table A.206: *rl*1889: transRR+IM With No Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.207: $u1060$: basicRR With No Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 258426 | 260085.07 | 258426 | 260085.07 | 260174 | 416277.7 | 1824828 | 1971984.53 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 403851.7 | 1713850 | 2014824.07 |
| | 5M | rnd | 254956 | 256437.03 | 309193 | 330037.4 | 1151654 | 1253208.67 | 1895310 | 2248907 |
| | | 2op | 248394 | 248394 | 298649 | 319293.5 | 1102347 | 1227468.47 | 2046145 | 2247322.33 |
| 51 | 500K | rnd | 258607 | 260009.37 | 258607 | 260009.37 | 258607 | 260009.37 | 616773 | 682255.37 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 595665 | 685737.03 |
| | 5M | rnd | 254180 | 255798.27 | 254307 | 260614.53 | 495533 | 552436.2 | 1560734 | 1769262.97 |
| | | 2op | 248394 | 248394 | 248394 | 251729.8 | 453907 | 512451.23 | 1560500 | 1743017.8 |

Table A.208: $u1060$: transRR With No Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.209: $u1060$: basicRR+RS With No Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 258568 | 260047.43 | 258568 | 260047.43 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 253944 | 256094.17 | 255182 | 257110.13 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248357 | 248392.77 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 258762 | 260003.2 | 258762 | 260003.2 | 258762 | 260003.2 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 254633 | 256036.5 | 254633 | 256105.87 | 255521 | 257778.7 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.210: $u1060$: transRR+RS With No Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.211: $u1060$: basicRR+IM With No Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 256324 | 257936.7 | 256324 | 257936.7 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 257275 | 258492.3 | 257275 | 258492.3 | 257275 | 258492.3 | 260174 | 260174 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.212: $u1060$: transRR+IM With No Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |

Table A.213: $u1432$: basicRR With No Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 181402 | 182674.6 | 181402 | 182674.6 | 182180 | 270961.17 | 1036634 | 1151218.23 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 257677.37 | 1078264 | 1156554.27 |
| | 5M | rnd | 175645 | 176627.07 | 214407 | 229590.77 | 695685 | 802459.93 | 1127576 | 1263483.87 |
| | | 2op | 169997 | 170056.93 | 213027 | 221456.27 | 750610 | 796978.77 | 1151987 | 1248701.1 |
| 51 | 500K | rnd | 180459 | 182284.37 | 180459 | 182284.37 | 180459 | 182284.37 | 408115 | 444616.73 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 389038 | 439047.93 |
| | 5M | rnd | 175155 | 176389.63 | 176154 | 182518.83 | 308773 | 339101.5 | 938263 | 1070879.53 |
| | | 2op | 169847 | 170048.27 | 170059 | 175614.8 | 286987 | 325245.8 | 974100 | 1076653.83 |

Table A.214: $u1432$: transRR With No Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |

Table A.215: $u1432$: basicRR+RS With No Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 180683 | 182527.23 | 180683 | 182527.23 | 181652 | 182949.27 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 175028 | 176623.73 | 175848 | 177673.77 | 181652 | 182884.33 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 180571 | 182478.4 | 180571 | 182478.4 | 180571 | 182478.4 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 175177 | 176542.03 | 175718 | 176679.03 | 177047 | 178616.57 | 183070 | 183070 |
| | | 2op | 169750 | 170048.7 | 169750 | 170048.7 | 170059 | 170059 | 170059 | 170059 |

Table A.216: $u1432$: transRR+RS With No Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |

Table A.217: $u1432$: basicRR+IM With No Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 177921 | 179822.67 | 177921 | 179822.67 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 179445 | 180475.03 | 179445 | 180475.03 | 179445 | 180475.03 | 183070 | 183070 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |

Table A.218: $u1432$: transRR+IM With No Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |

Table A.219: $u1817$: basicRR With No Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 92184.43 | 546802 | 617224.9 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 78370.47 | 534725 | 596299.1 |
| | 5M | rnd | 70053 | 70595.37 | 87932 | 96806.2 | 356851 | 406349.27 | 604306 | 690261.9 |
| | | 2op | 65378 | 65378 | 83605 | 90322.2 | 367212 | 403881.6 | 637067 | 683648.33 |
| 51 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 132506 | 183693.23 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 158667 | 186659.53 |
| | 5M | rnd | 69801 | 70457.83 | 69801 | 70627.53 | 134629 | 143454.23 | 498852 | 576399.03 |
| | | 2op | 65364 | 65377.53 | 65364 | 65751.1 | 128339 | 139815.93 | 532479 | 573202.63 |

Table A.220: $u1817$: transRR With No Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |

Table A.221: $u1817$: basicRR+RS With No Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 69997 | 70568.4 | 70261 | 70915.8 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 70106 | 70414.7 | 70106 | 70415.73 | 70548 | 71166.7 | 71460 | 71460 |
| | | 2op | 65331 | 65375 | 65335 | 65375.5 | 65378 | 65378 | 65378 | 65378 |

Table A.222: $u1817$: transRR+RS With No Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |

Table A.223: $u1817$: basicRR+IM With No Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 | 71460 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |

Table A.224: $u1817$: transRR+IM With No Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2576299 | 2688877.8 | 2576299 | 2688877.8 | 2576299 | 2688877.8 | 3726991 | 4172049.07 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 1614933 | 1684621.6 | 1614933 | 1684621.6 | 1940653 | 2143519.5 | 3726991 | 4172049.07 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 2614423 | 2704846.17 | 2614423 | 2704846.17 | 2614423 | 2704846.17 | 2614423 | 2730624.53 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 1630773 | 1700391.83 | 1630773 | 1700391.83 | 1630773 | 1701673.03 | 2384964 | 2634804.4 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |

Table A.225: *vm*1084: basicRR With No Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 3529237 | 3664031.17 | 3529237 | 3664031.17 | 3617400 | 4853734.5 | 6936979 | 7175648.07 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 478729.1 | 2393641 | 2674283.2 |
| | 5M | rnd | 3424320 | 3533142.63 | 3777863 | 4336059.63 | 5405434 | 5719645.3 | 7104698 | 7298327.17 |
| | | 2op | 273211 | 273286.4 | 339071 | 362849.27 | 1503242 | 1650139.53 | 2705243 | 3046909.47 |
| 51 | 500K | rnd | 3557297 | 3677767.33 | 3557297 | 3677767.33 | 3557297 | 3677767.33 | 6057998 | 6433366.53 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 760022 | 846892.53 |
| | 5M | rnd | 3442311 | 3541276.03 | 3426965 | 3535905.17 | 4147049 | 4903440.27 | 6435755 | 6773555.87 |
| | | 2op | 272868 | 273255.97 | 272991 | 277514.43 | 531465 | 625266.67 | 1944117 | 2344300.77 |

Table A.226: *vm*1084: transRR With No Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 2622652 | 2706018 | 2622652 | 2706018 | 2622652 | 2706018 | 3715470 | 4051572.2 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 1618446 | 1688977.1 | 1618446 | 1688977.1 | 1996151 | 2177190 | 3715470 | 4051572.2 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 2580469 | 2728596.23 | 2580469 | 2728596.23 | 2580469 | 2728596.23 | 2580469 | 2813666.1 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 1639452 | 1715685.8 | 1639452 | 1715685.8 | 1645840 | 1715898.73 | 2487808 | 2737453.03 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |

Table A.227: *vm*1084: basicRR+RS With No Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 3619334 | 3688359.8 | 3619334 | 3688359.8 | 3629712 | 3719217.63 | 3979212 | 4214755.2 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 3465514 | 3549019.87 | 3132687 | 3358927.47 | 3598945 | 3717497.93 | 3979212 | 4214755.2 |
| | | 2op | 273212 | 273286.43 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 3532632 | 3672408.73 | 3532632 | 3672408.73 | 3532632 | 3672408.73 | 3689565 | 3786578.87 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 3397452 | 3535550.6 | 3323233 | 3522823.37 | 3425947 | 3581577.9 | 3689565 | 3786578.87 |
| | | 2op | 273184 | 273285.5 | 273268 | 273288.3 | 273289 | 273289 | 273289 | 273289 |

Table A.228: *vm*1084: transRR+RS With No Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 3863849 | 4011093.8 | 3863849 | 4011093.8 | 3863849 | 4011093.8 | 4068155 | 4488999.93 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 2240484 | 2376534.43 | 2240484 | 2376534.43 | 2240484 | 2377014.17 | 4068155 | 4488999.93 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 4046529 | 4108107.6 | 4046529 | 4108107.6 | 4046529 | 4108107.6 | 4046529 | 4108107.6 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 2495445 | 2555904.57 | 2495445 | 2555904.57 | 2495445 | 2555904.57 | 2932588 | 3618431.47 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |

Table A.229: *vm*1084: basicRR+IM With No Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 3897013 | 4009408.73 | 3897013 | 4009408.73 | 3897013 | 4009408.73 | 4105462 | 4347082.53 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 3509759 | 3562026.53 | 3509759 | 3562026.53 | 3560670 | 3644972.9 | 4105462 | 4347082.53 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 4019190 | 4121050.43 | 4019190 | 4121050.43 | 4019190 | 4121050.43 | 4019190 | 4121050.43 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 3507524 | 3560203.37 | 3507524 | 3560203.37 | 3507524 | 3560203.37 | 3863725 | 4110399 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |

Table A.230: *vm*1084: transRR+IM With No Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 5203606 | 5366689.73 | 5203606 | 5366689.73 | 5203606 | 5366689.73 | 6657925 | 7354246.7 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 3129592 | 3278712.2 | 3129592 | 3278712.2 | 3644244 | 3953686.47 | 6657925 | 7354246.7 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 5297569 | 5435401.83 | 5297569 | 5435401.83 | 5297569 | 5435401.83 | 5297569 | 5436802.67 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 3167943 | 3282787.4 | 3167943 | 3282787.4 | 3167943 | 3282787.4 | 4467900 | 4959709.9 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.231: *vm*1748: basicRR With No Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 7029120 | 7175121.6 | 7029120 | 7175121.6 | 7029120 | 7792385.67 | 12367557 | 12779340.57 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 462382.07 | 3065297 | 3822010.67 |
| | 5M | rnd | 6647551 | 6830365.2 | 6655345 | 7756302.13 | 9355664 | 9842987.73 | 12373036 | 12914679 |
| | | 2op | 379201 | 379201 | 465176 | 505383.03 | 2265813 | 2427219.87 | 4017275 | 4396282.7 |
| 51 | 500K | rnd | 7016631 | 7226444.97 | 7016631 | 7226444.97 | 7016631 | 7226444.97 | 7257344 | 11082698.57 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 917985 | 1096362 |
| | 5M | rnd | 6622951 | 6861768.53 | 6622951 | 6861768.53 | 8377753 | 9200532.4 | 11638119 | 12143791.77 |
| | | 2op | 379023 | 379195.07 | 379023 | 380180.17 | 692954 | 800180.9 | 3130859 | 3511631.7 |

Table A.232: *vm*1748: transRR With No Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 5272414 | 5383496.3 | 5272414 | 5383496.3 | 5272414 | 5383496.3 | 7009341 | 7544169.03 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 3085392 | 3251363.23 | 3085392 | 3251363.23 | 3497057 | 3911086.53 | 7009341 | 7544169.03 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 5282131 | 5413569.4 | 5282131 | 5413569.4 | 5282131 | 5413569.4 | 5282131 | 5423175.2 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 3176484 | 3280948.97 | 3176484 | 3280948.97 | 3176484 | 3280948.97 | 4247617 | 4870027.57 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.233: *vm*1748: basicRR+RS With No Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 7043536 | 7206889.33 | 7043536 | 7206889.33 | 7043536 | 7210001.7 | 7905411 | 8201265.27 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 6681524 | 6847327.03 | 6716108 | 6859654.13 | 6965233 | 7149243.33 | 7905411 | 8201265.27 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 7071875 | 7213619.07 | 7071875 | 7213619.07 | 7071875 | 7213619.07 | 7086619 | 7312196.17 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 6689009 | 6845624.27 | 6689009 | 6845624.27 | 6729949 | 6913516.9 | 7086619 | 7312196.17 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.234: *vm*1748: transRR+RS With No Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 7812966 | 7896286.27 | 7812966 | 7896286.27 | 7812966 | 7896286.27 | 7812966 | 8095737.37 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 4637086 | 4783951.23 | 4637086 | 4783951.23 | 4637086 | 4783951.23 | 7514831 | 8053903.87 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 7965607 | 8161486.53 | 7965607 | 8161486.53 | 7965607 | 8161486.53 | 7965607 | 8161486.53 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 5016549 | 5151667.83 | 5016549 | 5151667.83 | 5016549 | 5151667.83 | 5367987 | 7030849.67 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.235: *vm*1748: basicRR+IM With No Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 7954630 | 8038231.27 | 7954630 | 8038231.27 | 7954630 | 8038231.27 | 8163525 | 8359114.37 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 6884470 | 6995804.7 | 6884470 | 6995804.7 | 6924530 | 7074773 | 8163525 | 8359114.37 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 8200506 | 8309501.27 | 8200506 | 8309501.27 | 8200506 | 8309501.27 | 8200506 | 8309501.27 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 6947179 | 7046149.37 | 6947179 | 7046149.37 | 6947179 | 7046149.37 | 7633270 | 8236928.23 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.236: *vm*1748: transRR+IM With No Post Optimization – Suspected Optimal Score is 336556

### A.4.2 Results With Post Optimization

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| 51 | 500K | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |

Table A.237: $d1291$: basicRR With Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 55691 | 58643.83 | 55691 | 58643.83 | 55005 | 57267.17 | 55970 | 58575.37 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 56227 | 57327.43 | 56145 | 59278.7 |
| | 5M | rnd | 55942 | 57594.03 | 56218 | 57273.67 | 55459 | 58208.07 | 57330 | 58938.6 |
| | | 2op | 57709 | 57709 | 56310 | 57020.2 | 56182 | 59504.93 | 56251 | 59254.13 |
| 51 | 500K | rnd | 55895 | 58432 | 55895 | 58432 | 55895 | 58432 | 56538 | 58260 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 56376 | 58103.13 |
| | 5M | rnd | 55731 | 57490 | 56063 | 57798.4 | 55711 | 58590.47 | 56668 | 58318.07 |
| | | 2op | 57709 | 57709 | 56638 | 57480.93 | 56746 | 57931.43 | 56618 | 59172.2 |

Table A.238: $d1291$: transRR With Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| 51 | 500K | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |

Table A.239: $d1291$: basicRR+RS With Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 56181 | 58841.57 | 56181 | 58841.57 | 56181 | 59004.27 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 55707 | 57432.77 | 55163 | 57226.17 | 56907 | 59035.27 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| 51 | 500K | rnd | 56251 | 58494.33 | 56251 | 58494.33 | 56251 | 58494.33 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 55944 | 57644.87 | 55559 | 57574.57 | 56106 | 57355.07 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |

Table A.240: $d1291$: transRR+RS With Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| 51 | 500K | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |

Table A.241: $d1291$: basicRR+IM With Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 55683 | 57164.03 | 55683 | 57164.03 | 56212 | 59057.6 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| 51 | 500K | rnd | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |
| | 5M | rnd | 55812 | 57275.27 | 55812 | 57275.27 | 55812 | 57275.27 | 59180 | 59180 |
| | | 2op | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 | 57709 |

Table A.242: $d1291$: transRR+IM With Post Optimization – Suspected Optimal Score is 50801

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 69235 | 71084.77 | 69235 | 71084.77 | 69235 | 71099.17 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.243: $d1655$: basicRR With Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 69425 | 70555.53 | 69425 | 70555.53 | 69425 | 70592.2 | 70374 | 71294.7 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 69179 | 70329.2 | 69747 | 71486.43 |
| | 5M | rnd | 69516 | 70731.47 | 68879 | 70320.83 | 69293 | 71019.13 | 69254 | 71066.47 |
| | | 2op | 70594 | 70594 | 68522 | 69464.83 | 70325 | 71553.13 | 69937 | 71450.4 |
| 51 | 500K | rnd | 69824 | 70579.27 | 69824 | 70579.27 | 69824 | 70579.27 | 69339 | 70776.13 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 69318 | 70765.27 |
| | 5M | rnd | 69734 | 70824.67 | 69734 | 70920.1 | 69569 | 70774.33 | 70280 | 71404.1 |
| | | 2op | 70594 | 70594 | 69485 | 70494.03 | 69170 | 70372.43 | 69604 | 71814.63 |

Table A.244: $d1655$: transRR With Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 69559 | 71130.67 | 69559 | 71130.67 | 69559 | 71083.77 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.245: $d1655$: basicRR+RS With Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 69261 | 70635.2 | 69261 | 70635.2 | 69546 | 70763.47 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 69278 | 70678.77 | 69653 | 70655.27 | 69066 | 70719.37 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 69102 | 70714.3 | 69102 | 70714.3 | 69102 | 70714.3 | 68938 | 70481.8 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 68949 | 70671.83 | 68949 | 70599.33 | 69351 | 70720.97 | 68938 | 70481.8 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.246: *d*1655: transRR+RS With Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.247: *d*1655: basicRR+IM With Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 69182 | 70500.5 | 69182 | 70500.5 | 69208 | 70493.9 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| 51 | 500K | rnd | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 | 71233 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |
| | 5M | rnd | 69068 | 70390.93 | 69068 | 70390.93 | 69068 | 70390.93 | 70675 | 71214.4 |
| | | 2op | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 | 70594 |

Table A.248: *d*1655: transRR+IM With Post Optimization – Suspected Optimal Score is 62128

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 20505586 | 20883123.17 | 20505586 | 20883123.17 | 20505586 | 20883123.17 | 20580495 | 20947715.63 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20644388 | 20931393.9 | 20644388 | 20931393.9 | 20384354 | 20986603.33 | 20580495 | 20947715.63 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 20510571 | 20979485.57 | 20510571 | 20979485.57 | 20510571 | 20979485.57 | 20569968 | 21016686.17 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20601043 | 20972034.03 | 20601043 | 20972034.03 | 20601043 | 20972034.03 | 20499959 | 20943537.47 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.249: *dsj*1000: basicRR With Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 20646883 | 20966327.03 | 20646883 | 20966327.03 | 20641581 | 20988269.93 | 20547638 | 21004791.8 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20322445 | 20614535.43 | 20560094 | 20923757.53 |
| | 5M | rnd | 20270323 | 20846502.67 | 20298920 | 20930207.9 | 20445747 | 20891050.6 | 20573106 | 20922100.97 |
| | | 2op | 20913324 | 20947940.33 | 20292743 | 20575104.77 | 20486235 | 20841076.27 | 20612658 | 20943834.4 |
| 51 | 500K | rnd | 20540412 | 20948362.17 | 20540412 | 20948362.17 | 20540412 | 20948362.17 | 20500433 | 20875965.77 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20271195 | 20689313.03 |
| | 5M | rnd | 20430684 | 20916720.9 | 20430684 | 20898247.33 | 20578711 | 20929497.23 | 20557218 | 21003209.77 |
| | | 2op | 20803079 | 20944265.5 | 20658408 | 20862454.63 | 20347128 | 20668351.87 | 20438806 | 20841823.13 |

Table A.250: *dsj*1000: transRR With Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 20533433 | 20894036.1 | 20533433 | 20894036.1 | 20533433 | 20894036.1 | 20335251 | 20917598.8 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20513216 | 20890961.83 | 20513216 | 20890961.83 | 20535948 | 21005982.6 | 20335251 | 20917598.8 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 20680219 | 20937189.77 | 20680219 | 20937189.77 | 20680219 | 20937189.77 | 20636451 | 20935205.27 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20561034 | 20952139.43 | 20561034 | 20952139.43 | 20561034 | 20952139.43 | 20636451 | 20950885.2 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.251: *dsj*1000: basicRR+RS With Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 20609871 | 21008117.4 | 20609871 | 21008117.4 | 20501918 | 20970102.73 | 20458554 | 20868276.77 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20511952 | 20878325.33 | 20592782 | 20997930.6 | 20501918 | 20970102.73 | 20458554 | 20868276.77 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 20430149 | 20958788.83 | 20430149 | 20958788.83 | 20430149 | 20958788.83 | 20466408 | 20906416.63 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20464741 | 20937846.8 | 20464741 | 20935345.87 | 20366489 | 21002202.37 | 20466408 | 20906416.63 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.252: *dsj*1000: transRR+RS With Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 20445459 | 20947955.5 | 20445459 | 20947955.5 | 20445459 | 20947955.5 | 20434302 | 20917515.5 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20309097 | 20866084.43 | 20309097 | 20866084.43 | 20309097 | 20866084.43 | 20434302 | 20906277.17 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 20428405 | 20897644.57 | 20428405 | 20897644.57 | 20428405 | 20897644.57 | 20428405 | 20897644.57 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20592233 | 20976507.93 | 20592233 | 20976507.93 | 20592233 | 20976507.93 | 20509312 | 20932026.3 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.253: *dsj*1000: basicRR+IM With Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 20390987 | 20912061.77 | 20390987 | 20912061.77 | 20390987 | 20912061.77 | 20413965 | 20895651.03 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20434942 | 20966152.8 | 20434942 | 20966152.8 | 20529766 | 20934117.3 | 20413965 | 20895651.03 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| 51 | 500K | rnd | 20428543 | 20875670.5 | 20428543 | 20875670.5 | 20428543 | 20875670.5 | 20428543 | 20875670.5 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |
| | 5M | rnd | 20468778 | 21018643.67 | 20468778 | 21018643.67 | 20468778 | 21018643.67 | 20595237 | 20856183.57 |
| | | 2op | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 | 20949134 |

Table A.254: *dsj*1000: transRR+IM With Post Optimization – Suspected Optimal Score is 18659688

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 21275 | 21860.4 | 21275 | 21860.4 | 21275 | 21853.43 | 21726 | 21726 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 21154 | 21954.73 | 21154 | 21954.73 | 21064 | 21912.27 | 21726 | 21726 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 20939 | 21852.7 | 20939 | 21852.7 | 20939 | 21852.7 | 21125 | 21829.7 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 21054 | 21826.73 | 21054 | 21826.73 | 21054 | 21826.87 | 21125 | 21833.33 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.255: $fl1400$: basicRR With Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 20864 | 21994.5 | 20864 | 21994.5 | 21076 | 21919.5 | 20962 | 21722.9 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21210 | 21524.7 | 21060 | 21867.77 |
| | 5M | rnd | 21166 | 21848.13 | 20888 | 21845.83 | 21135 | 21832.47 | 21144 | 21810.67 |
| | | 2op | 21672 | 21672 | 21268 | 21577.43 | 20979 | 21711.97 | 21015 | 21767.3 |
| 51 | 500K | rnd | 21105 | 21958 | 21105 | 21958 | 21105 | 21958 | 21027 | 21712.9 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21118 | 21631.37 |
| | 5M | rnd | 21152 | 21986.53 | 21115 | 21825.3 | 21220 | 21808.53 | 21075 | 21844.83 |
| | | 2op | 21672 | 21672 | 21458 | 21615.33 | 21169 | 21585.23 | 20935 | 21736.57 |

Table A.256: $fl1400$: transRR With Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 21046 | 21830.77 | 21046 | 21830.77 | 21046 | 21830.77 | 21726 | 21726 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 21173 | 21715.27 | 21173 | 21715.27 | 21129 | 21841.4 | 21726 | 21726 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 21287 | 21856.37 | 21287 | 21856.37 | 21287 | 21856.37 | 21173 | 21751.67 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 21044 | 21844.1 | 21044 | 21844.1 | 21044 | 21868.73 | 21173 | 21806.93 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.257: $fl1400$: basicRR+RS With Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 20934 | 21845.4 | 20934 | 21845.4 | 20885 | 21678.7 | 21277 | 21866.37 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 21100 | 21836.33 | 20980 | 21753.1 | 20885 | 21678.7 | 21277 | 21866.37 |
| | | 2op | 21467 | 21665.17 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 20981 | 21750.63 | 20981 | 21750.63 | 20981 | 21750.63 | 20908 | 21743.4 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 21038 | 21795.17 | 21313 | 21940.63 | 21236 | 21877.1 | 20908 | 21743.4 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.258: $fl1400$: transRR+RS With Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 21726 | 21726 | 21726 | 21726 | 21726 | 21726 | 21726 | 21726 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 20915 | 22012.53 | 20915 | 22012.53 | 20850 | 21910.27 | 21726 | 21726 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 21144 | 21706.6 | 21144 | 21706.6 | 21144 | 21706.6 | 21144 | 21706.6 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 21072 | 21805.63 | 21072 | 21805.63 | 21072 | 21805.63 | 20997 | 21779.63 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.259: $fl1400$: basicRR+IM With Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 21231 | 21955.37 | 21231 | 21955.37 | 21231 | 21955.37 | 21213 | 21770.07 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 21020 | 21943.17 | 21020 | 21943.17 | 21139 | 21830.53 | 21213 | 21770.07 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| 51 | 500K | rnd | 21227 | 21931.97 | 21227 | 21931.97 | 21227 | 21931.97 | 21227 | 21931.97 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |
| | 5M | rnd | 21288 | 21980.03 | 21288 | 21980.03 | 21288 | 21980.03 | 20831 | 21759.7 |
| | | 2op | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 | 21672 |

Table A.260: $fl1400$: transRR+IM With Post Optimization – Suspected Optimal Score is 20127

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| 51 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |

Table A.261: *fl*1577: basicRR With Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 23880 | 24965.1 | 24178 | 25123.73 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23254 | 23594.33 | 24188 | 25160.37 |
| | 5M | rnd | 25142 | 25142 | 23983 | 24897.37 | 23870 | 25372.23 | 24096 | 25230.2 |
| | | 2op | 23815 | 23948.23 | 23349 | 23568.17 | 23795 | 24764.73 | 23992 | 25060.5 |
| 51 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 24399 | 25386.57 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23408 | 23742.07 |
| | 5M | rnd | 25142 | 25142 | 23689 | 24995.97 | 24145 | 25057.97 | 23982 | 25199.9 |
| | | 2op | 23825 | 23950.97 | 23695 | 23838.33 | 23318 | 23590.23 | 24131 | 24937.97 |

Table A.262: *fl*1577: transRR With Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| 51 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |

Table A.263: *fl*1577: basicRR+RS With Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 23833 | 25098.37 | 25142 | 25150.97 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23753 | 23940.8 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| 51 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23894 | 23961.67 | 23894 | 23961.67 | 23964 | 23964 | 23964 | 23964 |

Table A.264: *fl*1577: transRR+RS With Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| 51 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |

Table A.265: *fl*1577: basicRR+IM With Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| 51 | 500K | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |
| | 5M | rnd | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 | 25142 |
| | | 2op | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 | 23964 |

Table A.266: *fl*1577: transRR+IM With Post Optimization – Suspected Optimal Score is 22249

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 63098 | 63737.7 | 63098 | 63737.7 | 63098 | 63737.7 | 62228 | 63511.77 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62841 | 63535.7 | 62841 | 63535.7 | 62572 | 63656.8 | 62228 | 63511.77 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 62570 | 63701.7 | 62570 | 63701.7 | 62570 | 63701.7 | 62593 | 63716.77 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62707 | 63596.93 | 62707 | 63596.93 | 62707 | 63583.2 | 62593 | 63698.9 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.267: *nrw*1379: basicRR With Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 62441 | 63156.97 | 62441 | 63156.97 | 62383 | 63199.6 | 62159 | 63165.83 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 61733 | 62447.27 | 62375 | 63650.5 |
| | 5M | rnd | 62546 | 63277.47 | 62188 | 63111.73 | 62238 | 63223.53 | 62568 | 63214.27 |
| | | 2op | 62317 | 62317 | 61587 | 62155.6 | 62486 | 63598.63 | 62245 | 63523.37 |
| 51 | 500K | rnd | 62408 | 63147.73 | 62408 | 63147.73 | 62408 | 63147.73 | 62254 | 63252.67 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62595 | 63258.53 |
| | 5M | rnd | 62538 | 63240.23 | 62609 | 63254.53 | 62588 | 63215.07 | 62280 | 63192.57 |
| | | 2op | 62317 | 62317 | 62142 | 62305.73 | 62286 | 63003.57 | 62639 | 63659.8 |

Table A.268: *nrw*1379: transRR With Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 62510 | 63546.87 | 62510 | 63546.87 | 62510 | 63546.87 | 62170 | 63527.17 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62655 | 63748.3 | 62655 | 63748.3 | 62760 | 63600.7 | 62170 | 63527.17 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 62696 | 63592.1 | 62696 | 63592.1 | 62696 | 63592.1 | 62696 | 63598.1 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62774 | 63773.57 | 62774 | 63773.57 | 62774 | 63773.57 | 62821 | 63698.77 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.269: *nrw*1379: basicRR+RS With Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 62011 | 63013.53 | 62011 | 63013.53 | 62204 | 63186.8 | 62219 | 63077.53 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62022 | 63029.53 | 62477 | 63139.37 | 62204 | 63188.73 | 62219 | 63077.53 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 62290 | 63144.57 | 62290 | 63144.57 | 62290 | 63144.57 | 62512 | 63208.83 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62295 | 63089.27 | 62365 | 63139.4 | 62346 | 63194.7 | 62512 | 63208.83 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.270: *nrw*1379: transRR+RS With Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 62822 | 63621.8 | 62822 | 63621.8 | 62822 | 63621.8 | 62873 | 63382.03 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62630 | 63627.4 | 62630 | 63627.4 | 62630 | 63604.67 | 62083 | 63307.77 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 62529 | 63558.73 | 62529 | 63558.73 | 62529 | 63558.73 | 62529 | 63558.73 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62895 | 63684.2 | 62895 | 63684.2 | 62895 | 63684.2 | 62641 | 63531.43 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.271: *nrw*1379: basicRR+IM With Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 61939 | 63173.07 | 61939 | 63173.07 | 61939 | 63173.07 | 61905 | 63150.63 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62559 | 63145.67 | 62559 | 63145.67 | 62244 | 63258.13 | 61905 | 63150.63 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| 51 | 500K | rnd | 61995 | 63050.87 | 61995 | 63050.87 | 61995 | 63050.87 | 61995 | 63050.87 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |
| | 5M | rnd | 62670 | 63396.03 | 62670 | 63396.03 | 62670 | 63387.57 | 62076 | 63109.43 |
| | | 2op | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 | 62317 |

Table A.272: *nrw*1379: transRR+IM With Post Optimization – Suspected Optimal Score is 56638

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.273: *pcb*1173: basicRR With Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 62264 | 63694.23 | 62264 | 63694.23 | 62854 | 64415.57 | 63629 | 65145.87 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 62714 | 63977 | 63914 | 65115.33 |
| | 5M | rnd | 62479 | 63631.43 | 62775 | 64397.97 | 63704 | 65157.57 | 64132 | 65299.07 |
| | | 2op | 64704 | 65115.8 | 62839 | 63654.4 | 64039 | 65337.37 | 64165 | 65345.4 |
| 51 | 500K | rnd | 62686 | 63642.1 | 62686 | 63642.1 | 62686 | 63642.1 | 63928 | 65320.27 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 63670 | 64788.07 |
| | 5M | rnd | 62815 | 63786.37 | 62815 | 63760.7 | 63908 | 64802.33 | 63458 | 65061.7 |
| | | 2op | 64469 | 65088.47 | 62749 | 64779.6 | 63165 | 64491.33 | 63799 | 65097.8 |

Table A.274: *pcb*1173: transRR With Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.275: *pcb*1173: basicRR+RS With Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 62738 | 63648.53 | 62738 | 63648.53 | 62690 | 63646.27 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 62475 | 63583.37 | 62719 | 63657.2 | 62690 | 63727.33 | 64116 | 64116 |
| | | 2op | 64795 | 65118.83 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 62524 | 63681.27 | 62524 | 63681.27 | 62524 | 63681.27 | 62898 | 63845.87 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 62837 | 63640.5 | 62789 | 63603.07 | 62428 | 63607.27 | 62898 | 63845.87 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.276: *pcb*1173: transRR+RS With Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.277: *pcb*1173: basicRR+IM With Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 63636 | 64100 | 63636 | 64100 | 63636 | 64100 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 62572 | 63788.17 | 62572 | 63788.17 | 62350 | 63701.27 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| 51 | 500K | rnd | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 | 64116 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |
| | 5M | rnd | 62096 | 63496.83 | 62096 | 63496.83 | 62096 | 63496.83 | 62739 | 63998.6 |
| | | 2op | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 | 65130 |

Table A.278: *pcb*1173: transRR+IM With Post Optimization – Suspected Optimal Score is 56892

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |

Table A.279: *pr*1002: basicRR With Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 281680 | 286236.6 | 281680 | 286236.6 | 281288 | 287169.2 | 287256 | 292763.5 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 281342 | 285443.4 | 285060 | 291718.6 |
| | 5M | rnd | 281914 | 286083.93 | 282133 | 286493.53 | 284384 | 291199.47 | 285544 | 292664.23 |
| | | 2op | 285537 | 285537 | 281577 | 285008.8 | 287631 | 292044.47 | 285646 | 292979.47 |
| 51 | 500K | rnd | 281233 | 285773.73 | 281233 | 285773.73 | 281233 | 285773.73 | 285168 | 291344.6 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285643 | 289967.83 |
| | 5M | rnd | 280255 | 285703.1 | 280255 | 285848.03 | 285239 | 290555.4 | 285022 | 291834.8 |
| | | 2op | 284781 | 285511.8 | 280708 | 284600.73 | 283136 | 288442.8 | 285853 | 291971.67 |

Table A.280: *pr*1002: transRR With Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |

Table A.281: *pr*1002: basicRR+RS With Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 282422 | 286026.5 | 282422 | 286026.5 | 282232 | 286451.87 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 280995 | 286115.73 | 280271 | 286523.1 | 282232 | 286455.8 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 280793 | 285441.87 | 280793 | 285441.87 | 280793 | 285441.87 | 281958 | 285586.07 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 281507 | 285701.53 | 281507 | 285898.37 | 283041 | 286134.23 | 281958 | 285586.07 |
| | | 2op | 283505 | 285469.27 | 283505 | 285469.27 | 285537 | 285537 | 285537 | 285537 |

Table A.282: *pr*1002: transRR+RS With Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |

Table A.283: *pr*1002: basicRR+IM With Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 280826 | 285676.67 | 280826 | 285676.67 | 281551 | 286611.63 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| 51 | 500K | rnd | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |
| | 5M | rnd | 282506 | 286068.47 | 282506 | 286068.47 | 282506 | 286068.47 | 284844 | 284844 |
| | | 2op | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 | 285537 |

Table A.284: *pr*1002: transRR+IM With Post Optimization – Suspected Optimal Score is 259045

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 283938 | 292166.53 | 283938 | 292166.53 | 283938 | 292166.53 | 291227 | 291227 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 281367 | 290337.63 | 281367 | 290337.63 | 282348 | 291357.07 | 291227 | 291227 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 277989 | 291814.23 | 277989 | 291814.23 | 277989 | 291814.23 | 278628 | 291307.7 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 280709 | 290849.23 | 280709 | 290849.23 | 280709 | 291021.17 | 278628 | 290357.7 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |

Table A.285: *rl*1304: basicRR With Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 280659 | 289236.1 | 280659 | 289236.1 | 280831 | 289250.63 | 276191 | 289983.6 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 274919 | 280966.83 | 283636 | 290876.77 |
| | 5M | rnd | 277740 | 289687.27 | 284313 | 290350.67 | 282642 | 291174.1 | 281817 | 290824.7 |
| | | 2op | 286262 | 287119.17 | 275096 | 280401.2 | 281035 | 290353.3 | 280762 | 290908.53 |
| 51 | 500K | rnd | 283299 | 289461.07 | 283299 | 289461.07 | 283299 | 289461.07 | 282760 | 290661.93 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 275450 | 281509.37 |
| | 5M | rnd | 282642 | 291435.97 | 282642 | 291399 | 281215 | 291222.23 | 280199 | 290640.93 |
| | | 2op | 285736 | 287041.5 | 284923 | 286747.63 | 273670 | 280076.93 | 279452 | 290714.13 |

Table A.286: *rl*1304: transRR With Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 285095 | 291298 | 285095 | 291298 | 285095 | 291298 | 291227 | 291227 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 282647 | 291230.27 | 282647 | 291230.27 | 277583 | 292271.77 | 291227 | 291227 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 282555 | 290410.9 | 282555 | 290410.9 | 282555 | 290410.9 | 281197 | 291579.33 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 285300 | 292375.27 | 285300 | 292375.27 | 285300 | 292359.7 | 281197 | 292045.37 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |

Table A.287: *rl*1304: basicRR+RS With Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 277355 | 290334.8 | 277355 | 290334.8 | 283951 | 290398.63 | 282245 | 291126.8 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 280850 | 289913.93 | 279970 | 291380.13 | 281406 | 290198.03 | 282245 | 291126.8 |
| | | 2op | 285977 | 287094.1 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 280996 | 290985.13 | 280996 | 290985.13 | 280996 | 290985.13 | 280995 | 289312.27 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 283800 | 290554.23 | 283800 | 290474.27 | 274838 | 289451.13 | 280995 | 289312.27 |
| | | 2op | 286031 | 287087.83 | 285390 | 287066.17 | 287163 | 287163 | 287163 | 287163 |

Table A.288: *rl*1304: transRR+RS With Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 291227 | 291227 | 291227 | 291227 | 291227 | 291227 | 291227 | 291227 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 282632 | 291699.87 | 282632 | 291699.87 | 283230 | 291750.9 | 291227 | 291227 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 291227 | 291227 | 291227 | 291227 | 291227 | 291227 | 291227 | 291227 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 284168 | 290334.87 | 284168 | 290334.87 | 284168 | 290334.87 | 284741 | 291110.67 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |

Table A.289: *rl*1304: basicRR+IM With Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 278493 | 289987 | 278493 | 289987 | 278493 | 289987 | 280689 | 289846 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 283635 | 290833.3 | 283635 | 290833.3 | 280615 | 290811.3 | 280689 | 289761.77 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| 51 | 500K | rnd | 282662 | 290502.07 | 282662 | 290502.07 | 282662 | 290502.07 | 282662 | 290502.07 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |
| | 5M | rnd | 276012 | 290097.1 | 276012 | 290097.1 | 276012 | 290097.1 | 280774 | 292167.4 |
| | | 2op | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 | 287163 |

Table A.290: *rl*1304: transRR+IM With Post Optimization – Suspected Optimal Score is 252948

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 300761 | 309681.33 | 300761 | 309681.33 | 299200 | 309416.2 | 308326 | 308326 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 299565 | 310131.13 | 299565 | 310131.13 | 295860 | 307723.43 | 308326 | 308326 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 301009 | 309927.17 | 301009 | 309927.17 | 301009 | 309927.17 | 296573 | 309270.93 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 301155 | 307927.87 | 301155 | 307927.87 | 301155 | 308028.67 | 296573 | 309303.1 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.291: *rl*1323: basicRR With Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 299203 | 309381.37 | 299203 | 309381.37 | 303516 | 309710.8 | 295826 | 307476.37 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 295776 | 303864.93 | 302493 | 310041.03 |
| | 5M | rnd | 302025 | 309610.87 | 304457 | 309713.53 | 298674 | 307349 | 295679 | 309465.8 |
| | | 2op | 307805 | 307805 | 298564 | 301065.27 | 299822 | 308254.1 | 298869 | 309430.37 |
| 51 | 500K | rnd | 299361 | 308733.9 | 299361 | 308733.9 | 299361 | 308733.9 | 298938 | 309611.2 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 298996 | 304914.57 |
| | 5M | rnd | 299611 | 309925.73 | 299611 | 309607.27 | 300977 | 308747.9 | 294922 | 308051.33 |
| | | 2op | 307165 | 307770.27 | 303324 | 306890.2 | 297573 | 303150.6 | 301512 | 309780.1 |

Table A.292: *rl*1323: transRR With Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 299748 | 309549.93 | 299748 | 309549.93 | 299748 | 309549.93 | 308326 | 308326 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 301705 | 309651.3 | 301705 | 309651.3 | 298259 | 309023.37 | 308326 | 308326 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 296089 | 308129.27 | 296089 | 308129.27 | 296089 | 308129.27 | 302924 | 309235.9 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 300879 | 311658.3 | 300879 | 311658.3 | 300879 | 311658.3 | 299755 | 308528.43 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.293: *rl*1323: basicRR+RS With Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 301949 | 310250.57 | 301949 | 310250.57 | 300587 | 310532.6 | 298880 | 307761.67 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 299588 | 307709.47 | 301343 | 308974.13 | 300587 | 309568.8 | 298880 | 307761.67 |
| | | 2op | 304706 | 307701.7 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 294536 | 307850.97 | 294536 | 307850.97 | 294536 | 307850.97 | 298840 | 308549.07 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 301978 | 308189.8 | 301978 | 309283.37 | 298814 | 306510.73 | 298840 | 308549.07 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.294: *rl*1323: transRR+RS With Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 308326 | 308326 | 308326 | 308326 | 308326 | 308326 | 308326 | 308326 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 299083 | 310365.3 | 299083 | 310365.3 | 303765 | 310945.6 | 308326 | 308326 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 308326 | 308326 | 308326 | 308326 | 308326 | 308326 | 308326 | 308326 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 301464 | 309409.07 | 301464 | 309409.07 | 301464 | 309409.07 | 303922 | 308336.8 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.295: *rl*1323: basicRR+IM With Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 301643 | 309297.13 | 301643 | 309297.13 | 301643 | 309297.13 | 306168 | 308505.43 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 301685 | 309297.2 | 301685 | 309297.2 | 297374 | 309703.77 | 306833 | 308374.67 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| 51 | 500K | rnd | 308326 | 308326 | 308326 | 308326 | 308326 | 308326 | 308326 | 308326 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |
| | 5M | rnd | 302451 | 310940.87 | 302451 | 310940.87 | 302451 | 310940.87 | 302351 | 308775.47 |
| | | 2op | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 | 307805 |

Table A.296: *rl*1323: transRR+IM With Post Optimization – Suspected Optimal Score is 270199

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 353597 | 363033.87 | 353597 | 363033.87 | 353597 | 363033.87 | 351215 | 367262.5 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 352908 | 362996.3 | 352908 | 362996.3 | 353753 | 362160.87 | 351215 | 367262.5 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 349719 | 361503.57 | 349719 | 361503.57 | 349719 | 361503.57 | 349719 | 361240.3 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 354474 | 361609.87 | 354474 | 361609.87 | 354474 | 361609.87 | 353775 | 362590.03 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |

Table A.297: *rl*1889: basicRR With Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 353757 | 362356.63 | 353757 | 362356.63 | 353757 | 362156.9 | 358243 | 363089.73 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 353462 | 368162.43 | 357238 | 363274.37 |
| | 5M | rnd | 355619 | 361690.37 | 356631 | 364834.27 | 353152 | 362414.7 | 350515 | 361966.53 |
| | | 2op | 368831 | 368831 | 351026 | 355775.57 | 353146 | 362793.5 | 354704 | 362610.87 |
| 51 | 500K | rnd | 354182 | 361682.6 | 354182 | 361682.6 | 354182 | 361682.6 | 352380 | 363103.4 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 350587 | 358339.17 |
| | 5M | rnd | 352881 | 362089.87 | 352881 | 362089.87 | 354086 | 362352.7 | 352789 | 362563.7 |
| | | 2op | 365077 | 368705.87 | 365077 | 368705.87 | 349806 | 356296 | 353746 | 362477.2 |

Table A.298: *rl*1889: transRR With Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 354851 | 362711.77 | 354851 | 362711.77 | 354851 | 362711.77 | 357105 | 368110.07 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 354248 | 361092.23 | 354248 | 361092.23 | 355057 | 362339.4 | 357105 | 368110.07 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 353836 | 363925.13 | 353836 | 363925.13 | 353836 | 363925.13 | 353836 | 362803.37 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 348189 | 363542.3 | 348189 | 363542.3 | 348189 | 363542.3 | 350655 | 361985.2 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |

Table A.299: *rl*1889: basicRR+RS With Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 350445 | 361083.37 | 350445 | 361083.37 | 350445 | 361241.13 | 348719 | 361900.2 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 355807 | 363632.43 | 354312 | 362111.87 | 351202 | 361231.77 | 348719 | 361900.2 |
| | | 2op | 366346 | 368682.93 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 352474 | 360778.83 | 352474 | 360778.83 | 352474 | 360778.83 | 349798 | 362279.27 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 351081 | 361816.33 | 351081 | 361816.33 | 351272 | 360070.23 | 349798 | 362858.93 |
| | | 2op | 366769 | 368762.27 | 366769 | 368762.27 | 368831 | 368831 | 368831 | 368831 |

Table A.300: *rl*1889: transRR+RS With Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 349152 | 362083.9 | 349152 | 362083.9 | 349152 | 362083.9 | 368831 | 368831 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 352378 | 361827.53 | 352378 | 361827.53 | 352378 | 361827.53 | 356440 | 363151.67 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |

Table A.301: *rl*1889: basicRR+IM With Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 352806 | 362361.77 | 352806 | 362361.77 | 352806 | 362361.77 | 352806 | 361765.33 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 351276 | 361194.2 | 351276 | 361194.2 | 352852 | 361456.03 | 351988 | 360842.17 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| 51 | 500K | rnd | 348947 | 361407.83 | 348947 | 361407.83 | 348947 | 361407.83 | 348947 | 361407.83 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |
| | 5M | rnd | 355523 | 360834.03 | 355523 | 360834.03 | 355523 | 360834.03 | 356786 | 363834.53 |
| | | 2op | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 | 368831 |

Table A.302: *rl*1889: transRR+IM With Post Optimization – Suspected Optimal Score is 316536

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.303: $u1060$: basicRR With Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 248097 | 248687.83 | 248097 | 248687.83 | 242114 | 246293.7 | 246307 | 252157.23 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 242915 | 246192 | 246679 | 252152.3 |
| | 5M | rnd | 246506 | 248392.77 | 244237 | 246834.47 | 246014 | 252096.67 | 246228 | 252908.73 |
| | | 2op | 248394 | 248394 | 243813 | 246262.57 | 247833 | 252300.57 | 247790 | 252473.23 |
| 51 | 500K | rnd | 247387 | 248540.93 | 247387 | 248540.93 | 247387 | 248540.93 | 243767 | 248296.17 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 243883 | 248185.9 |
| | 5M | rnd | 246500 | 248080.77 | 245344 | 247840.03 | 244013 | 247852.73 | 246629 | 251591.1 |
| | | 2op | 248394 | 248394 | 246972 | 248057.37 | 243653 | 248341.23 | 246691 | 251202.2 |

Table A.304: $u1060$: transRR With Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.305: $u1060$: basicRR+RS With Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 246226 | 248643.17 | 246226 | 248643.17 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 245151 | 248244.13 | 244570 | 248175.37 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 247375 | 248360.03 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 245394 | 248462.17 | 245394 | 248462.17 | 245394 | 248462.17 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 246554 | 248117.63 | 245338 | 248095.73 | 245685 | 247921.03 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.306: $u1060$: transRR+RS With Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.307: $u1060$: basicRR+IM With Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 245609 | 247966.23 | 245609 | 247966.23 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| 51 | 500K | rnd | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |
| | 5M | rnd | 246044 | 247701.5 | 246044 | 247701.5 | 246044 | 247701.5 | 248769 | 248769 |
| | | 2op | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 | 248394 |

Table A.308: $u1060$: transRR+IM With Post Optimization – Suspected Optimal Score is 224094

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |

Table A.309: $u1432$: basicRR With Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 168246 | 169829.17 | 168246 | 169829.17 | 167730 | 170057.53 | 172535 | 175018.53 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 168777 | 170132.13 | 171117 | 174403.87 |
| | 5M | rnd | 168691 | 169777.87 | 169338 | 170693.83 | 171944 | 174661.5 | 172180 | 174114.5 |
| | | 2op | 168540 | 170008.37 | 168598 | 170122.63 | 171741 | 174451.73 | 172230 | 174758.27 |
| 51 | 500K | rnd | 168369 | 169813.8 | 168369 | 169813.8 | 168369 | 169813.8 | 170816 | 172709.9 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 168411 | 172453.07 |
| | 5M | rnd | 168884 | 169773.37 | 169020 | 169840 | 169997 | 171791.33 | 172279 | 174814.4 |
| | | 2op | 168467 | 169930.6 | 169056 | 169907.63 | 169133 | 171785.37 | 171718 | 174605.27 |

Table A.310: $u1432$: transRR With Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |

Table A.311: $u1432$: basicRR+RS With Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 168894 | 169800.3 | 168894 | 169800.3 | 169575 | 169630.2 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 169347 | 169969.83 | 168835 | 169989.37 | 169057 | 169625.57 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 167974 | 169869.23 | 167974 | 169869.23 | 167974 | 169869.23 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 168324 | 169874.3 | 168324 | 169885.17 | 168041 | 169966.3 | 169575 | 169575 |
| | | 2op | 168931 | 170021.4 | 168931 | 170021.4 | 170059 | 170059 | 170059 | 170059 |

Table A.312: $u1432$: transRR+RS With Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |

Table A.313: $u1432$: basicRR+IM With Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 168591 | 170001.83 | 168591 | 170001.83 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| 51 | 500K | rnd | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |
| | 5M | rnd | 168890 | 169916.7 | 168890 | 169916.7 | 168890 | 169916.7 | 169575 | 169575 |
| | | 2op | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 | 170059 |

Table A.314: $u1432$: transRR+IM With Post Optimization – Suspected Optimal Score is 152970

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |

Table A.315: $u1817$: basicRR With Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 64502 | 65405.7 | 65682 | 67262.97 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 63819 | 65239.33 | 64473 | 67406.87 |
| | 5M | rnd | 65205 | 65623.43 | 64537 | 65270.6 | 66209 | 67339.97 | 66029 | 67355.8 |
| | | 2op | 65378 | 65378 | 63886 | 64617.77 | 65805 | 67297.9 | 65238 | 67450.1 |
| 51 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 64875 | 66127.5 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 64772 | 65886.53 |
| | 5M | rnd | 64985 | 65520.1 | 64985 | 65503.7 | 65190 | 66035.27 | 65538 | 67283.6 |
| | | 2op | 64805 | 65358.9 | 64592 | 65227.27 | 64583 | 65356.97 | 66316 | 67380.93 |

Table A.316: $u1817$: transRR With Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |

Table A.317: $u1817$: basicRR+RS With Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 64977 | 65445.33 | 64908 | 65495.9 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 64758 | 65490.33 | 64758 | 65487.9 | 64880 | 65487.07 | 65378 | 65378 |
| | | 2op | 64883 | 65350.73 | 64883 | 65350.73 | 65378 | 65378 | 65378 | 65378 |

Table A.318: $u1817$: transRR+RS With Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |

Table A.319: $u1817$: basicRR+IM With Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| 51 | 500K | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | 5M | rnd | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |
| | | 2op | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 | 65378 |

Table A.320: $u1817$: transRR+IM With Post Optimization – Suspected Optimal Score is 57201

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 257655 | 269860.2 | 257655 | 269860.2 | 257655 | 269860.2 | 263047 | 269165 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 264700 | 270102.83 | 264700 | 270102.83 | 262428 | 269337.13 | 263047 | 269165 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 262821 | 269497.87 | 262821 | 269497.87 | 262821 | 269497.87 | 262821 | 269529.87 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 265754 | 270156.7 | 265754 | 270156.7 | 265754 | 270204.73 | 264501 | 270321.63 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |

Table A.321: *vm*1084: basicRR With Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 263793 | 270618.47 | 263793 | 270618.47 | 264707 | 268201.93 | 260540 | 270304.93 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 262132 | 267696.4 | 263403 | 270224.73 |
| | 5M | rnd | 263233 | 269844.83 | 264199 | 268717.43 | 266416 | 272018.37 | 263171 | 268905.93 |
| | | 2op | 272757 | 273271.27 | 264989 | 267771.53 | 262797 | 268991.2 | 264908 | 270615.13 |
| 51 | 500K | rnd | 263461 | 270581.23 | 263461 | 270581.23 | 263461 | 270581.23 | 262293 | 268953.73 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 263177 | 266839.07 |
| | 5M | rnd | 264785 | 269999.63 | 264785 | 269990.93 | 259815 | 269675.07 | 264244 | 269370.53 |
| | | 2op | 271165 | 273113.97 | 269706 | 272220.73 | 261057 | 266687.23 | 263148 | 270310.2 |

Table A.322: *vm*1084: transRR With Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 262160 | 269722.93 | 262160 | 269722.93 | 262160 | 269722.93 | 264521 | 269407.33 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 264513 | 271198.27 | 264513 | 271198.27 | 265075 | 270447.83 | 264521 | 269407.33 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 264599 | 269561.17 | 264599 | 269561.17 | 264599 | 269561.17 | 264599 | 269576.3 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 262682 | 270876.47 | 262682 | 270876.47 | 262682 | 270645.83 | 265365 | 270326.93 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |

Table A.323: *vm*1084: basicRR+RS With Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 261455 | 268765.6 | 261455 | 268765.6 | 264298 | 270309.3 | 261730 | 269291.9 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 262309 | 268193.97 | 262991 | 269339.23 | 264298 | 270254.3 | 261730 | 269291.9 |
| | | 2op | 272111 | 273249.73 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 262458 | 270176.87 | 262458 | 270176.87 | 262458 | 270176.87 | 264236 | 269706.73 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 263052 | 267986.57 | 263052 | 268176.47 | 258388 | 268691.53 | 264236 | 269706.73 |
| | | 2op | 272906 | 273276.23 | 272906 | 273276.23 | 273289 | 273289 | 273289 | 273289 |

Table A.324: *vm*1084: transRR+RS With Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 263953 | 270739.2 | 263953 | 270739.2 | 263953 | 270739.2 | 262442 | 269888.3 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 264528 | 269968.2 | 264528 | 269968.2 | 264528 | 270254.23 | 262442 | 269888.3 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 260765 | 268817.33 | 260765 | 268817.33 | 260765 | 268817.33 | 260765 | 268817.33 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 261680 | 268454.97 | 261680 | 268454.97 | 261680 | 268454.97 | 264083 | 269868.43 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |

Table A.325: *vm*1084: basicRR+IM With Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 263819 | 269051.47 | 263819 | 269051.47 | 263819 | 269051.47 | 263192 | 270230.23 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 260550 | 269438.87 | 260550 | 269438.87 | 262531 | 270938.27 | 263192 | 270230.23 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| 51 | 500K | rnd | 261820 | 268915.3 | 261820 | 268915.3 | 261820 | 268915.3 | 261820 | 268915.3 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |
| | 5M | rnd | 264340 | 268797.43 | 264340 | 268797.43 | 264340 | 268797.43 | 263167 | 269932.7 |
| | | 2op | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 | 273289 |

Table A.326: *vm*1084: transRR+IM With Post Optimization – Suspected Optimal Score is 239297

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 367356 | 379429.7 | 367356 | 379429.7 | 367356 | 379429.7 | 371440 | 378619.47 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 370852 | 379212.83 | 370852 | 379212.83 | 370940 | 379220.53 | 371440 | 378619.47 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 371737 | 379427.27 | 371737 | 379427.27 | 371737 | 379427.27 | 371737 | 379181.37 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 373374 | 381158 | 373374 | 381158 | 373374 | 381158 | 373511 | 380357.97 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.327: *vm*1748: basicRR With Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 373911 | 380714.27 | 373911 | 380714.27 | 373911 | 381256.6 | 371444 | 379028.13 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 366519 | 376688.07 | 371587 | 378895.37 |
| | 5M | rnd | 372157 | 379879 | 372157 | 379668.43 | 370971 | 379495.47 | 367582 | 378373.73 |
| | | 2op | 379201 | 379201 | 367930 | 372609.47 | 370592 | 379677.3 | 372169 | 379644.13 |
| 51 | 500K | rnd | 374648 | 379590.1 | 374648 | 379590.1 | 374648 | 379590.1 | 368780 | 379029.2 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 370107 | 375457.17 |
| | 5M | rnd | 373010 | 380081.27 | 373010 | 380081.27 | 370815 | 379445.07 | 372250 | 379939.27 |
| | | 2op | 376016 | 379094.83 | 374261 | 378696.1 | 369342 | 374437.93 | 370101 | 379273.5 |

Table A.328: *vm*1748: transRR With Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 370900 | 380445.1 | 370900 | 380445.1 | 370900 | 380445.1 | 374627 | 379546.37 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 372257 | 379350.37 | 372257 | 379350.37 | 373392 | 380189.1 | 374627 | 379546.37 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 368218 | 377854.37 | 368218 | 377854.37 | 368218 | 377854.37 | 368218 | 378056.93 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 371568 | 380938.53 | 371568 | 380938.53 | 371568 | 380938.53 | 374529 | 380363.27 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.329: *vm*1748: basicRR+RS With Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 370208 | 379101.17 | 370208 | 379101.17 | 370208 | 379197.77 | 374380 | 379414.5 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 370265 | 379503.97 | 370434 | 379685.37 | 373525 | 380582.57 | 374380 | 379414.5 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 372337 | 379624.1 | 372337 | 379624.1 | 372337 | 379624.1 | 370116 | 379216.03 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 372368 | 379045.47 | 372368 | 379045.47 | 374844 | 381175.23 | 370116 | 379216.03 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.330: *vm*1748: transRR+RS With Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 370201 | 379750.83 | 370201 | 379750.83 | 370201 | 379750.83 | 371956 | 380100.73 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 373706 | 381179.23 | 373706 | 381179.23 | 373706 | 381179.23 | 371956 | 379563 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 373225 | 379006.93 | 373225 | 379006.93 | 373225 | 379006.93 | 373225 | 379006.93 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 371132 | 379875.3 | 371132 | 379875.3 | 371132 | 379875.3 | 371362 | 380357.37 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.331: *vm*1748: basicRR+IM With Post Optimization – Suspected Optimal Score is 336556

| Parameters | | | Basic | | after 10000 | | after 1000 | | after 100 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Gn | Sd | Mx | Av | Mx | Av | Mx | Av | Mx | Av |
| 11 | 500K | rnd | 371667 | 379505.7 | 371667 | 379505.7 | 371667 | 379505.7 | 373596 | 379411.93 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 372785 | 380695.93 | 372785 | 380695.93 | 369669 | 378293.07 | 373596 | 379411.93 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| 51 | 500K | rnd | 370508 | 380082.03 | 370508 | 380082.03 | 370508 | 380082.03 | 370508 | 380082.03 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |
| | 5M | rnd | 372744 | 379857.9 | 372744 | 379857.9 | 372744 | 379857.9 | 370470 | 378929.1 |
| | | 2op | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 | 379201 |

Table A.332: *vm*1748: transRR+IM With Post Optimization – Suspected Optimal Score is 336556

## A.5 DNA Error Correction

### A.5.1 Code 1

| Parameters | | | | 1 Restart | | 15 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 10.47 | 588.63 | 14.9 | 611.17 | 14.93 | 591.5 |
| | | | 2 | 8.27 | 558.93 | 12.7 | 584.87 | 14.03 | 569.33 |
| | | | 3 | 4.67 | 505.47 | 8 | 533.6 | 8.4 | 509.7 |
| | | Ver | 1 | 9.5 | 586.03 | 13.43 | 606.63 | 13.77 | 590 |
| | | | 2 | 7.7 | 562.07 | 11.93 | 588.97 | 13.07 | 571.7 |
| | | | 3 | 4.93 | 506.9 | 6.77 | 531.63 | 7.37 | 514.73 |
| | 2 | Train | 1 | 10.4 | 609.1 | 15.97 | 605.4 | 15.73 | 606.53 |
| | | | 2 | 9.33 | 579.53 | 13.37 | 571 | 13.03 | 573.5 |
| | | | 3 | 5.9 | 527.27 | 8.63 | 518.1 | 8.03 | 517.47 |
| | | Ver | 1 | 10 | 607.4 | 14.63 | 599.9 | 14 | 601.33 |
| | | | 2 | 9.4 | 584.07 | 13.23 | 576.9 | 12.53 | 579.9 |
| | | | 3 | 5.5 | 528.63 | 6.8 | 515.33 | 6.07 | 515.33 |
| | 7 | Train | 1 | 11.23 | 611.23 | 16.47 | 594.07 | 16.3 | 583.03 |
| | | | 2 | 9 | 580.87 | 15.17 | 562.43 | 16.87 | 560.6 |
| | | | 3 | 5.03 | 531.83 | 8.6 | 499.57 | 9.7 | 490.3 |
| | | Ver | 1 | 10.73 | 608.17 | 15.13 | 588.1 | 15.87 | 580.43 |
| | | | 2 | 8.9 | 587.27 | 14.47 | 567.17 | 14.8 | 561.07 |
| | | | 3 | 5.07 | 530.1 | 7.2 | 498.47 | 8.67 | 493.37 |
| | 12 | Train | 1 | 14.33 | 590.43 | 15.73 | 605.63 | 15.07 | 608.3 |
| | | | 2 | 10.03 | 560.43 | 13.03 | 572.43 | 12.87 | 582.03 |
| | | | 3 | 6.2 | 510.7 | 9.07 | 523.93 | 8.5 | 533.6 |
| | | Ver | 1 | 13.63 | 587.27 | 14.83 | 602 | 14.3 | 605.3 |
| | | | 2 | 10.63 | 568.93 | 12.8 | 579.07 | 12.13 | 584.87 |
| | | | 3 | 6.37 | 514 | 6.53 | 525.37 | 6.53 | 532.37 |
| 25 | 1 | Train | 1 | 13.33 | 593.17 | 16.53 | 593.73 | 15.8 | 607.1 |
| | | | 2 | 10.13 | 563.9 | 14.57 | 567.93 | 13.77 | 582.27 |
| | | | 3 | 5.4 | 508.3 | 8.7 | 511.07 | 8.3 | 529.43 |
| | | Ver | 1 | 12.23 | 591.27 | 15.97 | 590.37 | 15.13 | 603.87 |
| | | | 2 | 9.33 | 568.57 | 13.6 | 570.8 | 12.6 | 584 |
| | | | 3 | 5.87 | 508.73 | 7.23 | 510.47 | 6.87 | 527.77 |
| | 2 | Train | 1 | 11.63 | 607.63 | 14.4 | 611.67 | 16.07 | 616.37 |
| | | | 2 | 9.43 | 581.87 | 11.83 | 590.13 | 12.23 | 590 |
| | | | 3 | 5.23 | 535.17 | 7.33 | 545.2 | 7.57 | 544.5 |
| | | Ver | 1 | 11.87 | 607.37 | 13.4 | 609.5 | 14.1 | 613.63 |
| | | | 2 | 8.7 | 585.97 | 11.17 | 593.67 | 12.33 | 594.17 |
| | | | 3 | 4.83 | 538.17 | 5.87 | 545.27 | 5.67 | 542.1 |
| | 7 | Train | 1 | 14.23 | 607.5 | 14.83 | 594.77 | 14.53 | 607.1 |
| | | | 2 | 12 | 575.37 | 14.83 | 573.53 | 13.23 | 576.57 |
| | | | 3 | 7.13 | 521.63 | 9.33 | 511.7 | 8.97 | 524.6 |
| | | Ver | 1 | 13.8 | 605.2 | 14.77 | 591.73 | 13.57 | 603.33 |
| | | | 2 | 11.1 | 581.2 | 12.93 | 574 | 12.83 | 580.9 |
| | | | 3 | 6.53 | 522.6 | 7.8 | 511.83 | 6.87 | 524.17 |
| | 12 | Train | 1 | 17.17 | 593.4 | 14.87 | 608.7 | 16.23 | 596.9 |
| | | | 2 | 14.1 | 566.63 | 12.8 | 578.37 | 14.43 | 572.93 |
| | | | 3 | 7.87 | 507.23 | 8.7 | 530.07 | 8.73 | 515.53 |
| | | Ver | 1 | 16.07 | 588.3 | 13.7 | 604.83 | 15.47 | 593.2 |
| | | | 2 | 12.37 | 570.83 | 12.6 | 583.73 | 13.27 | 575.4 |
| | | | 3 | 7.7 | 508.83 | 6.8 | 528.87 | 7.97 | 515.57 |
| 51 | 1 | Train | 1 | 12.93 | 610.93 | 17.13 | 596 | 13.8 | 613.7 |
| | | | 2 | 10.7 | 581.97 | 13.73 | 557.83 | 11.37 | 588.17 |
| | | | 3 | 6.07 | 535.07 | 9.43 | 508.17 | 7.73 | 540.13 |
| | | Ver | 1 | 12.37 | 608.8 | 15.6 | 590.73 | 12.63 | 610.77 |
| | | | 2 | 9.67 | 587.43 | 14.03 | 565.03 | 10.9 | 592.4 |
| | | | 3 | 5.23 | 536.2 | 7.23 | 506.07 | 5.97 | 538.07 |
| | 2 | Train | 1 | 14.07 | 588.63 | 14.77 | 610.03 | 16.23 | 600.43 |
| | | | 2 | 12.27 | 565.7 | 13.33 | 582.83 | 16.13 | 569.97 |
| | | | 3 | 7.63 | 507.3 | 8.5 | 531.1 | 9.47 | 504.17 |
| | | Ver | 1 | 13.57 | 588.9 | 14.1 | 605.97 | 15.5 | 595.8 |
| | | | 2 | 11.07 | 569.13 | 12.23 | 587.07 | 15 | 573.2 |
| | | | 3 | 6.03 | 509.57 | 6.37 | 530.67 | 7.13 | 503.77 |
| | 7 | Train | 1 | 15.13 | 610.17 | 15.6 | 605.57 | 15 | 609.57 |
| | | | 2 | 12.3 | 580 | 13.83 | 574.33 | 12.17 | 583.7 |
| | | | 3 | 7.67 | 531.63 | 8.7 | 517.27 | 7.87 | 535.63 |
| | | Ver | 1 | 14.6 | 608.87 | 14.77 | 601.6 | 14.07 | 605.97 |
| | | | 2 | 11.87 | 585.37 | 12.87 | 579.57 | 11.73 | 588.2 |
| | | | 3 | 7 | 530.7 | 7.4 | 517.47 | 6.23 | 534.17 |
| | 12 | Train | 1 | 15.87 | 611.13 | 14.17 | 596.83 | 16.2 | 602.1 |
| | | | 2 | 13.7 | 579.97 | 14.03 | 568.77 | 14.3 | 577.43 |
| | | | 3 | 8.43 | 525.37 | 9.87 | 512.3 | 8.67 | 519.73 |
| | | Ver | 1 | 14.7 | 607.63 | 13.73 | 591.73 | 15.63 | 598.43 |
| | | | 2 | 12.8 | 583 | 12.6 | 571.53 | 12.83 | 581.07 |
| | | | 3 | 6.63 | 521.43 | 8.13 | 511.2 | 7.53 | 519 |

Table A.333: 2 States – $(12, 55, 7)_4$ – Perfect Score is 660 and fuzzy tolerance of 2

| Parameters | | | | 1 Restart | | 15 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 47.8 | 539.43 | 66.4 | 548.03 | 74.17 | 662.4 |
| | | | 2 | 33.8 | 484.67 | 49.1 | 497.27 | 52.77 | 641.77 |
| | | | 3 | 18.5 | 402.43 | 27.1 | 404.83 | 30.8 | 573.3 |
| | | Ver | 1 | 47.13 | 536.07 | 64.6 | 549.17 | 70.97 | 666.3 |
| | | | 2 | 33.03 | 491.83 | 46.2 | 498.27 | 49.87 | 642.73 |
| | | | 3 | 17.63 | 405.57 | 25.23 | 409.37 | 27.43 | 578.87 |
| | 2 | Train | 1 | 44.63 | 524.77 | 62.93 | 576 | 72.3 | 646.47 |
| | | | 2 | 31.63 | 468.77 | 48.97 | 522.57 | 55.93 | 622.77 |
| | | | 3 | 15.73 | 382.13 | 26.9 | 433.83 | 28.03 | 553.9 |
| | | Ver | 1 | 44.43 | 527.2 | 58.7 | 573.23 | 70.27 | 647.53 |
| | | | 2 | 30.3 | 473.7 | 46.2 | 524.4 | 50.93 | 619.5 |
| | | | 3 | 16.67 | 381.7 | 24.47 | 432.53 | 26.63 | 558.23 |
| | 7 | Train | 1 | 53.2 | 540.43 | 70.6 | 563.03 | 73.17 | 634.57 |
| | | | 2 | 36.03 | 483.7 | 52.27 | 502.47 | 60.5 | 613.17 |
| | | | 3 | 18.87 | 395.83 | 28.7 | 404.77 | 30.43 | 536.9 |
| | | Ver | 1 | 51.33 | 537.1 | 66.3 | 557.7 | 71.4 | 637.67 |
| | | | 2 | 33.73 | 492.27 | 48.2 | 505.77 | 57.37 | 609.87 |
| | | | 3 | 18.73 | 400.53 | 27.97 | 403.5 | 29.63 | 542.9 |
| | 12 | Train | 1 | 61.57 | 529.97 | 62.83 | 572.03 | 59.63 | 670.03 |
| | | | 2 | 42.03 | 480.57 | 47.37 | 525.53 | 43.57 | 647.63 |
| | | | 3 | 21.7 | 389.07 | 26.6 | 437.97 | 23.57 | 586.1 |
| | | Ver | 1 | 60 | 531.53 | 60.33 | 568.97 | 56.07 | 671.23 |
| | | | 2 | 40.53 | 480.13 | 44.9 | 524.8 | 40.93 | 647.97 |
| | | | 3 | 21.8 | 389.73 | 24.03 | 435.93 | 20.83 | 592.1 |
| 25 | 1 | Train | 1 | 58.33 | 530.4 | 72.1 | 547.87 | 74.77 | 652.77 |
| | | | 2 | 42.77 | 477.2 | 54.33 | 495.73 | 55.33 | 629.5 |
| | | | 3 | 21.8 | 387.37 | 28.5 | 400.5 | 29.7 | 561.17 |
| | | Ver | 1 | 56.7 | 526.93 | 71.33 | 547.8 | 70.3 | 653.87 |
| | | | 2 | 42.23 | 481.83 | 51.63 | 496.27 | 52.2 | 628.5 |
| | | | 3 | 22.4 | 388.13 | 26.73 | 396.23 | 29.27 | 566.27 |
| | 2 | Train | 1 | 51.73 | 531.4 | 71.6 | 547.13 | 77.73 | 672.47 |
| | | | 2 | 38.77 | 471.07 | 50.4 | 491.8 | 58.53 | 653.77 |
| | | | 3 | 19.37 | 384.17 | 26.3 | 400.73 | 31.43 | 589.6 |
| | | Ver | 1 | 49.6 | 530.63 | 68.7 | 544.17 | 75.97 | 675.1 |
| | | | 2 | 37.9 | 473.93 | 48.6 | 493.47 | 56.43 | 649.17 |
| | | | 3 | 19.17 | 381.27 | 26.3 | 401 | 30.73 | 592.2 |
| | 7 | Train | 1 | 56.1 | 555.57 | 69.07 | 570.93 | 77.5 | 658.87 |
| | | | 2 | 39.5 | 496.03 | 53.8 | 515.2 | 52.97 | 632.87 |
| | | | 3 | 20.17 | 419.7 | 28.1 | 427.13 | 27.43 | 569.6 |
| | | Ver | 1 | 54.13 | 550.87 | 67.17 | 569 | 74.07 | 659.27 |
| | | | 2 | 35.93 | 501.3 | 50 | 517.73 | 50.9 | 633.6 |
| | | | 3 | 20.53 | 417.23 | 26.27 | 425.27 | 27.47 | 573.6 |
| | 12 | Train | 1 | 59.47 | 565.33 | 75.3 | 561.2 | 68.2 | 651.1 |
| | | | 2 | 40.13 | 510.7 | 55.2 | 505.93 | 51.03 | 631.77 |
| | | | 3 | 23 | 430.73 | 29.27 | 406.8 | 26.77 | 570.37 |
| | | Ver | 1 | 56.2 | 560.7 | 71.5 | 555.7 | 63.07 | 652.57 |
| | | | 2 | 39.1 | 513.33 | 51.8 | 505.97 | 47.37 | 628.13 |
| | | | 3 | 22.5 | 433.7 | 28.2 | 405.83 | 24.77 | 573.03 |
| 51 | 1 | Train | 1 | 66.93 | 530.1 | 64.6 | 570.07 | 78.73 | 667.43 |
| | | | 2 | 46.6 | 477.73 | 47.83 | 520.4 | 60.43 | 642.87 |
| | | | 3 | 24.9 | 390.63 | 26.83 | 442.33 | 34.17 | 582.23 |
| | | Ver | 1 | 65.87 | 527.87 | 63.77 | 570.23 | 76.73 | 667.9 |
| | | | 2 | 43.3 | 479.03 | 44.73 | 521.9 | 60.13 | 645.37 |
| | | | 3 | 21.1 | 390.1 | 24.43 | 437.33 | 30.3 | 586.6 |
| | 2 | Train | 1 | 54.97 | 562.37 | 74.13 | 562.53 | 74.23 | 650.43 |
| | | | 2 | 38.9 | 516.9 | 57.5 | 510.43 | 52.27 | 622.73 |
| | | | 3 | 22.03 | 434.97 | 31.57 | 419.6 | 30.7 | 549.43 |
| | | Ver | 1 | 52.67 | 561.37 | 69.17 | 558.87 | 69.47 | 651.7 |
| | | | 2 | 36.7 | 516.9 | 54.7 | 512.73 | 49 | 619.77 |
| | | | 3 | 19.37 | 435.67 | 26.67 | 417.1 | 27.9 | 552.87 |
| | 7 | Train | 1 | 61.57 | 549.33 | 66.73 | 565.4 | 82.37 | 665.87 |
| | | | 2 | 44.77 | 496.93 | 53.6 | 515.77 | 59.2 | 645.23 |
| | | | 3 | 23.37 | 415.47 | 29.7 | 428.73 | 32 | 584.8 |
| | | Ver | 1 | 59.4 | 546 | 65.93 | 562.47 | 77.6 | 667.1 |
| | | | 2 | 43 | 498.93 | 50.23 | 517.2 | 56.93 | 642.97 |
| | | | 3 | 21.57 | 406.23 | 25.33 | 426.93 | 30.47 | 587.63 |
| | 12 | Train | 1 | 74 | 530.67 | 79.83 | 562.27 | 75.63 | 649.47 |
| | | | 2 | 49.47 | 479.33 | 62.27 | 509.57 | 55.63 | 626.63 |
| | | | 3 | 27.87 | 390 | 35.77 | 405.87 | 31.27 | 556.77 |
| | | Ver | 1 | 70 | 525.63 | 76.23 | 558.1 | 72.33 | 650.63 |
| | | | 2 | 48.77 | 480.67 | 61.53 | 511.37 | 53.57 | 626.17 |
| | | | 3 | 27.03 | 388.07 | 30.8 | 402.03 | 27.97 | 559.43 |

Table A.334: 3 States – $(12, 55, 7)_4$ – Perfect Score is 660 and fuzzy tolerance of 2

| Parameters | | | | 1 Restart | | 15 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 109.3 | 433.37 | 133.77 | 490.37 | 141.33 | 508.73 |
| | | | 2 | 64.17 | 348.33 | 92.97 | 410.93 | 98.37 | 421.73 |
| | | | 3 | 32.2 | 247.83 | 45.2 | 286.7 | 49.57 | 298.47 |
| | | Ver | 1 | 107.1 | 426.23 | 127.87 | 485.53 | 132.53 | 500.13 |
| | | | 2 | 63.73 | 352.2 | 90.47 | 416.4 | 93.23 | 422.53 |
| | | | 3 | 31.2 | 249 | 43.47 | 287.27 | 46.7 | 298.73 |
| | 2 | Train | 1 | 113.17 | 458.83 | 135.83 | 494.6 | 134.57 | 494.4 |
| | | | 2 | 63.33 | 377.57 | 93.83 | 421.1 | 96.17 | 418.53 |
| | | | 3 | 32.23 | 278.17 | 47.63 | 304.77 | 48.53 | 291.33 |
| | | Ver | 1 | 107.93 | 454.6 | 131 | 492.6 | 127.07 | 492.63 |
| | | | 2 | 63.3 | 380.2 | 92.7 | 425.33 | 93.37 | 419.87 |
| | | | 3 | 31.7 | 278.77 | 43.8 | 301.83 | 45 | 292.37 |
| | 7 | Train | 1 | 112.57 | 454.67 | 130.57 | 511.73 | 137.83 | 494.1 |
| | | | 2 | 69.6 | 378.83 | 90.53 | 426.03 | 91.87 | 413.87 |
| | | | 3 | 34.1 | 274.07 | 47.23 | 307.87 | 46.37 | 299.13 |
| | | Ver | 1 | 110.3 | 446.63 | 124.37 | 506.8 | 136.1 | 489.17 |
| | | | 2 | 68.5 | 385.17 | 84.33 | 428.2 | 85.47 | 416.97 |
| | | | 3 | 34.7 | 275.67 | 39.3 | 304.43 | 42.4 | 299.17 |
| | 12 | Train | 1 | 108.23 | 464.63 | 132.9 | 481.93 | 130.3 | 507.27 |
| | | | 2 | 64.23 | 387.63 | 89.73 | 404.53 | 85.93 | 422.9 |
| | | | 3 | 33.5 | 285.23 | 44.57 | 288.67 | 43.9 | 305.13 |
| | | Ver | 1 | 107 | 461.33 | 129.37 | 479.67 | 121.8 | 504.37 |
| | | | 2 | 63.57 | 392 | 86.73 | 407.3 | 81.3 | 425.37 |
| | | | 3 | 30.2 | 285.6 | 42.93 | 288.13 | 43.43 | 306.8 |
| 25 | 1 | Train | 1 | 115.53 | 468.53 | 139.5 | 498.13 | 134.53 | 506.03 |
| | | | 2 | 71.47 | 392.43 | 100.1 | 418.6 | 93.07 | 427.57 |
| | | | 3 | 34.77 | 278.93 | 51.83 | 288.4 | 47.13 | 306.9 |
| | | Ver | 1 | 112.17 | 463.63 | 134.13 | 493.37 | 131.5 | 501 |
| | | | 2 | 70.5 | 393.93 | 94.8 | 424.97 | 91.07 | 426.93 |
| | | | 3 | 37.17 | 283.3 | 46.07 | 286.5 | 45.73 | 302.67 |
| | 2 | Train | 1 | 108.57 | 476.07 | 123.8 | 520.57 | 131.13 | 512.53 |
| | | | 2 | 63.63 | 392.4 | 85.8 | 446.4 | 85.8 | 427.13 |
| | | | 3 | 30.6 | 292.43 | 44.77 | 337.27 | 43.63 | 312.53 |
| | | Ver | 1 | 105.8 | 471.4 | 120.5 | 518.7 | 124.97 | 509.07 |
| | | | 2 | 61.93 | 392.47 | 79.53 | 447.07 | 81.4 | 428.47 |
| | | | 3 | 32.23 | 295.93 | 41.67 | 335.03 | 41.27 | 311.97 |
| | 7 | Train | 1 | 98.5 | 484.4 | 136.33 | 492.6 | 131.1 | 503.93 |
| | | | 2 | 64.87 | 403.27 | 92.1 | 411.33 | 92.27 | 420.9 |
| | | | 3 | 31.77 | 294.07 | 45.97 | 294.17 | 44.63 | 311.43 |
| | | Ver | 1 | 95.23 | 482.1 | 127.57 | 486.67 | 125.47 | 501 |
| | | | 2 | 63.83 | 409.13 | 85.33 | 415.6 | 85.6 | 427.9 |
| | | | 3 | 31 | 298.53 | 40.83 | 294.4 | 42.63 | 312.53 |
| | 12 | Train | 1 | 118.7 | 467 | 142.7 | 502.23 | 140.13 | 497.4 |
| | | | 2 | 71.07 | 386 | 95.27 | 421.97 | 97.23 | 413.9 |
| | | | 3 | 32.8 | 284.87 | 47.43 | 305.23 | 48.07 | 296.5 |
| | | Ver | 1 | 117.07 | 463.07 | 137.93 | 497.7 | 134.13 | 492.97 |
| | | | 2 | 67.6 | 389.73 | 89.93 | 424.67 | 93.3 | 420.23 |
| | | | 3 | 33.33 | 286.3 | 44.2 | 307.7 | 45.23 | 292.07 |
| 51 | 1 | Train | 1 | 108.03 | 485.2 | 156 | 493.4 | 129.5 | 503.97 |
| | | | 2 | 65.57 | 411.53 | 103.13 | 415.83 | 89.67 | 423.13 |
| | | | 3 | 34.47 | 307.53 | 50.1 | 292.2 | 42.63 | 304.07 |
| | | Ver | 1 | 103.2 | 480.7 | 150.1 | 488.8 | 124.53 | 501.7 |
| | | | 2 | 62.87 | 413.1 | 97.87 | 418.13 | 83.4 | 423.63 |
| | | | 3 | 34.27 | 309.43 | 49.23 | 292.1 | 41.63 | 303.77 |
| | 2 | Train | 1 | 111.57 | 460.93 | 136.97 | 522.5 | 138.7 | 501.97 |
| | | | 2 | 73.97 | 381.23 | 93.7 | 438.7 | 95.87 | 426.37 |
| | | | 3 | 35.1 | 271.27 | 48.37 | 323.17 | 48.6 | 302.33 |
| | | Ver | 1 | 109.7 | 459.27 | 130.6 | 515.93 | 131.73 | 499.6 |
| | | | 2 | 72.8 | 383.17 | 87.87 | 440.57 | 90.57 | 425.2 |
| | | | 3 | 32.27 | 266.8 | 46.47 | 321.1 | 45.43 | 305.1 |
| | 7 | Train | 1 | 115.63 | 479.83 | 132.43 | 508.13 | 132.53 | 507.87 |
| | | | 2 | 71.67 | 398.3 | 90.2 | 432.83 | 87.3 | 423.13 |
| | | | 3 | 37.03 | 293.77 | 45.67 | 323.5 | 46.43 | 309.67 |
| | | Ver | 1 | 114.13 | 472.87 | 126.7 | 508.57 | 126.3 | 506.67 |
| | | | 2 | 69.87 | 400.8 | 88.23 | 441.47 | 78.77 | 425.07 |
| | | | 3 | 35.53 | 290 | 42.57 | 324.17 | 41.5 | 310.47 |
| | 12 | Train | 1 | 119.1 | 480.73 | 139.9 | 514.67 | 132.97 | 508.73 |
| | | | 2 | 75.37 | 397.27 | 90.63 | 433.13 | 90.63 | 430.9 |
| | | | 3 | 38.47 | 293.2 | 43.87 | 319.8 | 44.83 | 310.07 |
| | | Ver | 1 | 120.93 | 479.27 | 134.7 | 514.47 | 128.03 | 505.63 |
| | | | 2 | 72.53 | 403.7 | 85.57 | 439.2 | 86.8 | 428.87 |
| | | | 3 | 35.33 | 294.03 | 42.53 | 319.83 | 43.93 | 308.77 |

Table A.335: 4 States – $(12, 55, 7)_4$ – Perfect Score is 660 and fuzzy tolerance of 2

| Parameters | | | | Trans 30 Restarts | |
|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 141.33 | 612.67 |
| | | | 2 | 98.37 | 573.23 |
| | | | 3 | 49.57 | 514.23 |
| | | Ver | 1 | 132.53 | 609.77 |
| | | | 2 | 93.23 | 576.77 |
| | | | 3 | 46.7 | 515.73 |
| | 2 | Train | 1 | 134.57 | 603.47 |
| | | | 2 | 96.17 | 564.9 |
| | | | 3 | 48.53 | 502.33 |
| | | Ver | 1 | 127.07 | 603 |
| | | | 2 | 93.37 | 566.97 |
| | | | 3 | 45 | 503.5 |
| | 7 | Train | 1 | 136.03 | 599.77 |
| | | | 2 | 93.13 | 565.17 |
| | | | 3 | 46.47 | 505.4 |
| | | Ver | 1 | 134.07 | 598.07 |
| | | | 2 | 85.17 | 564.57 |
| | | | 3 | 42.77 | 501.13 |
| | 12 | Train | 1 | 134.73 | 600.77 |
| | | | 2 | 88.77 | 563.3 |
| | | | 3 | 45.27 | 504.73 |
| | | Ver | 1 | 129.43 | 597.47 |
| | | | 2 | 84.03 | 563.5 |
| | | | 3 | 42.53 | 505.77 |
| 25 | 1 | Train | 1 | 131.47 | 600.93 |
| | | | 2 | 86.87 | 565.77 |
| | | | 3 | 45.8 | 510.7 |
| | | Ver | 1 | 127.77 | 598.2 |
| | | | 2 | 83.87 | 565.6 |
| | | | 3 | 45.13 | 511.2 |
| | 2 | Train | 1 | 131.13 | 605.9 |
| | | | 2 | 85.8 | 569.6 |
| | | | 3 | 43.63 | 515.27 |
| | | Ver | 1 | 124.97 | 604.2 |
| | | | 2 | 81.4 | 572.37 |
| | | | 3 | 41.27 | 514.4 |
| | 7 | Train | 1 | 131.1 | 602 |
| | | | 2 | 92.27 | 563.23 |
| | | | 3 | 44.63 | 507.33 |
| | | Ver | 1 | 125.47 | 600.77 |
| | | | 2 | 85.6 | 564.07 |
| | | | 3 | 42.63 | 504.23 |
| | 12 | Train | 1 | 140.13 | 601.67 |
| | | | 2 | 97.23 | 561.07 |
| | | | 3 | 48.07 | 505.93 |
| | | Ver | 1 | 134.13 | 597.73 |
| | | | 2 | 93.3 | 566.03 |
| | | | 3 | 45.23 | 498.2 |
| 51 | 1 | Train | 1 | 129 | 614.5 |
| | | | 2 | 95.5 | 584.23 |
| | | | 3 | 46.47 | 527.73 |
| | | Ver | 1 | 125.57 | 615.1 |
| | | | 2 | 92.1 | 585.5 |
| | | | 3 | 45.47 | 525.97 |
| | 2 | Train | 1 | 135.4 | 608.37 |
| | | | 2 | 91.4 | 573.07 |
| | | | 3 | 46.17 | 510.87 |
| | | Ver | 1 | 129.1 | 609.27 |
| | | | 2 | 88.13 | 574 |
| | | | 3 | 43.4 | 512.67 |
| | 7 | Train | 1 | 126.1 | 603.7 |
| | | | 2 | 86.1 | 567.27 |
| | | | 3 | 44.9 | 513.63 |
| | | Ver | 1 | 120.87 | 600.97 |
| | | | 2 | 76.4 | 565.67 |
| | | | 3 | 39.5 | 512.53 |
| | 12 | Train | 1 | 132.97 | 601.5 |
| | | | 2 | 90.63 | 566.4 |
| | | | 3 | 44.83 | 508.13 |
| | | Ver | 1 | 128.03 | 600.27 |
| | | | 2 | 86.8 | 567.5 |
| | | | 3 | 43.93 | 507.83 |
| 101 | 1 | Train | 1 | 135.23 | 608.83 |
| | | | 2 | 95.73 | 576.37 |
| | | | 3 | 46.27 | 516.33 |
| | | Ver | 1 | 130.33 | 607.53 |
| | | | 2 | 86.77 | 575.87 |
| | | | 3 | 42.9 | 516 |
| | 2 | Train | 1 | 123.37 | 614.13 |
| | | | 2 | 90.63 | 584.57 |
| | | | 3 | 45.27 | 529.73 |
| | | Ver | 1 | 121 | 613.23 |
| | | | 2 | 87.27 | 587.27 |
| | | | 3 | 38.97 | 532.3 |
| | 7 | Train | 1 | 136.6 | 604.33 |
| | | | 2 | 91.9 | 568.6 |
| | | | 3 | 47.5 | 510.97 |
| | | Ver | 1 | 129.1 | 605.43 |
| | | | 2 | 83.87 | 565.97 |
| | | | 3 | 44.4 | 505.27 |
| | 12 | Train | 1 | 140.1 | 602.67 |
| | | | 2 | 92.6 | 568.73 |
| | | | 3 | 46.93 | 507.97 |
| | | Ver | 1 | 133.37 | 603.03 |
| | | | 2 | 88.47 | 570.67 |
| | | | 3 | 43.33 | 506.87 |

Table A.336: 4 States – $(12, 55, 7)_4$ – Perfect Score is 660 and fuzzy tolerance of 3

| Parameters | | | | 10% Mutation | | 30% Mutation | | 4 Restarts | | Trans 30 Restarts | | Longer 4 Restarts | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 399.6 | 514.47 | 393.97 | 514.97 | 402.87 | 515.73 | 200.83 | 588.1 | 403.87 | 524.53 |
| | | | 2 | 316.77 | 463.1 | 310.07 | 466.6 | 322.93 | 467.3 | 125.03 | 531.93 | 328.3 | 482.9 |
| | | | 3 | 183.17 | 358.4 | 180.5 | 358.93 | 191.2 | 360.53 | 61.5 | 454.5 | 188.8 | 377 |
| | | Ver | 1 | 386.23 | 504.9 | 378.9 | 509.13 | 388.63 | 506.47 | 193.03 | 585.03 | 392.03 | 518.1 |
| | | | 2 | 318.43 | 466.77 | 313.93 | 470.67 | 326.77 | 469.13 | 118.6 | 530.4 | 327.47 | 483.47 |
| | | | 3 | 180.83 | 355.13 | 175.07 | 362.37 | 182.8 | 357 | 56.1 | 454.47 | 185.1 | 372.43 |
| | 2 | Train | 1 | 415.8 | 511.8 | 415.57 | 519.6 | 406.7 | 517.77 | 209.93 | 581.37 | 406.53 | 520.27 |
| | | | 2 | 324.73 | 460.57 | 331.93 | 469.83 | 323.97 | 471.97 | 143.97 | 532.7 | 322.77 | 475.47 |
| | | | 3 | 192.17 | 352.9 | 195.07 | 366.73 | 191.73 | 370.47 | 69.03 | 456.6 | 193.5 | 373.63 |
| | | Ver | 1 | 395.03 | 502.67 | 400.67 | 512.3 | 393.8 | 510.37 | 202.5 | 578.87 | 389.6 | 513.03 |
| | | | 2 | 329.97 | 469.37 | 328 | 473.2 | 325.27 | 476.93 | 135.27 | 533.57 | 325.3 | 479.57 |
| | | | 3 | 188.63 | 352.63 | 188.13 | 365.03 | 189.2 | 365.13 | 67.73 | 451.47 | 185.17 | 370.6 |
| | 7 | Train | 1 | 418.77 | 519.87 | 414.3 | 518.93 | 412.53 | 519.23 | 220.4 | 568.03 | 421.53 | 526.57 |
| | | | 2 | 335.23 | 472.93 | 334.23 | 473.57 | 328.83 | 479.33 | 147.4 | 505.4 | 330.57 | 480.37 |
| | | | 3 | 199.7 | 366.33 | 199.1 | 369.9 | 193.07 | 371.43 | 71.13 | 419.87 | 195.47 | 376.3 |
| | | Ver | 1 | 402.6 | 509.6 | 397.8 | 509.07 | 401.67 | 514.73 | 213.1 | 565.1 | 403.6 | 516.4 |
| | | | 2 | 331.2 | 471.3 | 336.2 | 473.97 | 331.33 | 481.23 | 142.3 | 511.9 | 332.1 | 483.27 |
| | | | 3 | 191.8 | 361.47 | 192 | 361.8 | 187.8 | 369.57 | 66.63 | 420.83 | 190.63 | 378.13 |
| | 12 | Train | 1 | 408.97 | 514.03 | 418.03 | 525.4 | 404.57 | 522.1 | 225.9 | 574.57 | 419.7 | 526.33 |
| | | | 2 | 325.97 | 470.53 | 338.43 | 480.8 | 320.53 | 477.83 | 155.23 | 522.77 | 334.57 | 482.67 |
| | | | 3 | 194.73 | 365.53 | 198.77 | 373.63 | 187 | 376.2 | 75.1 | 434.63 | 200.07 | 379.47 |
| | | Ver | 1 | 396.73 | 510.17 | 401.47 | 515.83 | 392.37 | 517.9 | 216.97 | 573.4 | 407.07 | 518.87 |
| | | | 2 | 330.43 | 475.77 | 336.93 | 477.63 | 318.73 | 478.03 | 152.2 | 522.57 | 336.37 | 482.5 |
| | | | 3 | 186.53 | 361.6 | 195.27 | 370.07 | 182.9 | 370.87 | 71.53 | 429.83 | 193.63 | 379.57 |
| 25 | 1 | Train | 1 | 393.03 | 511.53 | 405.97 | 513.7 | 409.6 | 523.03 | 222.6 | 576.73 | 410.57 | 517.57 |
| | | | 2 | 311.7 | 467.87 | 323.87 | 470.87 | 323.87 | 478.93 | 136.17 | 517.77 | 321.53 | 473.83 |
| | | | 3 | 180.87 | 359.27 | 191.73 | 366.33 | 194.47 | 373.03 | 66.4 | 433.23 | 190.07 | 367.5 |
| | | Ver | 1 | 380.63 | 505.3 | 395.47 | 508.53 | 394.07 | 513.33 | 212.73 | 573.63 | 396 | 509.5 |
| | | | 2 | 309.83 | 468.23 | 328.47 | 472.5 | 329.7 | 480.37 | 135.03 | 520.73 | 323 | 477.17 |
| | | | 3 | 177.83 | 359.57 | 186.63 | 363.37 | 186.6 | 370.7 | 65.63 | 432.37 | 185.2 | 367.83 |
| | 2 | Train | 1 | 410.17 | 507.07 | 415.43 | 515.43 | 408.97 | 509.87 | 216.83 | 573.73 | 421 | 529.83 |
| | | | 2 | 327.73 | 460.23 | 328.13 | 472 | 331.4 | 468.47 | 144.43 | 517.03 | 332.37 | 489.77 |
| | | | 3 | 197.17 | 350.77 | 197.73 | 372.23 | 195.83 | 359.9 | 71.47 | 438.33 | 204.23 | 388.8 |
| | | Ver | 1 | 392.1 | 497.17 | 406 | 511.43 | 395.6 | 503.1 | 211.23 | 568.8 | 406.9 | 522.03 |
| | | | 2 | 326.9 | 461 | 332.87 | 477.63 | 331.73 | 469.7 | 138.1 | 521.63 | 334.53 | 489.77 |
| | | | 3 | 192.73 | 349.1 | 191.13 | 362.33 | 188.47 | 356.43 | 66.7 | 432.53 | 192.9 | 386.13 |
| | 7 | Train | 1 | 415.47 | 514.37 | 414.53 | 513.83 | 417.03 | 526.17 | 214.53 | 583.5 | 419 | 519.63 |
| | | | 2 | 327.53 | 465.7 | 331.77 | 471.53 | 331.3 | 481.13 | 136.97 | 525.4 | 333.37 | 473.63 |
| | | | 3 | 195.87 | 354.37 | 202.17 | 365.67 | 194.8 | 379.5 | 70.2 | 445.8 | 199.5 | 368.93 |
| | | Ver | 1 | 400.67 | 503.63 | 401.23 | 508.13 | 403.53 | 516.57 | 203.77 | 580.1 | 402.93 | 510.57 |
| | | | 2 | 329.87 | 467.4 | 333.13 | 473.63 | 333.47 | 485.27 | 133.5 | 527.47 | 336.17 | 475.13 |
| | | | 3 | 188.67 | 354.43 | 192.63 | 363 | 194.87 | 381.03 | 63.03 | 440.83 | 194.03 | 366.93 |
| | 12 | Train | 1 | 409.1 | 512.97 | 420.2 | 515.97 | 414.83 | 513.13 | 210.3 | 578.3 | 421.9 | 522.9 |
| | | | 2 | 329.13 | 467.6 | 336.97 | 466.47 | 331.83 | 471.17 | 134.93 | 526 | 333 | 473.53 |
| | | | 3 | 197.5 | 363.57 | 202.27 | 363.13 | 197.27 | 359.8 | 69.17 | 444.83 | 197.07 | 370.23 |
| | | Ver | 1 | 396.93 | 507.67 | 405.27 | 506.63 | 399.3 | 503.57 | 202.6 | 578.67 | 405.5 | 512.4 |
| | | | 2 | 329.5 | 470.27 | 335.8 | 469.77 | 327.73 | 469.73 | 134.27 | 528.4 | 334.63 | 478.7 |
| | | | 3 | 190.57 | 358.2 | 196.97 | 358.27 | 192.13 | 360.93 | 63.4 | 447.3 | 192.93 | 369.1 |
| 51 | 1 | Train | 1 | 403.4 | 510.1 | 407.93 | 516.53 | 411.53 | 520.43 | 214.73 | 567.3 | 414.27 | 523.13 |
| | | | 2 | 322.4 | 460.37 | 325.67 | 473.03 | 326.03 | 476.53 | 137.63 | 507.6 | 336.43 | 481.77 |
| | | | 3 | 187.67 | 349.83 | 188.9 | 361.77 | 194.83 | 373.97 | 69.03 | 425.87 | 192.9 | 373.67 |
| | | Ver | 1 | 388.53 | 499.73 | 391.73 | 508.07 | 398.5 | 511.53 | 203.1 | 562.83 | 397.7 | 514.93 |
| | | | 2 | 322.93 | 462.57 | 327.77 | 476.33 | 328.9 | 480.43 | 134.6 | 511.7 | 332.03 | 482.13 |
| | | | 3 | 185.03 | 348.37 | 186.53 | 359.97 | 189.67 | 370.37 | 64.5 | 422.93 | 194.17 | 373.73 |
| | 2 | Train | 1 | 411.3 | 517.3 | 411.23 | 526.63 | 414.67 | 520.93 | 205.33 | 579.63 | 418.4 | 525.43 |
| | | | 2 | 326.23 | 472.4 | 329.53 | 480.87 | 328.87 | 473.47 | 132.3 | 522.9 | 334.3 | 484.17 |
| | | | 3 | 196.87 | 364.23 | 191.43 | 373.83 | 201.03 | 369.23 | 64.23 | 439.4 | 197.43 | 380.63 |
| | | Ver | 1 | 400.5 | 511.67 | 395.13 | 516.43 | 398.9 | 507.93 | 197.67 | 579.63 | 403.67 | 517.27 |
| | | | 2 | 332.73 | 477.27 | 328 | 481.93 | 333.93 | 475.43 | 129.33 | 523.33 | 331.4 | 483.97 |
| | | | 3 | 187.67 | 359.07 | 187.77 | 374.43 | 191.83 | 367.67 | 59.57 | 436.2 | 191.93 | 378.9 |
| | 7 | Train | 1 | 410.37 | 507.7 | 420.47 | 521.27 | 412.87 | 511.97 | 215.93 | 574.07 | 422.7 | 522.53 |
| | | | 2 | 327.53 | 460.53 | 333.43 | 476.2 | 332 | 469.67 | 141.63 | 514.73 | 337.93 | 473.3 |
| | | | 3 | 193.8 | 352.3 | 200.13 | 366.2 | 197.1 | 358.53 | 67.2 | 429.63 | 204.67 | 366.77 |
| | | Ver | 1 | 399.33 | 505 | 402.3 | 510.27 | 395.9 | 502.87 | 202.07 | 569.97 | 405.23 | 510.7 |
| | | | 2 | 329.6 | 464.77 | 331.3 | 475.73 | 332.73 | 471.07 | 139.03 | 514.93 | 336.53 | 474.63 |
| | | | 3 | 187.6 | 349.17 | 197.3 | 367.87 | 193.33 | 358.13 | 65.63 | 431.5 | 196.8 | 367.2 |
| | 12 | Train | 1 | 416.37 | 507.7 | 418.8 | 515.43 | 418.97 | 516.27 | 210.9 | 575.8 | 424.17 | 522.97 |
| | | | 2 | 327.8 | 456.27 | 337.27 | 469.33 | 335.07 | 473.07 | 135.9 | 521.37 | 333.6 | 468.27 |
| | | | 3 | 196 | 348.23 | 202.5 | 363.43 | 198.4 | 364.83 | 65.67 | 441.13 | 200.13 | 366.77 |
| | | Ver | 1 | 398.87 | 497.7 | 402.67 | 505.07 | 401.97 | 506.33 | 203.73 | 573.6 | 407.7 | 511.33 |
| | | | 2 | 326.73 | 458.47 | 334.07 | 469.17 | 334.97 | 475.37 | 135.2 | 522.03 | 335.57 | 473.63 |
| | | | 3 | 193.7 | 349.5 | 199.47 | 365.53 | 195 | 365.5 | 63.57 | 443.77 | 197.17 | 366.77 |
| 101 | 1 | Train | 1 | 404.47 | 514.5 | 409.1 | 521.2 | 416.1 | 526.37 | 206.43 | 572.67 | 415.73 | 525.77 |
| | | | 2 | 323.87 | 468.33 | 329.33 | 476.8 | 337.1 | 484.43 | 142.77 | 518.27 | 336.13 | 484.87 |
| | | | 3 | 190.8 | 363.4 | 188.5 | 367.2 | 195.33 | 375.97 | 69.53 | 432.5 | 197.9 | 374.27 |
| | | Ver | 1 | 390.07 | 506.37 | 390.9 | 513.1 | 401.87 | 520 | 200.4 | 570.83 | 400.47 | 514.43 |
| | | | 2 | 325.37 | 470.9 | 328.13 | 476.77 | 333.5 | 482.87 | 142.6 | 519.37 | 337.8 | 482.13 |
| | | | 3 | 182.47 | 362.37 | 188.07 | 368.93 | 192 | 373.2 | 68.73 | 432.43 | 193.73 | 374.47 |
| | 2 | Train | 1 | 413.47 | 514.53 | 411.4 | 517.43 | 418.1 | 519.43 | 215.07 | 567.07 | 420.6 | 523.73 |
| | | | 2 | 331.27 | 468.53 | 326.6 | 468.07 | 333.83 | 476.83 | 140.4 | 505 | 340.13 | 477.53 |
| | | | 3 | 192.9 | 360.77 | 194.27 | 364.9 | 196.07 | 366.13 | 67.63 | 422.63 | 203.27 | 372.87 |
| | | Ver | 1 | 392.87 | 502.97 | 393 | 506.87 | 399.27 | 508.33 | 204.33 | 559.77 | 403.73 | 514.37 |
| | | | 2 | 328.73 | 468.77 | 328.07 | 471.3 | 332.5 | 471.93 | 138.43 | 506.9 | 338.17 | 478.07 |
| | | | 3 | 192 | 359.63 | 184.57 | 356.67 | 192.07 | 363.73 | 64.53 | 417.13 | 198.6 | 370.33 |
| | 7 | Train | 1 | 410.6 | 509.13 | 423.73 | 525.5 | 421.47 | 517.8 | 204.7 | 588.9 | 420.97 | 518.43 |
| | | | 2 | 329.7 | 461.63 | 337.4 | 478.17 | 333.57 | 470.87 | 132 | 539.67 | 338.53 | 474.9 |
| | | | 3 | 198.23 | 357.13 | 200.1 | 372.03 | 206.3 | 369.87 | 62.97 | 464.97 | 201.77 | 367.6 |
| | | Ver | 1 | 396.13 | 500.87 | 403.33 | 515.23 | 406.03 | 508.77 | 199.43 | 584.43 | 406.43 | 509.87 |
| | | | 2 | 332 | 466.43 | 336.9 | 478.83 | 333.63 | 471.2 | 125.07 | 541.73 | 335.7 | 475.07 |
| | | | 3 | 191.17 | 349.37 | 194.5 | 372.1 | 195.33 | 360.57 | 60.9 | 460.07 | 196.83 | 364.7 |
| | 12 | Train | 1 | 415.17 | 512.53 | 425.1 | 513.83 | 423.9 | 513.03 | 207.33 | 578.63 | 421 | 516.87 |
| | | | 2 | 330.23 | 461.93 | 335.77 | 467.13 | 336.6 | 464.43 | 131.67 | 518.67 | 340.93 | 474.83 |
| | | | 3 | 197.03 | 354.2 | 201.83 | 357.07 | 204.03 | 356.73 | 64.93 | 442.23 | 205.67 | 366.43 |
| | | Ver | 1 | 397.77 | 500.47 | 405.4 | 503.7 | 405.27 | 501.7 | 200.17 | 574.9 | 406.87 | 508.83 |
| | | | 2 | 330.57 | 463.97 | 335.03 | 466.03 | 334.63 | 464.63 | 128.6 | 525.4 | 341.93 | 475.8 |
| | | | 3 | 193.77 | 352.5 | 197.53 | 353.33 | 200.37 | 354.37 | 61.07 | 438.1 | 196.47 | 362.97 |

Table A.337: 6 States – $(12, 55, 7)_4$ – Perfect Score is 660 and fuzzy tolerance of 3

| Parameters | | | | 10% Mutation | | 30% Mutation | | 4 Restarts | | Trans 30 Restarts | | Longer 4 Restarts | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 549.03 | 584.83 | 548 | 590.37 | 529.17 | 581.93 | 207.33 | 510.43 | 545.4 | 587.8 |
| | | | 2 | 462.1 | 533.4 | 462.9 | 538.83 | 438.8 | 528.03 | 131.67 | 412.73 | 452.17 | 533.1 |
| | | | 3 | 302.4 | 435.7 | 301.13 | 435.67 | 283.17 | 426.33 | 64.93 | 303.8 | 294.97 | 437.6 |
| | | Ver | 1 | 538.7 | 579.77 | 532.87 | 579.77 | 517.53 | 572.53 | 200.17 | 504.63 | 532.43 | 580.37 |
| | | | 2 | 456.43 | 533.37 | 449.97 | 533.67 | 435.27 | 527.27 | 128.6 | 412.3 | 449.07 | 536.93 |
| | | | 3 | 279.93 | 421.9 | 282.27 | 429.93 | 266.07 | 419.17 | 61.07 | 299.57 | 274.03 | 423.73 |
| | 2 | Train | 1 | 544.57 | 584.03 | 544.17 | 583.1 | 534.57 | 588.97 | 319.93 | 508.83 | 540.6 | 586.1 |
| | | | 2 | 463.17 | 538.23 | 461.97 | 534.6 | 443.8 | 536.53 | 199.93 | 408.33 | 460.7 | 537.53 |
| | | | 3 | 303.27 | 444.2 | 305.83 | 438.13 | 282.17 | 435.57 | 96.17 | 301.9 | 299.97 | 438.4 |
| | | Ver | 1 | 532.33 | 577.57 | 532.23 | 577 | 522.6 | 583.7 | 304.9 | 501.17 | 529.03 | 578.4 |
| | | | 2 | 454.07 | 535.8 | 451.47 | 530.73 | 438.67 | 535.43 | 195.1 | 414.03 | 451.2 | 538.07 |
| | | | 3 | 285.9 | 435.43 | 286.9 | 423.93 | 261.97 | 427.07 | 90.4 | 298.2 | 277.3 | 433.2 |
| | 7 | Train | 1 | 534.9 | 583.6 | 542.73 | 582.43 | 530.97 | 582.67 | 333.67 | 514.67 | 543.63 | 586.9 |
| | | | 2 | 449.3 | 531.77 | 456.53 | 530.23 | 438.97 | 521.63 | 211.03 | 419.33 | 456.6 | 534.93 |
| | | | 3 | 288 | 435 | 296.37 | 433.17 | 276.13 | 420.1 | 102.4 | 310.7 | 300.67 | 440.53 |
| | | Ver | 1 | 519.37 | 571.77 | 526.07 | 570.63 | 518.63 | 573.9 | 322.37 | 507.37 | 532.03 | 578.43 |
| | | | 2 | 438.23 | 529.3 | 451.93 | 531 | 433.13 | 523.77 | 207.1 | 419.9 | 449.07 | 534.17 |
| | | | 3 | 269.23 | 424.6 | 284.17 | 431.3 | 265.87 | 408.5 | 100.57 | 305.97 | 278 | 430.67 |
| | 12 | Train | 1 | 527.3 | 573.1 | 539.9 | 581.67 | 513.87 | 568.33 | 326.13 | 515.37 | 533.5 | 583.3 |
| | | | 2 | 446.67 | 520.23 | 456.63 | 530.8 | 430.93 | 516.47 | 199.37 | 413.13 | 444.7 | 527.83 |
| | | | 3 | 285.6 | 421.03 | 298.93 | 428.23 | 268.3 | 408.2 | 100.23 | 307.5 | 284.7 | 431.07 |
| | | Ver | 1 | 518.63 | 568.4 | 525.5 | 574.5 | 500.87 | 561.3 | 311.97 | 506.37 | 518.1 | 575.7 |
| | | | 2 | 437.1 | 519.67 | 446.97 | 527.63 | 423.73 | 514.37 | 197.27 | 420.07 | 435.7 | 529.33 |
| | | | 3 | 271.07 | 408.63 | 275.2 | 416.93 | 254.73 | 401.33 | 95.5 | 304.93 | 269.17 | 422.27 |
| 25 | 1 | Train | 1 | 545.57 | 582.3 | 545.8 | 588.7 | 534.67 | 582.3 | 326.4 | 507.37 | 546.57 | 589.47 |
| | | | 2 | 456.9 | 526.93 | 464.6 | 537.03 | 450.4 | 528.67 | 207.77 | 410.9 | 457.17 | 539.4 |
| | | | 3 | 305.13 | 429.83 | 305.9 | 445.27 | 285.63 | 428.23 | 105 | 302.53 | 301 | 448.8 |
| | | Ver | 1 | 531.37 | 572 | 538 | 583.5 | 522.17 | 573.1 | 310.73 | 496.63 | 530.33 | 579.53 |
| | | | 2 | 455.2 | 528.13 | 456.27 | 538.1 | 446.77 | 530.8 | 204.87 | 414.8 | 450.73 | 544.1 |
| | | | 3 | 289.37 | 421.4 | 286.67 | 433.33 | 277.3 | 424.83 | 99.33 | 302.87 | 280.6 | 443.3 |
| | 2 | Train | 1 | 528.57 | 572.53 | 545.4 | 583.73 | 535.4 | 587.2 | 327.47 | 509.97 | 546.47 | 588.07 |
| | | | 2 | 446.83 | 516.97 | 460.43 | 536.2 | 446.9 | 535.47 | 201.37 | 411.97 | 459.9 | 540.5 |
| | | | 3 | 290.77 | 417.6 | 301.4 | 442.1 | 283.9 | 435.3 | 101.47 | 299.33 | 298.97 | 444.57 |
| | | Ver | 1 | 517.97 | 564.1 | 531.43 | 576.67 | 522.97 | 577.87 | 315.8 | 501.97 | 535.7 | 581.07 |
| | | | 2 | 438.67 | 518.3 | 453.6 | 539.37 | 442.97 | 537.33 | 197.43 | 412.53 | 451.97 | 542.97 |
| | | | 3 | 274.93 | 406.17 | 282.4 | 436.17 | 272.03 | 428.77 | 95.6 | 299.37 | 277.87 | 432.47 |
| | 7 | Train | 1 | 536.33 | 579.23 | 548.77 | 587.8 | 531.4 | 582.73 | 329.3 | 514.23 | 546.13 | 593.1 |
| | | | 2 | 448.07 | 526.57 | 461.7 | 542.73 | 440.77 | 526.17 | 203.9 | 416.87 | 460.83 | 541.13 |
| | | | 3 | 290.7 | 425.6 | 304.93 | 454.5 | 280.93 | 427.77 | 102.5 | 308.73 | 297.97 | 451.13 |
| | | Ver | 1 | 522.73 | 571.37 | 539.37 | 584.97 | 519.3 | 573.9 | 318.27 | 508.7 | 532.13 | 585.8 |
| | | | 2 | 441.9 | 525.17 | 459.13 | 544.3 | 439.3 | 528.77 | 204.43 | 421.2 | 453.07 | 543.97 |
| | | | 3 | 273.67 | 418.67 | 282.77 | 441.8 | 270.8 | 420.43 | 96.6 | 302.67 | 283.67 | 443.3 |
| | 12 | Train | 1 | 537.83 | 583.1 | 536.8 | 577.37 | 519.1 | 572.8 | 334.17 | 506.37 | 538.07 | 587.63 |
| | | | 2 | 448.6 | 524.6 | 453.47 | 523.1 | 436.9 | 521.4 | 210 | 404.7 | 452.33 | 537.9 |
| | | | 3 | 287 | 425.53 | 298.93 | 425.8 | 274.57 | 414.93 | 102.83 | 291.2 | 293.37 | 442.83 |
| | | Ver | 1 | 521.37 | 572.03 | 525.47 | 569.57 | 507.5 | 565.5 | 318.47 | 497.1 | 527.6 | 582.73 |
| | | | 2 | 445.2 | 529.93 | 446.53 | 524.1 | 428.97 | 518.73 | 207.57 | 410.67 | 446.37 | 536.63 |
| | | | 3 | 275.27 | 418.43 | 274.97 | 412.73 | 263.87 | 408.83 | 99.97 | 292.73 | 273.07 | 429.13 |
| 51 | 1 | Train | 1 | 545.47 | 585.47 | 536.63 | 576.77 | 542.17 | 589.83 | 311.6 | 501.17 | 552.33 | 595.27 |
| | | | 2 | 458.43 | 535.73 | 456.67 | 529 | 453.7 | 541.93 | 187.7 | 402.2 | 466.47 | 547.37 |
| | | | 3 | 302.3 | 438.73 | 295.47 | 428.17 | 294.67 | 450.57 | 94.53 | 296.17 | 306.03 | 458.67 |
| | | Ver | 1 | 529.87 | 577.77 | 525.77 | 570.83 | 531.8 | 584.27 | 300.57 | 493 | 543.43 | 589.53 |
| | | | 2 | 452.8 | 535.17 | 444.83 | 525.6 | 451.9 | 545.17 | 191.03 | 408.67 | 459.43 | 549.67 |
| | | | 3 | 281.73 | 429.67 | 276.27 | 422.53 | 276.27 | 440.43 | 92.23 | 292.9 | 282.87 | 446.5 |
| | 2 | Train | 1 | 539.33 | 578 | 543.43 | 584.27 | 540.3 | 589.57 | 317.7 | 501.77 | 549.77 | 588.43 |
| | | | 2 | 458.1 | 527.87 | 460.6 | 533.37 | 452.03 | 540.1 | 194.9 | 402.07 | 465.93 | 544.53 |
| | | | 3 | 301.2 | 428.43 | 301.03 | 438.33 | 293.37 | 447 | 95.7 | 292.07 | 302 | 452.2 |
| | | Ver | 1 | 525.97 | 570.27 | 531.43 | 576.6 | 528.23 | 580.77 | 300.47 | 491.23 | 537.37 | 580.77 |
| | | | 2 | 449.6 | 527.23 | 453.67 | 533.67 | 452.27 | 543.7 | 194.13 | 406.9 | 456.4 | 545.6 |
| | | | 3 | 281.9 | 417.57 | 282.97 | 427.47 | 276.57 | 439.63 | 94.13 | 293.37 | 282.83 | 445.33 |
| | 7 | Train | 1 | 531.83 | 574.53 | 539.93 | 577.67 | 530.03 | 585.4 | 318.37 | 493.77 | 546.93 | 588.63 |
| | | | 2 | 445.2 | 520.77 | 455.23 | 526.2 | 444.8 | 536.53 | 193.17 | 390.93 | 464.33 | 540.9 |
| | | | 3 | 287.93 | 419.47 | 305.2 | 436.27 | 280.57 | 444.4 | 98.07 | 288.47 | 304.8 | 450.6 |
| | | Ver | 1 | 519.3 | 564.67 | 529.93 | 571.63 | 519.23 | 578.8 | 303.83 | 485.9 | 535.8 | 580.93 |
| | | | 2 | 442.17 | 523.2 | 453.67 | 532.1 | 439.07 | 540.83 | 191.9 | 393.3 | 460.53 | 542.97 |
| | | | 3 | 275.7 | 413.63 | 284.4 | 423.93 | 262.5 | 437.4 | 95.43 | 286.57 | 284.17 | 439.97 |
| | 12 | Train | 1 | 526.6 | 568.37 | 538.03 | 575.63 | 526.97 | 574.97 | 305.87 | 504 | 545.6 | 589.5 |
| | | | 2 | 439.47 | 509.4 | 458.23 | 525.1 | 444.77 | 528.4 | 177.47 | 399.83 | 459.5 | 541.57 |
| | | | 3 | 283.27 | 403.4 | 304.93 | 430.3 | 282.2 | 430.27 | 89.43 | 299.53 | 303.37 | 448.33 |
| | | Ver | 1 | 512.3 | 559.47 | 525.8 | 569.47 | 516.9 | 568.73 | 291.7 | 497.37 | 535.27 | 582.97 |
| | | | 2 | 438.53 | 513.77 | 451.4 | 526.33 | 436.13 | 526 | 174.9 | 404.7 | 456.5 | 543.43 |
| | | | 3 | 270.23 | 400.37 | 285.03 | 420.83 | 267.23 | 416.47 | 87.13 | 294.6 | 285.63 | 439.47 |
| 101 | 1 | Train | 1 | 540.57 | 580.4 | 539.07 | 577.2 | 544 | 589.17 | 300.8 | 489.57 | 554.5 | 589.17 |
| | | | 2 | 455.03 | 522.57 | 456.17 | 527.37 | 453.5 | 539.37 | 181.4 | 387.67 | 472.83 | 546.07 |
| | | | 3 | 302.13 | 423.43 | 296.3 | 430.3 | 295.93 | 451.3 | 89.67 | 285.7 | 312.33 | 458.5 |
| | | Ver | 1 | 526.47 | 570.97 | 527.07 | 568.47 | 531.67 | 581.9 | 290.5 | 486.17 | 542.47 | 582.93 |
| | | | 2 | 447.93 | 524.97 | 453.27 | 526.3 | 449.53 | 541.17 | 179.8 | 391.4 | 466.7 | 546.53 |
| | | | 3 | 279.3 | 414.03 | 282.77 | 421.2 | 277.97 | 440.1 | 85.93 | 279.47 | 296.67 | 448.03 |
| | 2 | Train | 1 | 536.5 | 577.87 | 544.3 | 582.4 | 542.73 | 584.13 | 299.57 | 497.83 | 553.73 | 588.73 |
| | | | 2 | 454.5 | 522.27 | 460.7 | 532.63 | 457.07 | 538.13 | 177.5 | 399.03 | 468.73 | 543.03 |
| | | | 3 | 301.43 | 421.53 | 300.17 | 436.3 | 295.67 | 446.77 | 84.2 | 292.3 | 314.97 | 456.43 |
| | | Ver | 1 | 523.97 | 568.63 | 531.37 | 575.1 | 531.97 | 577.27 | 286.83 | 490.63 | 543.97 | 582.97 |
| | | | 2 | 445.77 | 521.1 | 452.13 | 531.6 | 451.23 | 538.3 | 175.83 | 402.77 | 464.9 | 546.47 |
| | | | 3 | 282.9 | 414.67 | 283.53 | 427.13 | 282.63 | 440.37 | 83.37 | 288.77 | 295.47 | 447.07 |
| | 7 | Train | 1 | 529.67 | 569.57 | 544.1 | 582.3 | 536.5 | 581.57 | 300.57 | 477.33 | 555.8 | 595.9 |
| | | | 2 | 449.97 | 515.97 | 459.43 | 533.83 | 451.3 | 535.7 | 181.03 | 380.4 | 468.33 | 544.8 |
| | | | 3 | 295.53 | 415.93 | 301.27 | 443.9 | 291.77 | 442.33 | 91.87 | 275.37 | 307.33 | 455.33 |
| | | Ver | 1 | 519.53 | 562.13 | 535.6 | 576.83 | 528.9 | 576.4 | 289.9 | 473.43 | 544.1 | 586.3 |
| | | | 2 | 443.3 | 516.23 | 453.6 | 535.43 | 450.43 | 541.07 | 181.53 | 383.43 | 461.67 | 548.13 |
| | | | 3 | 279.93 | 408.3 | 283.53 | 431.17 | 274.57 | 430.67 | 88.23 | 273.87 | 292.4 | 447.97 |
| | 12 | Train | 1 | 516.2 | 562 | 542.17 | 580.23 | 536.07 | 583.27 | 306.47 | 496.97 | 546.07 | 584.6 |
| | | | 2 | 434.13 | 500.9 | 454.33 | 527.93 | 449.97 | 535.7 | 182.67 | 391.47 | 461.53 | 541.5 |
| | | | 3 | 281.7 | 392.93 | 299.93 | 436.87 | 285.33 | 443.3 | 90.37 | 288.03 | 304.17 | 451.6 |
| | | Ver | 1 | 502.77 | 551.57 | 533.27 | 572.57 | 527 | 578.33 | 296.33 | 489.57 | 539.13 | 580.87 |
| | | | 2 | 430.27 | 505.67 | 451.5 | 532.8 | 447.8 | 539.2 | 185.83 | 396.2 | 458.6 | 543.43 |
| | | | 3 | 266.07 | 386.53 | 285.37 | 424.17 | 274.77 | 432.93 | 89.53 | 287.87 | 284.63 | 442.57 |

Table A.338: 12 States – $(12, 55, 7)_4$ – Perfect Score is 660 and fuzzy tolerance of 3

| Parameters | | | | 10% Mutation | | 30% Mutation | | 4 Restarts | | Trans 30 Restarts | | Longer 4 Restarts | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 558.4 | 587.7 | 566.07 | 595.33 | 531.4 | 578.73 | 350.13 | 441.67 | 552.5 | 586.53 |
| | | | 2 | 463.8 | 511.1 | 477.57 | 532.47 | 436.73 | 502.97 | 218.97 | 323.3 | 460.4 | 525.1 |
| | | | 3 | 310.8 | 387.73 | 319.77 | 411.8 | 276.87 | 381.57 | 108.77 | 205.77 | 306.37 | 410.2 |
| | | Ver | 1 | 540.43 | 577.2 | 549.87 | 588.27 | 511.3 | 565.43 | 329.17 | 428.03 | 538.57 | 580.57 |
| | | | 2 | 448.4 | 508.03 | 462.13 | 526.8 | 426.57 | 501 | 210.8 | 320.3 | 451 | 522.53 |
| | | | 3 | 276.67 | 367.03 | 286.57 | 393.5 | 252.5 | 366.73 | 105.73 | 202.37 | 278.73 | 398.67 |
| | 2 | Train | 1 | 558.73 | 590.43 | 563.3 | 592.23 | 535.83 | 575.77 | 342.73 | 447.4 | 551.43 | 583.1 |
| | | | 2 | 467.7 | 516.03 | 473 | 526.97 | 436.87 | 498.73 | 216.07 | 326.03 | 461.23 | 516.9 |
| | | | 3 | 311.57 | 391.57 | 317.03 | 410.23 | 279.5 | 376.43 | 110.8 | 213.43 | 309.6 | 402.5 |
| | | Ver | 1 | 542.6 | 579.77 | 546.3 | 583.93 | 517.73 | 565.6 | 326.13 | 432.7 | 536.03 | 575.6 |
| | | | 2 | 451.93 | 512.9 | 458.43 | 523.93 | 424.77 | 498.47 | 206.57 | 326.97 | 445.3 | 513.1 |
| | | | 3 | 285.93 | 374.47 | 283.83 | 396.93 | 253.57 | 361.47 | 102.17 | 209.17 | 277.9 | 383.93 |
| | 7 | Train | 1 | 535.73 | 569.9 | 552.4 | 578.77 | 518.7 | 565.1 | 351.87 | 449.2 | 549.53 | 589.73 |
| | | | 2 | 444.9 | 496.2 | 465.97 | 516.2 | 422.57 | 487.7 | 223.03 | 331.73 | 458.5 | 524.9 |
| | | | 3 | 294.03 | 373.6 | 313.6 | 399.7 | 266.43 | 363.37 | 117.5 | 219.57 | 301.4 | 414.43 |
| | | Ver | 1 | 517.13 | 558.47 | 537.63 | 570.4 | 500.3 | 552.6 | 334.2 | 437.17 | 533.93 | 579.83 |
| | | | 2 | 432.37 | 496.53 | 451.1 | 510.1 | 409.93 | 487.37 | 216.43 | 329.8 | 443.7 | 522.27 |
| | | | 3 | 262.67 | 361.9 | 283.1 | 380.57 | 242.5 | 349.9 | 108.4 | 209.93 | 272.13 | 395.73 |
| | 12 | Train | 1 | 538.63 | 575.9 | 546.03 | 576.43 | 525.37 | 568.7 | 338.97 | 434.37 | 538.27 | 574.83 |
| | | | 2 | 443.8 | 502.9 | 459 | 506.63 | 427.3 | 496.93 | 211.87 | 315.43 | 446.3 | 506.2 |
| | | | 3 | 288.4 | 376.2 | 303.87 | 386.73 | 270.5 | 374 | 107.57 | 202.3 | 290.03 | 385.23 |
| | | Ver | 1 | 523.07 | 566.5 | 528.2 | 564.67 | 505.43 | 556.43 | 322.67 | 424.93 | 519.27 | 564.17 |
| | | | 2 | 433.1 | 497.27 | 440.2 | 503.03 | 412.6 | 491.37 | 202.7 | 312.87 | 432.2 | 501.8 |
| | | | 3 | 262.6 | 361.2 | 266.93 | 365.1 | 250.53 | 362.4 | 103.8 | 200.6 | 265.7 | 371.7 |
| 25 | 1 | Train | 1 | 559.8 | 587.4 | 558.43 | 591.27 | 528.87 | 571.9 | 354.33 | 461.53 | 555.73 | 592.8 |
| | | | 2 | 468.73 | 514.13 | 472.33 | 528.07 | 440.2 | 504.13 | 218.27 | 341.03 | 466.53 | 529.27 |
| | | | 3 | 312.73 | 392.2 | 317.23 | 414.63 | 283.1 | 390.07 | 113.5 | 226.93 | 311.6 | 423.07 |
| | | Ver | 1 | 543.63 | 575.67 | 543.2 | 580.23 | 512.57 | 563.03 | 334.47 | 447.67 | 539.17 | 583.7 |
| | | | 2 | 453.47 | 513.9 | 455.03 | 523.37 | 427.37 | 503.77 | 214 | 341.3 | 451.93 | 530.7 |
| | | | 3 | 285.3 | 378.9 | 285.97 | 401.73 | 258.17 | 375.93 | 107.7 | 220.6 | 281.97 | 405.43 |
| | 2 | Train | 1 | 557.57 | 585.9 | 561.67 | 593.07 | 539.17 | 577.33 | 350.57 | 448.6 | 559.1 | 593.57 |
| | | | 2 | 469.1 | 517.03 | 474.23 | 529.1 | 449.67 | 513.03 | 219.03 | 329.77 | 469.8 | 532.4 |
| | | | 3 | 318.83 | 397.67 | 319.5 | 416.37 | 296.13 | 399.47 | 111.7 | 212.2 | 308.87 | 418.67 |
| | | Ver | 1 | 544.1 | 577.8 | 544.77 | 584.13 | 524.37 | 567 | 334.83 | 436.73 | 544.07 | 585.7 |
| | | | 2 | 459.6 | 514.07 | 458.03 | 524.23 | 434.37 | 509 | 207.03 | 326.17 | 454.97 | 528.4 |
| | | | 3 | 281.53 | 378.4 | 286.13 | 395.1 | 268.3 | 385.73 | 103.7 | 205.53 | 282.53 | 404.07 |
| | 7 | Train | 1 | 545.07 | 575.53 | 559.3 | 587.7 | 529.87 | 573.1 | 350.33 | 456.17 | 552.03 | 589.47 |
| | | | 2 | 453.97 | 504.8 | 474.5 | 530.4 | 438.57 | 509 | 215.47 | 332.77 | 461.1 | 527.23 |
| | | | 3 | 301.17 | 381.93 | 324.03 | 418.17 | 282.53 | 391.57 | 112.13 | 219.33 | 305.97 | 418.17 |
| | | Ver | 1 | 525.9 | 564.6 | 542.63 | 580.23 | 513.83 | 564 | 330 | 441.63 | 538.23 | 582.17 |
| | | | 2 | 443.77 | 503.77 | 456.93 | 521.47 | 428.87 | 510.9 | 204.97 | 330.77 | 449.97 | 525.57 |
| | | | 3 | 271.93 | 371.3 | 286.97 | 399.47 | 257.57 | 381.3 | 103.87 | 212.93 | 277.33 | 404.47 |
| | 12 | Train | 1 | 539.3 | 576.07 | 557.73 | 583.27 | 533.3 | 579.27 | 338.33 | 442.1 | 550.3 | 585.67 |
| | | | 2 | 446.47 | 509.17 | 465.03 | 517 | 438.37 | 515.17 | 210.33 | 323.83 | 460.8 | 522.4 |
| | | | 3 | 292.57 | 385.77 | 315.77 | 403.87 | 279.73 | 403.67 | 108.03 | 211.73 | 304.53 | 410.83 |
| | | Ver | 1 | 521.27 | 565.53 | 543.27 | 573.97 | 518.3 | 568.83 | 323.43 | 430.97 | 536.27 | 578.73 |
| | | | 2 | 433.5 | 503.47 | 453 | 515.87 | 428.9 | 515.57 | 202.37 | 325.13 | 449.07 | 522.63 |
| | | | 3 | 261.27 | 363.03 | 282.37 | 388.2 | 259.1 | 391.3 | 100.83 | 211.43 | 277.4 | 394.83 |
| 51 | 1 | Train | 1 | 558.77 | 585.87 | 553.1 | 582.33 | 552.9 | 595.13 | 331.27 | 438.53 | 559.33 | 591.2 |
| | | | 2 | 472.33 | 514.37 | 465.73 | 519.7 | 457.83 | 536.2 | 195.9 | 313.1 | 472.53 | 538.7 |
| | | | 3 | 321.57 | 392.87 | 312.13 | 408.8 | 299 | 434.33 | 100.6 | 205.7 | 319.27 | 435.13 |
| | | Ver | 1 | 543.63 | 575.27 | 536.1 | 571.27 | 539.37 | 586.33 | 315.03 | 427.23 | 548.7 | 585.43 |
| | | | 2 | 455.67 | 512.2 | 450.47 | 515.2 | 446.23 | 537.17 | 190.37 | 315.4 | 463.43 | 535.4 |
| | | | 3 | 284.4 | 375.87 | 281.63 | 389.03 | 274.53 | 421.47 | 97.7 | 201.27 | 291.73 | 419.77 |
| | 2 | Train | 1 | 557.8 | 584.1 | 562.63 | 591.93 | 546.93 | 586.9 | 332.03 | 430.33 | 559.17 | 595.17 |
| | | | 2 | 470.03 | 514.43 | 477.13 | 530.27 | 455.97 | 523.67 | 200.4 | 311.37 | 468.93 | 533.6 |
| | | | 3 | 316.63 | 395.37 | 322.73 | 420.43 | 305.37 | 420.3 | 100.43 | 201.37 | 313.03 | 423.23 |
| | | Ver | 1 | 541.4 | 573.93 | 548.03 | 583.97 | 533.63 | 578.63 | 318.5 | 421.87 | 543.63 | 586.33 |
| | | | 2 | 452.9 | 511.4 | 460.9 | 526.8 | 445.4 | 523.2 | 193.23 | 308.07 | 454.03 | 531.07 |
| | | | 3 | 284.03 | 377.5 | 290.63 | 400.4 | 273.43 | 403.4 | 95.33 | 196.77 | 282.97 | 413 |
| | 7 | Train | 1 | 545.77 | 577.7 | 551.27 | 580.03 | 539.97 | 581.27 | 332.13 | 438.83 | 553.93 | 589.87 |
| | | | 2 | 453.93 | 504.3 | 469 | 519.7 | 447.5 | 520.7 | 199.7 | 316.3 | 467.53 | 534.27 |
| | | | 3 | 300.03 | 384.93 | 318.6 | 407.77 | 288.53 | 408.83 | 101.43 | 204.87 | 311.37 | 430.83 |
| | | Ver | 1 | 527.43 | 564.03 | 537.03 | 571 | 527.5 | 575.6 | 318.43 | 427.83 | 540.93 | 583.63 |
| | | | 2 | 441.1 | 502.27 | 455.67 | 517.6 | 441.83 | 523.87 | 191.23 | 316.4 | 455.23 | 531.73 |
| | | | 3 | 279.53 | 373.13 | 285.87 | 393.43 | 268.77 | 398.2 | 95.83 | 204.67 | 285.33 | 420.37 |
| | 12 | Train | 1 | 529.33 | 560.97 | 548.73 | 580.5 | 530.1 | 574.47 | 325.33 | 433.33 | 549.47 | 584.77 |
| | | | 2 | 440.67 | 488.13 | 462.1 | 511.7 | 439.7 | 511.73 | 188.13 | 305.93 | 459.9 | 524.27 |
| | | | 3 | 288.23 | 361.13 | 309.7 | 393.2 | 285.33 | 406.83 | 91.5 | 196.47 | 306.63 | 423.83 |
| | | Ver | 1 | 511.13 | 548.1 | 528.8 | 568.2 | 515.2 | 563.77 | 307 | 420.73 | 533.03 | 576.2 |
| | | | 2 | 429.83 | 485.37 | 447.33 | 507.2 | 431.1 | 516.03 | 185.17 | 308.93 | 446.87 | 526.9 |
| | | | 3 | 261.47 | 345.57 | 280.23 | 378.1 | 264.93 | 395.33 | 91.13 | 195.4 | 281.27 | 413.27 |
| 101 | 1 | Train | 1 | 553.53 | 578 | 552.43 | 583.23 | 551.47 | 586.83 | 316.87 | 419.03 | 567.03 | 596.2 |
| | | | 2 | 466.43 | 509.33 | 467.23 | 521.77 | 462.77 | 528.03 | 186.23 | 296.67 | 483.87 | 544.9 |
| | | | 3 | 315.33 | 388.87 | 316.33 | 408.77 | 304.6 | 422 | 95.6 | 193.97 | 328.43 | 449.67 |
| | | Ver | 1 | 537.1 | 566.47 | 535.4 | 574.3 | 534.97 | 580.53 | 301.7 | 408.03 | 553.07 | 588.47 |
| | | | 2 | 450.9 | 502.5 | 455.13 | 518.7 | 453.23 | 529.03 | 179.1 | 293.2 | 469.8 | 543.37 |
| | | | 3 | 285.2 | 370.33 | 284.7 | 389.63 | 286 | 410.4 | 88.67 | 188.13 | 302.73 | 434.2 |
| | 2 | Train | 1 | 551.57 | 578.93 | 552.17 | 580.6 | 551.87 | 591.4 | 311.67 | 422.83 | 568.73 | 597.33 |
| | | | 2 | 469.1 | 509.53 | 469.67 | 517.73 | 465.67 | 537.03 | 180.33 | 297.3 | 485.9 | 545.97 |
| | | | 3 | 313.03 | 385.8 | 316.5 | 408.1 | 306.63 | 437.73 | 90 | 196.9 | 333 | 448.23 |
| | | Ver | 1 | 535.37 | 569.6 | 536.67 | 568.87 | 539.1 | 585.23 | 297.63 | 414.43 | 556.27 | 589.4 |
| | | | 2 | 450.5 | 504 | 455.07 | 513.63 | 456.3 | 538.5 | 179.33 | 303.27 | 471.13 | 542.13 |
| | | | 3 | 280.63 | 370.43 | 291.1 | 393.97 | 282.93 | 425.8 | 88.33 | 197 | 301.13 | 429.2 |
| | 7 | Train | 1 | 536.97 | 566.43 | 545.7 | 577.23 | 542.53 | 583.67 | 318.63 | 423.8 | 564.1 | 599.5 |
| | | | 2 | 456 | 502.07 | 465.47 | 519.63 | 458.53 | 525.7 | 187.5 | 296.17 | 479.37 | 549.47 |
| | | | 3 | 303.43 | 380.07 | 310.73 | 407.63 | 296.37 | 421.47 | 90.3 | 186.83 | 320.93 | 453.97 |
| | | Ver | 1 | 520.97 | 556.63 | 531.6 | 567.77 | 528.67 | 573.3 | 301.3 | 406.03 | 551.23 | 593.07 |
| | | | 2 | 442.17 | 498.43 | 449.33 | 516.33 | 444.43 | 524.3 | 178.9 | 293.9 | 464.07 | 550.5 |
| | | | 3 | 270.73 | 365.2 | 283.77 | 395.13 | 278.03 | 409.83 | 89.93 | 186.27 | 292.57 | 442.03 |
| | 12 | Train | 1 | 525.37 | 556.23 | 543.9 | 575.1 | 540.6 | 583.37 | 318.1 | 422.77 | 554.4 | 588.8 |
| | | | 2 | 439.07 | 485.17 | 462.63 | 515.77 | 450.47 | 530.73 | 188.93 | 302.6 | 471.9 | 537.27 |
| | | | 3 | 286.43 | 363.33 | 315.2 | 406 | 293.4 | 433.53 | 96.47 | 199.2 | 316.9 | 441.67 |
| | | Ver | 1 | 506.87 | 543.47 | 530.37 | 565 | 528.6 | 575.63 | 300.63 | 409.73 | 542.4 | 580.93 |
| | | | 2 | 423.07 | 480.3 | 449.17 | 509.63 | 443.43 | 532.83 | 186.8 | 302.83 | 461.37 | 537.3 |
| | | | 3 | 263.97 | 349.83 | 285.23 | 390.33 | 274.17 | 425.87 | 92.17 | 194.23 | 292.67 | 427.53 |

Table A.339: 18 States – $(12, 55, 7)_4$ – Perfect Score is 660 and fuzzy tolerance of 3

### A.5.2 Code 2

| Parameters | | | | 1 Restart | | 15 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 7.83 | 649.53 | 15.3 | 648.7 | 14.17 | 662.4 |
| | | | 2 | 6.67 | 625.67 | 14.5 | 625 | 14.1 | 641.77 |
| | | | 3 | 3.7 | 565.3 | 8.1 | 560.47 | 7.63 | 573.3 |
| | | Ver | 1 | 7.4 | 652.2 | 13.3 | 649.2 | 12.4 | 666.3 |
| | | | 2 | 5.53 | 627.47 | 12.07 | 625.67 | 11.8 | 642.73 |
| | | | 3 | 3.43 | 571.13 | 8.17 | 565.17 | 7.7 | 578.87 |
| | 2 | Train | 1 | 11.07 | 645.53 | 14.83 | 662.3 | 13.8 | 646.47 |
| | | | 2 | 8.63 | 617.7 | 14.2 | 634.13 | 14.73 | 622.77 |
| | | | 3 | 5.53 | 559.2 | 8.67 | 573.43 | 8.77 | 553.9 |
| | | Ver | 1 | 9.5 | 647.17 | 13.23 | 661.83 | 11.7 | 647.53 |
| | | | 2 | 8.03 | 619.97 | 12.23 | 635.37 | 11.53 | 619.5 |
| | | | 3 | 5.23 | 562.6 | 7.4 | 577.2 | 7.77 | 558.23 |
| | 7 | Train | 1 | 8.97 | 669.93 | 14.03 | 649.1 | 15.7 | 634.57 |
| | | | 2 | 8.33 | 643.77 | 15.3 | 625.17 | 15.37 | 613.17 |
| | | | 3 | 4.6 | 578.6 | 8.3 | 550.03 | 8.83 | 536.9 |
| | | Ver | 1 | 7.43 | 670.87 | 12.97 | 651.73 | 12.67 | 637.67 |
| | | | 2 | 7.23 | 646.6 | 12.27 | 619.8 | 12.8 | 609.87 |
| | | | 3 | 4.97 | 584.3 | 8.37 | 555.8 | 7.5 | 542.9 |
| | 12 | Train | 1 | 11.7 | 653.97 | 15.23 | 672.67 | 13.6 | 670.03 |
| | | | 2 | 10.3 | 625.87 | 14.77 | 646.97 | 13.1 | 647.63 |
| | | | 3 | 7.27 | 565.77 | 8.93 | 574.87 | 7.27 | 586.1 |
| | | Ver | 1 | 11.13 | 654.2 | 13.9 | 674 | 12.33 | 671.23 |
| | | | 2 | 9.53 | 627.9 | 12.8 | 645.17 | 11.23 | 647.97 |
| | | | 3 | 6.17 | 567.73 | 8.03 | 577.33 | 7.13 | 592.1 |
| 25 | 1 | Train | 1 | 9.97 | 658 | 13.77 | 661.23 | 15.6 | 652.77 |
| | | | 2 | 9.1 | 634.53 | 12.77 | 642.03 | 14.1 | 629.5 |
| | | | 3 | 5.67 | 573.5 | 7.63 | 579.57 | 8.1 | 561.17 |
| | | Ver | 1 | 8.83 | 660 | 12.2 | 662.87 | 13.37 | 653.87 |
| | | | 2 | 7.73 | 637.17 | 10.77 | 640.57 | 12.5 | 628.5 |
| | | | 3 | 5.03 | 576.37 | 6.63 | 585.13 | 7.13 | 566.27 |
| | 2 | Train | 1 | 10.5 | 661.27 | 10.97 | 682.37 | 12.4 | 672.47 |
| | | | 2 | 10.33 | 635.4 | 10.93 | 667.73 | 13.6 | 653.77 |
| | | | 3 | 5.13 | 572.43 | 6.7 | 614.73 | 7.77 | 589.6 |
| | | Ver | 1 | 9.23 | 661.67 | 9.9 | 683.9 | 11.23 | 675.1 |
| | | | 2 | 8.67 | 638.67 | 9.23 | 664.97 | 10.93 | 649.17 |
| | | | 3 | 5.7 | 572.3 | 5.47 | 617.27 | 7.47 | 592.2 |
| | 7 | Train | 1 | 12.73 | 658.87 | 15 | 645.57 | 14.47 | 658.87 |
| | | | 2 | 12.07 | 630.33 | 13.37 | 624.37 | 13.8 | 632.87 |
| | | | 3 | 7.17 | 558.97 | 8.37 | 558.77 | 8.17 | 569.6 |
| | | Ver | 1 | 11.2 | 659.53 | 11.9 | 647.1 | 12.83 | 659.27 |
| | | | 2 | 10.03 | 636.83 | 11.27 | 623.87 | 11.83 | 633.6 |
| | | | 3 | 7.37 | 563 | 5.7 | 561.87 | 7.3 | 573.6 |
| | 12 | Train | 1 | 16.03 | 652.03 | 13.97 | 670.1 | 14 | 651.1 |
| | | | 2 | 13.73 | 626.63 | 12.93 | 645.53 | 13 | 631.77 |
| | | | 3 | 8.83 | 560.4 | 7.53 | 585.43 | 7.87 | 570.37 |
| | | Ver | 1 | 14.57 | 653.6 | 12.1 | 670.07 | 12.27 | 652.57 |
| | | | 2 | 11.8 | 628.87 | 11.77 | 646.93 | 10.83 | 628.13 |
| | | | 3 | 6.8 | 565.03 | 7.13 | 589.33 | 6.4 | 573.03 |
| 51 | 1 | Train | 1 | 11.07 | 665.1 | 14.53 | 663.6 | 14.53 | 667.43 |
| | | | 2 | 9.83 | 635.03 | 13.83 | 635.37 | 13.17 | 642.87 |
| | | | 3 | 5.83 | 583.2 | 8.17 | 570.33 | 8.03 | 582.23 |
| | | Ver | 1 | 10.03 | 664.6 | 13.3 | 663.83 | 12.6 | 667.9 |
| | | | 2 | 8.5 | 638.9 | 12.2 | 634.4 | 11.57 | 645.37 |
| | | | 3 | 5.93 | 580.87 | 7.4 | 575 | 7.17 | 586.6 |
| | 2 | Train | 1 | 12.6 | 675.23 | 14.17 | 668.77 | 15 | 650.43 |
| | | | 2 | 12.43 | 651.4 | 13.87 | 645.77 | 15.9 | 622.73 |
| | | | 3 | 6.87 | 592.7 | 8 | 579.73 | 8.63 | 549.43 |
| | | Ver | 1 | 11 | 677.67 | 12.53 | 669.4 | 13.27 | 651.7 |
| | | | 2 | 10.07 | 654.57 | 11.9 | 644.7 | 13.4 | 619.77 |
| | | | 3 | 7.23 | 595.47 | 7.67 | 584.03 | 7.9 | 552.87 |
| | 7 | Train | 1 | 13 | 667.23 | 15.3 | 653.6 | 12.7 | 665.87 |
| | | | 2 | 13.23 | 643.9 | 14.23 | 629.4 | 12.57 | 645.23 |
| | | | 3 | 8.17 | 585 | 8.53 | 558.97 | 7.77 | 584.8 |
| | | Ver | 1 | 11.7 | 667.93 | 12.43 | 653.9 | 10.97 | 667.1 |
| | | | 2 | 11.27 | 642.5 | 12.2 | 628.77 | 10.2 | 642.97 |
| | | | 3 | 6.73 | 590.07 | 7.7 | 563.17 | 6.03 | 587.63 |
| | 12 | Train | 1 | 14.73 | 659.17 | 13.8 | 657.87 | 16.13 | 649.47 |
| | | | 2 | 14.37 | 631.1 | 13.47 | 633.5 | 14.6 | 626.63 |
| | | | 3 | 7.83 | 563.13 | 7.6 | 569.2 | 9.3 | 556.77 |
| | | Ver | 1 | 13.13 | 660.83 | 12 | 658.43 | 13.2 | 650.63 |
| | | | 2 | 12.13 | 636.03 | 11.37 | 633.57 | 12.63 | 626.17 |
| | | | 3 | 7.37 | 566.3 | 7.23 | 574.1 | 7.1 | 559.43 |

Table A.340: 2 States – $(12, 60, 7)_4$ one – Perfect Score is 720 and fuzzy tolerance of 2

| Parameters | | | | 1 Restart | | 15 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 46.77 | 586.23 | 74.53 | 598.93 | 69.03 | 610.23 |
| | | | 2 | 32.93 | 526.3 | 52.53 | 547.13 | 52.8 | 545.27 |
| | | | 3 | 16.4 | 431.53 | 27.1 | 449.63 | 28.17 | 435.5 |
| | | Ver | 1 | 46.7 | 585.7 | 70.33 | 601.53 | 65.53 | 610.83 |
| | | | 2 | 31.17 | 533.03 | 47.57 | 556.9 | 48.53 | 551 |
| | | | 3 | 16.17 | 440.97 | 27.77 | 449.4 | 25.9 | 440.47 |
| | 2 | Train | 1 | 41.33 | 568.93 | 60.17 | 619.73 | 69.33 | 612.93 |
| | | | 2 | 29.7 | 508.07 | 46.33 | 563.47 | 52.3 | 557.7 |
| | | | 3 | 14.63 | 415.57 | 25.67 | 461.87 | 27.93 | 454.3 |
| | | Ver | 1 | 41.8 | 572.37 | 55.33 | 619.23 | 66.17 | 611.93 |
| | | | 2 | 27.83 | 513.67 | 44.1 | 568.87 | 49.4 | 566.67 |
| | | | 3 | 16.73 | 419.7 | 25.17 | 463.03 | 26.87 | 451.6 |
| | 7 | Train | 1 | 49.4 | 593.17 | 69.7 | 607.8 | 66.87 | 600.7 |
| | | | 2 | 34.33 | 534.47 | 49.43 | 541.7 | 54 | 541.9 |
| | | | 3 | 16.5 | 437.37 | 26.6 | 440.77 | 27.5 | 432.77 |
| | | Ver | 1 | 50.2 | 597 | 63.9 | 605.47 | 62.73 | 598.77 |
| | | | 2 | 34.43 | 540.4 | 45.17 | 548.67 | 50.53 | 545.53 |
| | | | 3 | 16.8 | 441.53 | 24.8 | 443 | 26.73 | 429.57 |
| | 12 | Train | 1 | 57.7 | 574.83 | 59.4 | 610.63 | 54.07 | 635.73 |
| | | | 2 | 41.43 | 516.8 | 46.47 | 557.93 | 41.23 | 590.67 |
| | | | 3 | 21.33 | 416.53 | 22.63 | 459.83 | 23.2 | 504.37 |
| | | Ver | 1 | 57.67 | 577 | 55.57 | 606.77 | 51 | 635.83 |
| | | | 2 | 37.87 | 520.47 | 40.97 | 564.57 | 39.87 | 594.77 |
| | | | 3 | 21.13 | 421.1 | 22.57 | 463.5 | 21.23 | 500.43 |
| 25 | 1 | Train | 1 | 54.77 | 590.23 | 67.9 | 598.7 | 68.17 | 587.43 |
| | | | 2 | 39.77 | 531.83 | 50.13 | 537.87 | 52 | 517.2 |
| | | | 3 | 18.83 | 428.1 | 26.93 | 433.93 | 28.07 | 426.23 |
| | | Ver | 1 | 53.67 | 589.9 | 64.87 | 599.13 | 65 | 582.67 |
| | | | 2 | 36.27 | 532.1 | 46.5 | 546.67 | 47.27 | 525.6 |
| | | | 3 | 19.57 | 425.63 | 26.5 | 431.3 | 23.8 | 420.6 |
| | 2 | Train | 1 | 51.87 | 589.07 | 63.2 | 622.47 | 70.63 | 598.23 |
| | | | 2 | 35.47 | 524.9 | 53.03 | 558.87 | 53.83 | 539.2 |
| | | | 3 | 19.07 | 428 | 26.77 | 451.57 | 27.87 | 432.13 |
| | | Ver | 1 | 49.47 | 589.4 | 61.53 | 620.3 | 65.4 | 600.7 |
| | | | 2 | 35.17 | 530.8 | 47.97 | 566.4 | 51.33 | 546.43 |
| | | | 3 | 17.33 | 432.07 | 24.9 | 447.8 | 25.8 | 431.3 |
| | 7 | Train | 1 | 49.73 | 601.67 | 63.47 | 633.23 | 70.03 | 601.03 |
| | | | 2 | 35.27 | 536.23 | 50.1 | 580.27 | 53.6 | 542.9 |
| | | | 3 | 19 | 455.77 | 26.5 | 476.6 | 27.57 | 445.27 |
| | | Ver | 1 | 50.73 | 600.77 | 58.23 | 633.37 | 63.97 | 596.8 |
| | | | 2 | 33.37 | 543.6 | 44.43 | 581.03 | 45.83 | 549.57 |
| | | | 3 | 19.23 | 455.47 | 23.63 | 475.17 | 26.5 | 441.87 |
| | 12 | Train | 1 | 53.97 | 614.9 | 64.97 | 617.43 | 63.47 | 619.1 |
| | | | 2 | 40.17 | 562.37 | 50.73 | 555.53 | 48.53 | 565.4 |
| | | | 3 | 21.23 | 465.57 | 27.53 | 454.17 | 26 | 464.3 |
| | | Ver | 1 | 52.57 | 616.63 | 62.37 | 616.23 | 59.53 | 622.57 |
| | | | 2 | 36.1 | 562.23 | 46.83 | 565.13 | 46.53 | 573.23 |
| | | | 3 | 21.4 | 473 | 24.63 | 453.33 | 23.4 | 461.17 |
| 51 | 1 | Train | 1 | 56.17 | 587.8 | 67.93 | 610.07 | 78.07 | 596.9 |
| | | | 2 | 39.97 | 531.97 | 46.6 | 554.97 | 59.77 | 534.77 |
| | | | 3 | 20.87 | 433.7 | 25.1 | 463.13 | 30.03 | 422.17 |
| | | Ver | 1 | 55.8 | 587.6 | 66.07 | 609.43 | 72.77 | 595.3 |
| | | | 2 | 37.8 | 536.8 | 43.5 | 556.7 | 52.13 | 541.9 |
| | | | 3 | 20.03 | 430.8 | 24.17 | 465.67 | 27.57 | 420.63 |
| | 2 | Train | 1 | 53.4 | 593.47 | 71.6 | 609.5 | 70.97 | 601.57 |
| | | | 2 | 34.73 | 537.6 | 52.47 | 553.37 | 51.7 | 541.53 |
| | | | 3 | 21.07 | 457.87 | 27.17 | 455.93 | 25.97 | 441.3 |
| | | Ver | 1 | 52.9 | 595.63 | 66.77 | 608.07 | 69.03 | 598.9 |
| | | | 2 | 32.9 | 540.2 | 49.6 | 560.03 | 45.63 | 546.97 |
| | | | 3 | 17.57 | 457.17 | 26 | 458.6 | 25.47 | 443 |
| | 7 | Train | 1 | 57.53 | 597.3 | 60.8 | 617.83 | 71 | 596.97 |
| | | | 2 | 43.77 | 548.07 | 46.93 | 566.1 | 54.07 | 539.57 |
| | | | 3 | 20.97 | 445.23 | 25.63 | 471.33 | 26.87 | 428.33 |
| | | Ver | 1 | 57.63 | 597.33 | 60.47 | 618.17 | 67.83 | 596.03 |
| | | | 2 | 42.67 | 551.07 | 42.33 | 569.23 | 48.37 | 542.63 |
| | | | 3 | 22.47 | 448.23 | 24.67 | 471.83 | 25.77 | 425.2 |
| | 12 | Train | 1 | 71.3 | 580.5 | 74.03 | 609.73 | 66.8 | 601.53 |
| | | | 2 | 49.83 | 522.17 | 57.3 | 550.07 | 49.5 | 542.73 |
| | | | 3 | 24.57 | 414.63 | 31.73 | 438.1 | 25.33 | 444.7 |
| | | Ver | 1 | 69.27 | 583.37 | 70.27 | 605.53 | 64.37 | 599.97 |
| | | | 2 | 44.73 | 525.33 | 55.07 | 556.73 | 44.2 | 551.73 |
| | | | 3 | 26.03 | 421.83 | 28.23 | 438.47 | 25.4 | 446.33 |

Table A.341: 3 States – $(12, 60, 7)_4$ one – Perfect Score is 720 and fuzzy tolerance of 2

| Parameters | | | | 1 Restart | | 15 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 106.8 | 476.73 | 126.67 | 551.7 | 128.63 | 559.2 |
| | | | 2 | 62.13 | 383.43 | 82.3 | 472.43 | 91.5 | 468.07 |
| | | | 3 | 31.87 | 271.47 | 42.83 | 351.37 | 44.87 | 339.73 |
| | | Ver | 1 | 104.6 | 475.2 | 126.07 | 551 | 123.6 | 555.9 |
| | | | 2 | 61.53 | 394.43 | 78.9 | 480.97 | 86.37 | 473.37 |
| | | | 3 | 30.33 | 275.33 | 39.1 | 353.3 | 42.03 | 338.03 |
| | 2 | Train | 1 | 103.57 | 487.83 | 138.4 | 544.33 | 116.27 | 563.23 |
| | | | 2 | 58.73 | 391.5 | 104.53 | 448.2 | 72.3 | 469.07 |
| | | | 3 | 29.4 | 285.83 | 47.9 | 298.87 | 38.57 | 358.5 |
| | | Ver | 1 | 103.37 | 490.63 | 133.1 | 538.77 | 109.33 | 565.1 |
| | | | 2 | 57.27 | 397.9 | 102 | 458.27 | 72.07 | 477.23 |
| | | | 3 | 29.67 | 292.3 | 44.87 | 303.1 | 36.23 | 360.43 |
| | 7 | Train | 1 | 111.8 | 496.27 | 129.1 | 548.47 | 126.77 | 546.4 |
| | | | 2 | 66.87 | 410.17 | 81.93 | 458.43 | 92.67 | 464.03 |
| | | | 3 | 32.33 | 290.93 | 40.17 | 340.4 | 43.73 | 328.73 |
| | | Ver | 1 | 109.8 | 494.97 | 120.1 | 543.4 | 123.1 | 547.77 |
| | | | 2 | 64.13 | 412.83 | 77.73 | 463.47 | 84.47 | 468.47 |
| | | | 3 | 33.67 | 296.47 | 37.87 | 338.57 | 41.33 | 330.23 |
| | 12 | Train | 1 | 100.83 | 513.47 | 127.73 | 549 | 135.1 | 558.6 |
| | | | 2 | 60.2 | 427.2 | 86.77 | 462.53 | 94.13 | 476.1 |
| | | | 3 | 29.07 | 311.8 | 42.2 | 336.03 | 44.53 | 348.07 |
| | | Ver | 1 | 99.9 | 516.73 | 122.27 | 548.37 | 129.83 | 555.4 |
| | | | 2 | 56.4 | 431.03 | 82.37 | 471.93 | 86.2 | 483.03 |
| | | | 3 | 30.73 | 316.4 | 38.93 | 330 | 44.53 | 346.43 |
| 25 | 1 | Train | 1 | 112.53 | 504.67 | 139.83 | 533.07 | 125.83 | 541.2 |
| | | | 2 | 67.6 | 425.2 | 92.5 | 447.63 | 81.87 | 464.13 |
| | | | 3 | 32.87 | 310.7 | 46.67 | 322.83 | 40.27 | 341.53 |
| | | Ver | 1 | 111.03 | 505.03 | 133.03 | 531.93 | 124.53 | 546.33 |
| | | | 2 | 66.17 | 421.5 | 90.4 | 458.73 | 77.73 | 468.13 |
| | | | 3 | 34.03 | 308.63 | 41.27 | 322.33 | 38.67 | 342.23 |
| | 2 | Train | 1 | 109.1 | 530.03 | 125.4 | 549.4 | 138.33 | 541.37 |
| | | | 2 | 63.7 | 445.07 | 86.27 | 475.93 | 88.67 | 452.83 |
| | | | 3 | 33.23 | 335.8 | 43.97 | 356.3 | 43.77 | 323.67 |
| | | Ver | 1 | 106.17 | 530.73 | 123.13 | 549.2 | 131.83 | 540.2 |
| | | | 2 | 62.2 | 449.37 | 83.23 | 484.17 | 83.83 | 455.23 |
| | | | 3 | 31.77 | 334.37 | 40.37 | 349.4 | 41.73 | 322.23 |
| | 7 | Train | 1 | 93 | 528.27 | 124.9 | 545.8 | 139.83 | 525.47 |
| | | | 2 | 63.1 | 439.2 | 82.6 | 452.97 | 91 | 444.37 |
| | | | 3 | 29.6 | 319.3 | 41.67 | 327.83 | 43.2 | 318.53 |
| | | Ver | 1 | 93 | 529.9 | 119.57 | 543.37 | 132.43 | 524.93 |
| | | | 2 | 60.83 | 441.7 | 75.2 | 458.23 | 87.27 | 451.2 |
| | | | 3 | 28.37 | 319.93 | 36.1 | 325.1 | 42.33 | 314.1 |
| | 12 | Train | 1 | 115.73 | 508.2 | 137.1 | 551.2 | 134.1 | 546 |
| | | | 2 | 66.63 | 423.07 | 99.33 | 458.77 | 91.6 | 453.5 |
| | | | 3 | 31.83 | 310.87 | 46.83 | 321.03 | 45.8 | 321.77 |
| | | Ver | 1 | 108.8 | 506.8 | 127.43 | 549.87 | 128.63 | 541.13 |
| | | | 2 | 61.3 | 429.27 | 94.67 | 463.57 | 89.23 | 457.57 |
| | | | 3 | 32.83 | 316.67 | 44.3 | 324.6 | 41.53 | 322.6 |
| 51 | 1 | Train | 1 | 101.27 | 499.93 | 141.67 | 527.6 | 142.27 | 539.57 |
| | | | 2 | 59.5 | 415.97 | 94.83 | 440.77 | 91.63 | 450.1 |
| | | | 3 | 26.9 | 307.93 | 43.8 | 310.23 | 46.47 | 322.57 |
| | | Ver | 1 | 96.2 | 499.1 | 134.83 | 522.7 | 136 | 537.17 |
| | | | 2 | 55.93 | 423.43 | 87.7 | 447.8 | 85.2 | 454.43 |
| | | | 3 | 29.8 | 311.63 | 44.17 | 312.9 | 41.4 | 326.63 |
| | 2 | Train | 1 | 113.43 | 493.37 | 139.37 | 556.8 | 125.47 | 562.57 |
| | | | 2 | 68.33 | 399.4 | 95.2 | 476.37 | 93.2 | 476.23 |
| | | | 3 | 33.2 | 283.67 | 48.1 | 336.63 | 43.5 | 339.37 |
| | | Ver | 1 | 111.2 | 492.5 | 135.4 | 555.57 | 119.67 | 560.17 |
| | | | 2 | 66.23 | 403.13 | 90.7 | 485.77 | 85.73 | 484.33 |
| | | | 3 | 34.17 | 290.57 | 45.53 | 339.1 | 39.53 | 336.47 |
| | 7 | Train | 1 | 111.4 | 529.37 | 133.47 | 564.67 | 136.27 | 543.93 |
| | | | 2 | 70 | 440.4 | 89.07 | 490.97 | 89.5 | 456.27 |
| | | | 3 | 36.97 | 321.63 | 41.5 | 364.03 | 45.3 | 333.57 |
| | | Ver | 1 | 105.73 | 529.6 | 124.8 | 560.57 | 129.8 | 540.93 |
| | | | 2 | 69.8 | 445.7 | 82.1 | 498.27 | 83.67 | 466.5 |
| | | | 3 | 34.9 | 324.33 | 40.1 | 366.67 | 42.97 | 332.1 |
| | 12 | Train | 1 | 113.9 | 530.47 | 128.87 | 561.23 | 133.57 | 523.13 |
| | | | 2 | 74.1 | 449.17 | 82.83 | 465.13 | 90.13 | 426.03 |
| | | | 3 | 35.73 | 324.03 | 43 | 336.57 | 42.07 | 300.23 |
| | | Ver | 1 | 109.2 | 530.7 | 126.87 | 557.77 | 125.97 | 519.3 |
| | | | 2 | 70.53 | 448.83 | 77.33 | 471.3 | 80.67 | 436.17 |
| | | | 3 | 33.9 | 327 | 37.57 | 340.67 | 39.23 | 301.27 |

Table A.342: 4 States – $(12, 60, 7)_4$ one – Perfect Score is 720 and fuzzy tolerance of 2

| Parameters | | | | Trans 30 Restarts | |
|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy |
| | | Train | 1 | 128.63 | 662.8 |
| | | | 2 | 91.5 | 621.03 |
| | | | 3 | 44.87 | 555 |
| | | Ver | 1 | 123.6 | 661.3 |
| | | | 2 | 86.37 | 622.23 |
| | | | 3 | 42.03 | 557.17 |
| | | Train | 1 | 118.33 | 662.77 |
| | | | 2 | 78.17 | 622.63 |
| | | | 3 | 39.73 | 567.17 |
| | | Ver | 1 | 113.47 | 663.73 |
| | | | 2 | 74.83 | 631.5 |
| | | | 3 | 37.23 | 571.6 |
| | | Train | 1 | 128.87 | 656.57 |
| | | | 2 | 93.67 | 616 |
| | | | 3 | 44.37 | 547.1 |
| | | Ver | 1 | 125.43 | 656.03 |
| | | | 2 | 86.13 | 620.53 |
| | | | 3 | 41.9 | 545.93 |
| | | Train | 1 | 135.1 | 652.8 |
| | | | 2 | 94.13 | 614.1 |
| | | | 3 | 44.53 | 553.47 |
| | | Ver | 1 | 129.83 | 652.93 |
| | | | 2 | 86.2 | 620.13 |
| | | | 3 | 44.53 | 554.13 |
| | | Train | 1 | 124.47 | 657.23 |
| | | | 2 | 82.4 | 619.3 |
| | | | 3 | 40.8 | 557.43 |
| | | Ver | 1 | 122.13 | 657.1 |
| | | | 2 | 78.47 | 621.87 |
| | | | 3 | 38.63 | 557.13 |
| | | Train | 1 | 130.57 | 654.37 |
| | | | 2 | 84.47 | 614.67 |
| | | | 3 | 42.17 | 551.83 |
| | | Ver | 1 | 123.63 | 652.9 |
| | | | 2 | 81.1 | 613.97 |
| | | | 3 | 39.73 | 551.97 |
| | | Train | 1 | 139.83 | 643.4 |
| | | | 2 | 91 | 600.67 |
| | | | 3 | 43.2 | 528.57 |
| | | Ver | 1 | 132.43 | 642.6 |
| | | | 2 | 87.27 | 603.77 |
| | | | 3 | 42.33 | 527.87 |
| | | Train | 1 | 131.73 | 653.03 |
| | | | 2 | 89.57 | 605.07 |
| | | | 3 | 44.87 | 542.83 |
| | | Ver | 1 | 125.77 | 652.03 |
| | | | 2 | 86.17 | 610.1 |
| | | | 3 | 40.27 | 542.03 |
| | | Train | 1 | 141.1 | 654.37 |
| | | | 2 | 93.13 | 612.07 |
| | | | 3 | 45.7 | 547.63 |
| | | Ver | 1 | 134.1 | 652.3 |
| | | | 2 | 87.4 | 615.47 |
| | | | 3 | 42.27 | 547.93 |
| | | Train | 1 | 125.47 | 665.6 |
| | | | 2 | 93.2 | 629.07 |
| | | | 3 | 43.5 | 565.83 |
| | | Ver | 1 | 119.67 | 664.53 |
| | | | 2 | 85.73 | 632.3 |
| | | | 3 | 39.53 | 566.37 |
| | | Train | 1 | 141.4 | 643.47 |
| | | | 2 | 92.03 | 603.33 |
| | | | 3 | 46 | 534.53 |
| | | Ver | 1 | 136.53 | 642.7 |
| | | | 2 | 85.67 | 607.5 |
| | | | 3 | 43.33 | 534.9 |
| | | Train | 1 | 125.57 | 655.8 |
| | | | 2 | 83.77 | 613.5 |
| | | | 3 | 39.5 | 552.37 |
| | | Ver | 1 | 115.03 | 653.4 |
| | | | 2 | 76.17 | 619.47 |
| | | | 3 | 37.1 | 550 |
| | | Train | 1 | 126 | 660.27 |
| | | | 2 | 92.87 | 620.2 |
| | | | 3 | 43.3 | 554.73 |
| | | Ver | 1 | 122.8 | 658.3 |
| | | | 2 | 89.63 | 621.63 |
| | | | 3 | 41.4 | 552.33 |
| | | Train | 1 | 129.07 | 658.63 |
| | | | 2 | 87.23 | 615.77 |
| | | | 3 | 42.83 | 553.83 |
| | | Ver | 1 | 120.63 | 657.3 |
| | | | 2 | 82.47 | 622.27 |
| | | | 3 | 40.47 | 556.87 |
| | | Train | 1 | 124.5 | 653.63 |
| | | | 2 | 77.97 | 610.37 |
| | | | 3 | 38.97 | 550.5 |
| | | Ver | 1 | 118.2 | 654.23 |
| | | | 2 | 73 | 611.83 |
| | | | 3 | 34.57 | 553.53 |
| | | Train | 1 | 122.93 | 659.23 |
| | | | 2 | 87.1 | 620.13 |
| | | | 3 | 44.07 | 554.1 |
| | | Ver | 1 | 119.47 | 659.13 |
| | | | 2 | 81.3 | 623.6 |
| | | | 3 | 40 | 555.13 |

Table A.343: 4 States – $(12, 60, 7)_4$ one – Perfect Score is 720 and fuzzy tolerance of 3

| Parameters | | | | 30% Mutation | | 4 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 441.47 | 554.53 | 445.27 | 558.03 | 217.23 | 626.1 |
| | | | 2 | 343.17 | 502.77 | 344.8 | 510.57 | 141.27 | 562 |
| | | | 3 | 196.7 | 379.93 | 201.97 | 395.93 | 65.77 | 472.63 |
| | | Ver | 1 | 440.1 | 553.87 | 449.97 | 564.07 | 206.07 | 625.77 |
| | | | 2 | 342.87 | 505.3 | 340.93 | 517.4 | 135.8 | 566.33 |
| | | | 3 | 191.8 | 372.93 | 197.17 | 391.53 | 63.77 | 476.8 |
| | 2 | Train | 1 | 448.03 | 561.17 | 446 | 558.5 | 205.93 | 630.47 |
| | | | 2 | 348.2 | 509.1 | 343.77 | 509.4 | 127.9 | 570.1 |
| | | | 3 | 206.07 | 393.93 | 204.17 | 395.27 | 61.53 | 474.77 |
| | | Ver | 1 | 449.6 | 561.43 | 446.8 | 559.27 | 194.97 | 629.47 |
| | | | 2 | 347.53 | 513.07 | 340.83 | 517.07 | 123.87 | 571.1 |
| | | | 3 | 196.3 | 385.5 | 193.03 | 388.73 | 59.7 | 477.1 |
| | 7 | Train | 1 | 451.6 | 564.1 | 446.73 | 561.57 | 219.37 | 624.63 |
| | | | 2 | 354.13 | 511.2 | 345.3 | 512.57 | 146.07 | 562.33 |
| | | | 3 | 211.6 | 392.73 | 208.67 | 400.1 | 69.6 | 471.03 |
| | | Ver | 1 | 453.7 | 562.67 | 446.13 | 562.57 | 211.27 | 624.23 |
| | | | 2 | 349.03 | 512.3 | 342.03 | 515.23 | 140.37 | 564.4 |
| | | | 3 | 198.9 | 384 | 192.33 | 385.83 | 63.7 | 467.53 |
| | 12 | Train | 1 | 450.37 | 558.87 | 446.67 | 559.3 | 207.2 | 628.47 |
| | | | 2 | 352.13 | 506.13 | 344.6 | 507.63 | 138.03 | 565.73 |
| | | | 3 | 207.13 | 386.73 | 201.7 | 388.03 | 64.73 | 475.83 |
| | | Ver | 1 | 455.3 | 559.07 | 448.97 | 557.4 | 203.43 | 623.5 |
| | | | 2 | 346.37 | 510.73 | 340.33 | 510.57 | 132.93 | 566.77 |
| | | | 3 | 199.1 | 381.37 | 194.2 | 382.4 | 62.5 | 472.07 |
| 25 | 1 | Train | 1 | 441.5 | 551.93 | 453.87 | 562.77 | 209.87 | 648.67 |
| | | | 2 | 337.67 | 497.53 | 344.63 | 509.03 | 136.2 | 589.8 |
| | | | 3 | 198.47 | 386.3 | 202.63 | 391.33 | 62.33 | 504.27 |
| | | Ver | 1 | 441.2 | 551.83 | 451.13 | 559.37 | 200.87 | 649.17 |
| | | | 2 | 340.77 | 505.87 | 340.7 | 511.13 | 136.43 | 593.3 |
| | | | 3 | 188.83 | 372.6 | 194 | 381.97 | 61.57 | 504.37 |
| | 2 | Train | 1 | 455.93 | 566.17 | 450.9 | 564.5 | 211.2 | 633.67 |
| | | | 2 | 350.7 | 514.37 | 339.87 | 512.1 | 133.33 | 573.57 |
| | | | 3 | 207.6 | 400.87 | 196.97 | 394.5 | 61.73 | 482.3 |
| | | Ver | 1 | 455.83 | 565.7 | 451.3 | 563.3 | 199.83 | 631.53 |
| | | | 2 | 349 | 518.53 | 338.17 | 515.77 | 127.2 | 575.23 |
| | | | 3 | 203.37 | 392.5 | 190.3 | 387.03 | 56.57 | 483.37 |
| | 7 | Train | 1 | 449.57 | 563.87 | 452.07 | 563.9 | 207.33 | 643.4 |
| | | | 2 | 351.9 | 510.8 | 344.73 | 511.77 | 142.1 | 583.63 |
| | | | 3 | 208.5 | 399.53 | 211.37 | 399.87 | 67.63 | 489.9 |
| | | Ver | 1 | 453.07 | 564.77 | 453.57 | 563.87 | 201.07 | 641.97 |
| | | | 2 | 350.3 | 515.2 | 342.7 | 517.37 | 133.93 | 585.77 |
| | | | 3 | 199.77 | 392.13 | 195.83 | 391.07 | 62.1 | 491.23 |
| | 12 | Train | 1 | 455.93 | 566.53 | 448.43 | 562.67 | 215.43 | 635.57 |
| | | | 2 | 351.2 | 512.23 | 346.6 | 505.63 | 135.47 | 571.27 |
| | | | 3 | 207.13 | 397.87 | 208.7 | 394.67 | 63.07 | 485.43 |
| | | Ver | 1 | 455.07 | 561.9 | 449.5 | 563.03 | 211.17 | 633.17 |
| | | | 2 | 349.17 | 516.87 | 346.53 | 511.17 | 129.03 | 573.13 |
| | | | 3 | 198.93 | 391.4 | 195.17 | 383.4 | 59.73 | 487.97 |
| 51 | 1 | Train | 1 | 439.57 | 554.1 | 449.17 | 568.83 | 205.23 | 634.97 |
| | | | 2 | 338.63 | 505.63 | 344.67 | 517.1 | 136.33 | 572.47 |
| | | | 3 | 197.9 | 384.47 | 205.97 | 405.93 | 66.57 | 480.87 |
| | | Ver | 1 | 439.1 | 555.03 | 449.93 | 568.73 | 194.63 | 631.5 |
| | | | 2 | 330.57 | 503.63 | 341.53 | 523.93 | 134.93 | 576.2 |
| | | | 3 | 186.47 | 376.1 | 194.83 | 396.33 | 59.33 | 476.13 |
| | 2 | Train | 1 | 453.2 | 573.1 | 455.07 | 562.3 | 213.9 | 630.67 |
| | | | 2 | 348.3 | 517.97 | 346.9 | 507.33 | 127.77 | 567.7 |
| | | | 3 | 209.77 | 407.17 | 209.47 | 391.67 | 58.73 | 484 |
| | | Ver | 1 | 453.23 | 572.4 | 457.33 | 561.27 | 202.87 | 629.33 |
| | | | 2 | 347.73 | 526.7 | 345.5 | 510.13 | 122.6 | 568.77 |
| | | | 3 | 198.63 | 399.33 | 198.67 | 380.83 | 58.1 | 485.57 |
| | 7 | Train | 1 | 457.3 | 565.07 | 449.57 | 565.7 | 210.63 | 625.77 |
| | | | 2 | 353.83 | 511.83 | 347.87 | 511.47 | 122.67 | 561.07 |
| | | | 3 | 212.93 | 399.13 | 206.9 | 392.97 | 57.43 | 474.87 |
| | | Ver | 1 | 459.4 | 564.6 | 452.63 | 563.63 | 199.13 | 623.9 |
| | | | 2 | 358.7 | 522.57 | 342.17 | 518.9 | 117.37 | 566.2 |
| | | | 3 | 205.17 | 393.13 | 197.97 | 388.13 | 56.6 | 477.8 |
| | 12 | Train | 1 | 454.03 | 560.43 | 452.03 | 565.9 | 213 | 618.33 |
| | | | 2 | 349.87 | 508.3 | 351.07 | 513.23 | 133.27 | 550.1 |
| | | | 3 | 212.67 | 389 | 210.93 | 398.83 | 62.13 | 458.17 |
| | | Ver | 1 | 455.73 | 558.63 | 458.2 | 565.2 | 203.97 | 620 |
| | | | 2 | 345.03 | 509.53 | 347.63 | 518.37 | 130.13 | 554.2 |
| | | | 3 | 201.8 | 383.53 | 199.03 | 389.37 | 59.43 | 459.6 |
| 101 | 1 | Train | 1 | 444.9 | 557.03 | 447.5 | 570.4 | 201.37 | 637 |
| | | | 2 | 344.97 | 502.9 | 346.73 | 521.53 | 129.4 | 575.2 |
| | | | 3 | 203.43 | 384.37 | 209.13 | 408.9 | 58.33 | 487.23 |
| | | Ver | 1 | 444.43 | 556.6 | 453.7 | 572.27 | 195.87 | 634.97 |
| | | | 2 | 343.57 | 509.13 | 345.73 | 525.07 | 128.57 | 582.3 |
| | | | 3 | 193.77 | 377.73 | 199.17 | 397.6 | 59.43 | 487.33 |
| | 2 | Train | 1 | 447.67 | 560.47 | 451 | 562.8 | 210.5 | 622.73 |
| | | | 2 | 347.47 | 508.3 | 352.53 | 515 | 132.33 | 552.5 |
| | | | 3 | 205.47 | 388.77 | 213.23 | 399.33 | 61.77 | 456.27 |
| | | Ver | 1 | 450.57 | 558.83 | 458.97 | 567.33 | 200.07 | 616.37 |
| | | | 2 | 346.6 | 513.83 | 350.9 | 516.07 | 129.6 | 558.13 |
| | | | 3 | 193.2 | 379.67 | 200.07 | 390.7 | 56.67 | 458 |
| | 7 | Train | 1 | 460.07 | 562.57 | 453.13 | 559.4 | 204.53 | 626.9 |
| | | | 2 | 355.33 | 509 | 350.57 | 509.27 | 124.73 | 562.17 |
| | | | 3 | 216.57 | 393.73 | 214.83 | 398.6 | 58.73 | 469.43 |
| | | Ver | 1 | 463.93 | 563.07 | 462.4 | 563.8 | 201.93 | 624.33 |
| | | | 2 | 353.47 | 513.3 | 348.77 | 514.87 | 123.33 | 568.1 |
| | | | 3 | 207.63 | 385.83 | 201.73 | 387.7 | 54.8 | 473.13 |
| | 12 | Train | 1 | 464 | 558.9 | 454.93 | 554.8 | 202.9 | 619.17 |
| | | | 2 | 358.73 | 503.8 | 354.4 | 502.13 | 131.13 | 556.7 |
| | | | 3 | 215.87 | 385.7 | 213.27 | 382.13 | 63.13 | 466.97 |
| | | Ver | 1 | 465.2 | 558.53 | 462.03 | 555.13 | 201.13 | 621 |
| | | | 2 | 352.43 | 505.43 | 348.87 | 505.27 | 128.1 | 564.8 |
| | | | 3 | 203.3 | 373.17 | 202.87 | 371.37 | 59.3 | 466.97 |

Table A.344: 6 States – $(12, 60, 7)_4$ one – Perfect Score is 720 and fuzzy tolerance of 3

| Parameters | | | | 30% Mutation | | 4 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 592.13 | 632.57 | 572.93 | 627.6 | 345.73 | 554.2 |
| | | | 2 | 496.07 | 582.13 | 467.23 | 570.63 | 213.1 | 448.1 |
| | | | 3 | 328.1 | 474.47 | 293.83 | 456.27 | 99.67 | 326.4 |
| | | Ver | 1 | 585.87 | 630.83 | 563.1 | 624.43 | 335.77 | 556.17 |
| | | | 2 | 485.57 | 575.93 | 460 | 564.17 | 206.97 | 448 |
| | | | 3 | 300.27 | 470.2 | 269.67 | 447.57 | 95.37 | 333.73 |
| | 2 | Train | 1 | 584.73 | 626.27 | 581.73 | 630.3 | 350.67 | 552.67 |
| | | | 2 | 484.57 | 574.47 | 482.53 | 582.83 | 214.43 | 438.83 |
| | | | 3 | 317.23 | 469 | 314.67 | 476.3 | 98.87 | 315.8 |
| | | Ver | 1 | 576.93 | 624.47 | 578.03 | 631.87 | 335.67 | 549.37 |
| | | | 2 | 477.2 | 569.2 | 475.23 | 576.13 | 208.27 | 441.47 |
| | | | 3 | 284.6 | 456.57 | 283.27 | 467.9 | 97.57 | 321.7 |
| | 7 | Train | 1 | 576.37 | 624.93 | 558.17 | 614.27 | 348.93 | 562.07 |
| | | | 2 | 478.27 | 570.17 | 459.73 | 554.97 | 209.6 | 453.03 |
| | | | 3 | 312.13 | 463.07 | 284.77 | 439.8 | 99.93 | 332.43 |
| | | Ver | 1 | 569.57 | 623.5 | 551.27 | 612 | 338.87 | 563.1 |
| | | | 2 | 469.57 | 569.23 | 453.33 | 550.63 | 210.7 | 454.93 |
| | | | 3 | 279.4 | 450.97 | 265.03 | 430.13 | 91.17 | 328.87 |
| | 12 | Train | 1 | 573.8 | 619.6 | 562.9 | 622.43 | 337.53 | 552.47 |
| | | | 2 | 483.23 | 565.87 | 455.97 | 562.07 | 207.3 | 450.13 |
| | | | 3 | 311.57 | 456.97 | 281.93 | 446.2 | 97 | 316.53 |
| | | Ver | 1 | 567.67 | 618.23 | 553.1 | 619.67 | 324.37 | 545.07 |
| | | | 2 | 469.3 | 561.13 | 453.47 | 560.27 | 198.03 | 442.67 |
| | | | 3 | 282.03 | 446.93 | 260.2 | 439.37 | 91.07 | 319.8 |
| 25 | 1 | Train | 1 | 587.13 | 624.8 | 566.13 | 623.5 | 329.33 | 536.07 |
| | | | 2 | 487.6 | 572.43 | 462.73 | 565.67 | 195.47 | 419.1 |
| | | | 3 | 327.2 | 467.43 | 292.73 | 457.27 | 92.07 | 300.47 |
| | | Ver | 1 | 578.53 | 620.33 | 558.63 | 620.17 | 322.7 | 533.3 |
| | | | 2 | 478.53 | 564.67 | 455.57 | 561.8 | 191.63 | 418.67 |
| | | | 3 | 290.53 | 454.63 | 267.27 | 451 | 89.47 | 304.87 |
| | 2 | Train | 1 | 593.43 | 633.6 | 581.7 | 636.13 | 342.7 | 560.1 |
| | | | 2 | 495.5 | 581.47 | 477.37 | 581.4 | 205.63 | 448.63 |
| | | | 3 | 325.23 | 479.33 | 305.77 | 477.33 | 96.07 | 320.77 |
| | | Ver | 1 | 585.9 | 631.43 | 571.33 | 634.5 | 332.63 | 552.53 |
| | | | 2 | 489.37 | 577.1 | 467.73 | 577.7 | 200.53 | 443.53 |
| | | | 3 | 301.03 | 470.37 | 277.73 | 469.2 | 90.73 | 324.9 |
| | 7 | Train | 1 | 589 | 628.93 | 569.53 | 625 | 339.63 | 563.37 |
| | | | 2 | 491.57 | 577.9 | 465.5 | 566.1 | 194.3 | 451.73 |
| | | | 3 | 323.73 | 474.77 | 292.93 | 457.67 | 92.77 | 333.3 |
| | | Ver | 1 | 581.93 | 626.7 | 560.63 | 623.17 | 323.33 | 559.97 |
| | | | 2 | 485.4 | 571.9 | 459.77 | 564.97 | 199.43 | 455.2 |
| | | | 3 | 293.7 | 463.57 | 271.67 | 452.4 | 89.1 | 337.67 |
| | 12 | Train | 1 | 582.17 | 624.93 | 563.53 | 620.07 | 344.63 | 551.07 |
| | | | 2 | 483.97 | 571.6 | 458.93 | 562.3 | 211.03 | 442.2 |
| | | | 3 | 317.23 | 465 | 297.9 | 459.63 | 95.27 | 313.27 |
| | | Ver | 1 | 571.8 | 621.77 | 558.27 | 621.2 | 334.47 | 547.03 |
| | | | 2 | 471.63 | 563.87 | 458.2 | 562.2 | 204.63 | 440.17 |
| | | | 3 | 287.63 | 449.03 | 273.1 | 449.23 | 93.4 | 319.3 |
| 51 | 1 | Train | 1 | 577.7 | 618 | 581.9 | 630.47 | 330.23 | 545.67 |
| | | | 2 | 482.4 | 565.7 | 483.77 | 583.17 | 198.3 | 437.27 |
| | | | 3 | 316.9 | 456.2 | 312.63 | 478.13 | 90.4 | 308.2 |
| | | Ver | 1 | 571.9 | 619.37 | 581.73 | 635.63 | 317.93 | 544.27 |
| | | | 2 | 474.07 | 561.57 | 480.07 | 580.77 | 197.63 | 434.13 |
| | | | 3 | 290.43 | 447.73 | 285.1 | 469.57 | 87.63 | 311.2 |
| | 2 | Train | 1 | 593.27 | 630.9 | 585.63 | 631.6 | 330.03 | 540.8 |
| | | | 2 | 490.4 | 576.5 | 480.83 | 580.57 | 199.73 | 431.37 |
| | | | 3 | 321.07 | 474.9 | 312.9 | 482.53 | 89.1 | 308.9 |
| | | Ver | 1 | 581.73 | 626.77 | 580.17 | 631.7 | 316.77 | 538.43 |
| | | | 2 | 481.87 | 574.03 | 478.6 | 578.27 | 194.77 | 431.3 |
| | | | 3 | 294.83 | 465.47 | 283.93 | 474.03 | 90.4 | 308.97 |
| | 7 | Train | 1 | 588.97 | 625.6 | 586.73 | 639.1 | 324.73 | 542.8 |
| | | | 2 | 490.27 | 572.2 | 476.03 | 586.2 | 193.97 | 426.9 |
| | | | 3 | 329.07 | 471.4 | 302.8 | 484.03 | 87.03 | 303.4 |
| | | Ver | 1 | 581.93 | 625.67 | 580.33 | 639.37 | 312.43 | 540.87 |
| | | | 2 | 484.53 | 568 | 471.3 | 583.73 | 189.8 | 424.97 |
| | | | 3 | 296.73 | 460.57 | 275.2 | 476.77 | 85.6 | 306 |
| | 12 | Train | 1 | 578.77 | 618.33 | 574.53 | 626.6 | 319.33 | 546.77 |
| | | | 2 | 487.7 | 568.17 | 465.13 | 571.13 | 181.83 | 427.17 |
| | | | 3 | 317.57 | 457.1 | 298.73 | 464.57 | 85.6 | 311.03 |
| | | Ver | 1 | 573.83 | 617.9 | 566.27 | 625.27 | 309.53 | 542.03 |
| | | | 2 | 476.23 | 560.93 | 460.77 | 566.1 | 178.53 | 426.77 |
| | | | 3 | 293.73 | 447.63 | 271.83 | 456.4 | 85.8 | 314.47 |
| 101 | 1 | Train | 1 | 587.43 | 625.23 | 577.83 | 624.07 | 317.33 | 539.1 |
| | | | 2 | 486.37 | 572.17 | 482.6 | 570.77 | 189.1 | 427.43 |
| | | | 3 | 322.87 | 470.47 | 315.83 | 468.53 | 88.33 | 309.87 |
| | | Ver | 1 | 578.2 | 620.13 | 574.9 | 622.9 | 315.3 | 538.2 |
| | | | 2 | 481.83 | 567.53 | 478.23 | 567.03 | 186.93 | 429.17 |
| | | | 3 | 295.1 | 460.47 | 287.7 | 459.5 | 83.57 | 307.07 |
| | 2 | Train | 1 | 589.27 | 629.93 | 589.27 | 629.67 | 315.97 | 524.4 |
| | | | 2 | 487.83 | 579.87 | 487.7 | 580 | 184.6 | 410.53 |
| | | | 3 | 318.8 | 477.2 | 325.67 | 487.23 | 83.6 | 289.77 |
| | | Ver | 1 | 587.3 | 631.87 | 584.77 | 630.43 | 301.97 | 520.67 |
| | | | 2 | 479.17 | 576.03 | 483.83 | 577.47 | 180.2 | 406.13 |
| | | | 3 | 294.03 | 472.5 | 295.03 | 473.3 | 84.8 | 295.67 |
| | 7 | Train | 1 | 587.17 | 624.83 | 578.53 | 629.67 | 315.5 | 528 |
| | | | 2 | 486.43 | 575.27 | 477.17 | 578.27 | 181.93 | 413.7 |
| | | | 3 | 317.5 | 469.93 | 307 | 478.37 | 86.87 | 293.9 |
| | | Ver | 1 | 576.53 | 624.63 | 573.27 | 626.43 | 309.17 | 526.87 |
| | | | 2 | 478.9 | 567.63 | 471.03 | 573.43 | 180.97 | 409.87 |
| | | | 3 | 290.2 | 460.77 | 278.4 | 465.33 | 83.03 | 295.8 |
| | 12 | Train | 1 | 578.67 | 620.7 | 574.4 | 625.43 | 317.4 | 530.93 |
| | | | 2 | 486.33 | 568.87 | 468.37 | 572.3 | 190.63 | 420.47 |
| | | | 3 | 316.17 | 461.63 | 297.07 | 466.7 | 88.83 | 299.03 |
| | | Ver | 1 | 573.37 | 618.57 | 567.83 | 624.67 | 311.53 | 528.1 |
| | | | 2 | 474.63 | 560.67 | 467.9 | 569.53 | 189.33 | 419.37 |
| | | | 3 | 288.13 | 447.57 | 272.2 | 461.93 | 88.53 | 308.67 |

Table A.345: 12 States – $(12, 60, 7)_4$ one – Perfect Score is 720 and fuzzy tolerance of 3

### A.5.3 Code 3

| Parameters | | | | 30% Mutation | | 4 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 1 | Train | 1 | 613.03 | 644.17 | 567.03 | 616.47 | 361.8 | 480.5 |
| | | | 2 | 511.6 | 573.7 | 455.67 | 536.83 | 215.63 | 341.17 |
| | | | 3 | 345.7 | 443.87 | 288.17 | 399 | 103.9 | 215.4 |
| | | Ver | 1 | 597.73 | 638.07 | 549.93 | 609.77 | 347.67 | 476.97 |
| | | | 2 | 495.1 | 564.6 | 446.23 | 529.17 | 203.4 | 334.57 |
| | | | 3 | 307.63 | 428.37 | 260.77 | 389.3 | 96.63 | 216.17 |
| | 2 | Train | 1 | 603.7 | 636.93 | 571.77 | 619.13 | 370.77 | 495.57 |
| | | | 2 | 499.8 | 564.87 | 469.33 | 546.67 | 217.6 | 359.4 |
| | | | 3 | 338.7 | 441.63 | 297.73 | 411.3 | 103.97 | 223.73 |
| | | Ver | 1 | 587.67 | 631.27 | 562.57 | 615.2 | 354.47 | 490.3 |
| | | | 2 | 483.57 | 556.97 | 455.3 | 539.23 | 201.43 | 347.37 |
| | | | 3 | 295.03 | 425.63 | 266.47 | 396.97 | 99.03 | 228.93 |
| | 7 | Train | 1 | 602.13 | 640.13 | 559.67 | 614.7 | 368.27 | 496.83 |
| | | | 2 | 501.37 | 572.23 | 449.97 | 538.77 | 214.73 | 356.17 |
| | | | 3 | 333.67 | 437.97 | 281.9 | 402.6 | 107.17 | 229.6 |
| | | Ver | 1 | 588.67 | 633.43 | 547.57 | 610.37 | 357.77 | 493.57 |
| | | | 2 | 482.87 | 561.3 | 438.37 | 531.3 | 205.73 | 350.6 |
| | | | 3 | 288.27 | 417.5 | 253.73 | 393.17 | 99.83 | 228.93 |
| | 12 | Train | 1 | 598.2 | 629.93 | 553.77 | 604.8 | 362.63 | 493.07 |
| | | | 2 | 497.1 | 562.17 | 446.5 | 525.37 | 212.47 | 355.47 |
| | | | 3 | 335.7 | 439.67 | 280.8 | 388.37 | 103.57 | 230.8 |
| | | Ver | 1 | 585.63 | 627 | 539.93 | 598.17 | 346.83 | 487.77 |
| | | | 2 | 483.97 | 556.9 | 433.13 | 517.33 | 206.57 | 349.6 |
| | | | 3 | 296.07 | 424.27 | 250.43 | 378.3 | 98.87 | 231.37 |
| 25 | 1 | Train | 1 | 600.23 | 628.97 | 571.17 | 620 | 367.87 | 491.67 |
| | | | 2 | 504.07 | 561.87 | 463.77 | 545.33 | 222.43 | 357.57 |
| | | | 3 | 341.83 | 432.6 | 299.97 | 414.33 | 103.57 | 224.97 |
| | | Ver | 1 | 587.47 | 624.27 | 556.9 | 614.37 | 350.2 | 482.1 |
| | | | 2 | 487.1 | 554.67 | 452 | 539.43 | 208.7 | 350.1 |
| | | | 3 | 303.23 | 417.57 | 269.73 | 404.9 | 98.73 | 226.8 |
| | 2 | Train | 1 | 609.2 | 638.5 | 573.53 | 620.43 | 372.17 | 497.43 |
| | | | 2 | 513.7 | 575.9 | 470.6 | 554 | 217.87 | 360.03 |
| | | | 3 | 347.83 | 451.57 | 303.53 | 423.57 | 103.5 | 231.1 |
| | | Ver | 1 | 598.27 | 635.23 | 561.1 | 616.43 | 358.07 | 492.47 |
| | | | 2 | 497.97 | 567.77 | 457.63 | 546.07 | 206.53 | 351.3 |
| | | | 3 | 308.43 | 437.53 | 268.87 | 415.2 | 98.67 | 231.17 |
| | 7 | Train | 1 | 598.9 | 638.2 | 578.2 | 622.03 | 365.9 | 488.07 |
| | | | 2 | 498.53 | 574.67 | 472.7 | 552.67 | 218 | 352.53 |
| | | | 3 | 329.77 | 451.47 | 306.47 | 430.97 | 103.93 | 222.13 |
| | | Ver | 1 | 588.83 | 634.43 | 568.87 | 619.33 | 351.63 | 482.13 |
| | | | 2 | 481.9 | 569.9 | 463.6 | 551.1 | 209.2 | 347.67 |
| | | | 3 | 295.43 | 438.1 | 281.17 | 423.4 | 102.27 | 224.83 |
| | 12 | Train | 1 | 595.77 | 633.37 | 560.07 | 610.47 | 365.63 | 496.9 |
| | | | 2 | 494.93 | 565.13 | 459.43 | 543.47 | 211.7 | 354.77 |
| | | | 3 | 329.5 | 440.07 | 293.37 | 416.7 | 102.43 | 227.63 |
| | | Ver | 1 | 585.93 | 629.67 | 556.5 | 612.1 | 353.47 | 493.23 |
| | | | 2 | 477.57 | 556.1 | 451.83 | 541.1 | 202.57 | 349.3 |
| | | | 3 | 293.23 | 422.67 | 268.73 | 409.57 | 95 | 229.53 |
| 51 | 1 | Train | 1 | 596.8 | 627.1 | 592.47 | 639 | 351.43 | 470.63 |
| | | | 2 | 499.47 | 560.97 | 483.17 | 574.03 | 204.9 | 331.7 |
| | | | 3 | 336.27 | 434.9 | 315 | 453.23 | 97.33 | 206.6 |
| | | Ver | 1 | 583.83 | 622.73 | 580.7 | 633.33 | 345.7 | 471.6 |
| | | | 2 | 484.6 | 553.07 | 472.1 | 566.2 | 194.4 | 323.6 |
| | | | 3 | 296.5 | 418.7 | 283.07 | 439.93 | 93.57 | 204 |
| | 2 | Train | 1 | 603.33 | 639.53 | 581.3 | 625 | 354.87 | 471.2 |
| | | | 2 | 506.73 | 574.07 | 478.93 | 564.2 | 213.93 | 337.53 |
| | | | 3 | 335.73 | 446.83 | 309.13 | 439.93 | 102.57 | 210.7 |
| | | Ver | 1 | 591.53 | 635.03 | 570.47 | 622.77 | 344.87 | 470.3 |
| | | | 2 | 489.93 | 564.3 | 465.73 | 556.77 | 206.23 | 332.83 |
| | | | 3 | 301.33 | 432.13 | 277.37 | 428.63 | 96.63 | 209.07 |
| | 7 | Train | 1 | 600.93 | 636.5 | 585.27 | 632.9 | 350.33 | 483.07 |
| | | | 2 | 498.97 | 571.37 | 480.03 | 568.87 | 198.13 | 338.8 |
| | | | 3 | 333.87 | 450.83 | 309.73 | 456.27 | 91.83 | 215.07 |
| | | Ver | 1 | 588.53 | 631.5 | 574.83 | 629.27 | 341.6 | 481.83 |
| | | | 2 | 485.87 | 564.73 | 465.43 | 563.07 | 191.97 | 335.57 |
| | | | 3 | 297.4 | 437.27 | 279.97 | 443.33 | 90.6 | 218.3 |
| | 12 | Train | 1 | 596.47 | 627.03 | 574.13 | 620.13 | 347.5 | 473.47 |
| | | | 2 | 502.1 | 564.13 | 469.63 | 561.1 | 198.63 | 333.2 |
| | | | 3 | 335.7 | 442.13 | 303.6 | 439.93 | 95.5 | 209.3 |
| | | Ver | 1 | 587.07 | 624.3 | 565.97 | 619.47 | 338.97 | 472.73 |
| | | | 2 | 485.5 | 556.83 | 464.9 | 556.97 | 193.07 | 325.77 |
| | | | 3 | 298.47 | 427.73 | 271.03 | 431.7 | 93.63 | 207.47 |
| 101 | 1 | Train | 1 | 594.6 | 628.93 | 592.07 | 630.8 | 336.07 | 458.73 |
| | | | 2 | 492.57 | 559.6 | 494.63 | 575.5 | 191.9 | 320.83 |
| | | | 3 | 328.6 | 433.2 | 330.1 | 458.23 | 89.53 | 195.27 |
| | | Ver | 1 | 578.5 | 620.63 | 585.73 | 628.57 | 329.73 | 455.97 |
| | | | 2 | 477.33 | 551.23 | 479.83 | 566.6 | 186.07 | 314.67 |
| | | | 3 | 294.37 | 420.03 | 291.27 | 442.67 | 91.47 | 202.07 |
| | 2 | Train | 1 | 606.13 | 638.13 | 598.23 | 636.37 | 334.43 | 467.5 |
| | | | 2 | 502.97 | 573.9 | 500.07 | 584.17 | 188.23 | 326.77 |
| | | | 3 | 333.8 | 454.43 | 334.4 | 472.5 | 90.77 | 209.67 |
| | | Ver | 1 | 590.17 | 632.2 | 593.63 | 635.73 | 328.6 | 468.27 |
| | | | 2 | 485.77 | 564.17 | 486.33 | 577.17 | 183.47 | 324.57 |
| | | | 3 | 303.37 | 444.17 | 296.83 | 462.13 | 87.13 | 210.83 |
| | 7 | Train | 1 | 590.73 | 625.23 | 586.13 | 629.57 | 339.43 | 472.3 |
| | | | 2 | 497.4 | 563.87 | 486.9 | 573.9 | 183.23 | 329.9 |
| | | | 3 | 332.43 | 448.87 | 317.97 | 462.93 | 87.23 | 209.73 |
| | | Ver | 1 | 583.27 | 623.17 | 579.73 | 626.93 | 332.37 | 472.47 |
| | | | 2 | 480.77 | 559.3 | 478.67 | 571.27 | 176.4 | 325.6 |
| | | | 3 | 295.97 | 436.03 | 289.23 | 455.47 | 88.77 | 213.93 |
| | 12 | Train | 1 | 588.27 | 623.97 | 572.4 | 616.63 | 340.1 | 465.27 |
| | | | 2 | 491.43 | 558.37 | 466.83 | 552.53 | 190.93 | 324.87 |
| | | | 3 | 321.73 | 437.73 | 302.8 | 440.97 | 89.17 | 199.9 |
| | | Ver | 1 | 575.07 | 618.63 | 563.33 | 614.07 | 331.57 | 462.57 |
| | | | 2 | 476.07 | 552.03 | 464.27 | 553 | 184.2 | 319.93 |
| | | | 3 | 288.33 | 428.9 | 278.97 | 432.3 | 91.97 | 205.33 |

Table A.346: 18 States – $(12, 60, 7)_4$ one – Perfect Score is 720 and fuzzy tolerance of 3

| Parameters | | | | 1 Restart | | 15 Restarts | | trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 8.4 | 641.23 | 12.27 | 651.53 | 13.43 | 647.4 |
| | | | 2 | 7.43 | 618.57 | 10.8 | 628.37 | 11.13 | 621.07 |
| | | | 3 | 4.7 | 554.27 | 5.93 | 560.77 | 7.17 | 549.67 |
| | | Ver | 1 | 8.67 | 645.23 | 12.07 | 654.6 | 13.3 | 649.93 |
| | | | 2 | 7.07 | 617.57 | 10.67 | 627.23 | 11.3 | 621.63 |
| | | | 3 | 4.77 | 548.67 | 6.67 | 560.3 | 7.5 | 550.4 |
| | 2 | Train | 1 | 9.63 | 639.73 | 13.4 | 652.17 | 12.4 | 657.33 |
| | | | 2 | 7.47 | 613.27 | 11.33 | 621.43 | 10.37 | 631.67 |
| | | | 3 | 4.57 | 554.8 | 6.23 | 556.87 | 5.6 | 570.77 |
| | | Ver | 1 | 9.57 | 639.37 | 13.9 | 652.9 | 12.13 | 657.97 |
| | | | 2 | 7.87 | 611.8 | 12.1 | 624.33 | 10.9 | 634.03 |
| | | | 3 | 4.73 | 550.43 | 7.1 | 556.07 | 6.93 | 569.8 |
| | 7 | Train | 1 | 10.23 | 659.43 | 14.6 | 637.63 | 14.77 | 628.67 |
| | | | 2 | 8.43 | 628.07 | 10.97 | 603.2 | 11.37 | 598.17 |
| | | | 3 | 4.63 | 566.3 | 6.6 | 537.93 | 7.57 | 523.7 |
| | | Ver | 1 | 11.27 | 659.8 | 13.9 | 636.57 | 14.1 | 630.33 |
| | | | 2 | 9.93 | 628.7 | 12.43 | 608.43 | 11.43 | 601.53 |
| | | | 3 | 5 | 569 | 7.6 | 534.2 | 8.57 | 521.9 |
| | 12 | Train | 1 | 10.5 | 642.4 | 15.33 | 652.2 | 11.77 | 669.9 |
| | | | 2 | 7.97 | 617.67 | 12.9 | 618.5 | 9.8 | 646.03 |
| | | | 3 | 4.77 | 558.93 | 6.43 | 551.93 | 5.5 | 587.77 |
| | | Ver | 1 | 10.87 | 641.73 | 16.8 | 652.27 | 12.33 | 671.6 |
| | | | 2 | 7.77 | 616.57 | 13.93 | 620.73 | 9.93 | 644.77 |
| | | | 3 | 5.33 | 556.43 | 7.4 | 556.63 | 6.3 | 591.77 |
| 25 | 1 | Train | 1 | 9.3 | 640.7 | 14.8 | 638.17 | 13.1 | 657.53 |
| | | | 2 | 7.97 | 614.13 | 11.97 | 609.8 | 11.2 | 630.8 |
| | | | 3 | 4.47 | 554.03 | 6.77 | 540 | 6.33 | 565.07 |
| | | Ver | 1 | 10.33 | 640.93 | 15 | 640.23 | 13.93 | 659.47 |
| | | | 2 | 7.57 | 617.5 | 11.7 | 609.83 | 11.37 | 628.2 |
| | | | 3 | 5.3 | 553.3 | 8.6 | 541.43 | 6.73 | 566.4 |
| | 2 | Train | 1 | 9.23 | 648.53 | 11.53 | 677.07 | 12.33 | 670.6 |
| | | | 2 | 7.83 | 615.33 | 8.53 | 655.33 | 8.5 | 645.77 |
| | | | 3 | 4.5 | 559.2 | 5.37 | 604.63 | 5.83 | 590.27 |
| | | Ver | 1 | 9.6 | 643.9 | 11.5 | 677 | 11.4 | 669.67 |
| | | | 2 | 7.57 | 617.5 | 9.3 | 655.3 | 9.77 | 649.57 |
| | | | 3 | 4.57 | 560.93 | 6.4 | 605.87 | 6.5 | 593 |
| | 7 | Train | 1 | 11.7 | 640.5 | 13.57 | 637.8 | 13.3 | 649.63 |
| | | | 2 | 10.37 | 617.57 | 11.1 | 610.27 | 11.03 | 617.87 |
| | | | 3 | 5.97 | 555.53 | 6.6 | 541.5 | 5.67 | 550.57 |
| | | Ver | 1 | 12.93 | 643.57 | 13.93 | 640.93 | 13.8 | 650.63 |
| | | | 2 | 10.67 | 615.67 | 10.57 | 610.37 | 11.6 | 619.73 |
| | | | 3 | 6.83 | 549.57 | 7.43 | 542.67 | 6.4 | 555.37 |
| | 12 | Train | 1 | 13.3 | 659.33 | 12.93 | 662.73 | 12.23 | 663.37 |
| | | | 2 | 11.23 | 631.7 | 11.1 | 635.53 | 9.67 | 638.93 |
| | | | 3 | 6.57 | 558.47 | 6.3 | 575.93 | 5.87 | 584.83 |
| | | Ver | 1 | 14.1 | 660.03 | 13.7 | 664.07 | 12.13 | 663.9 |
| | | | 2 | 11.33 | 631.47 | 12.33 | 635.83 | 10.47 | 640.43 |
| | | | 3 | 7.53 | 562.07 | 6.83 | 574.07 | 6.37 | 581.87 |
| 51 | 1 | Train | 1 | 9.2 | 660.53 | 13.83 | 667.43 | 12.1 | 658.4 |
| | | | 2 | 7.9 | 633.47 | 11.17 | 634.1 | 10.4 | 634.13 |
| | | | 3 | 5 | 579 | 6 | 575.53 | 5.37 | 572.47 |
| | | Ver | 1 | 10.33 | 659.47 | 14.77 | 666.33 | 12.8 | 661.43 |
| | | | 2 | 7.7 | 634.67 | 12.87 | 637.07 | 10.53 | 633.93 |
| | | | 3 | 4.93 | 578.3 | 6.83 | 577.53 | 6.27 | 576.27 |
| | 2 | Train | 1 | 11.2 | 659.57 | 13.43 | 659.83 | 15.2 | 637.13 |
| | | | 2 | 9.97 | 638.33 | 11 | 635.03 | 11.07 | 600.7 |
| | | | 3 | 5.93 | 579.7 | 5.97 | 571.7 | 5.97 | 535.4 |
| | | Ver | 1 | 12.5 | 660.73 | 13.57 | 661.7 | 15.2 | 636.5 |
| | | | 2 | 10.17 | 638.97 | 11.4 | 634.17 | 12.27 | 603.3 |
| | | | 3 | 6.7 | 581.93 | 7.27 | 574.03 | 7.07 | 533.7 |
| | 7 | Train | 1 | 12.77 | 653.93 | 12.37 | 654.17 | 12.97 | 657.7 |
| | | | 2 | 10.8 | 625.37 | 11.77 | 628.1 | 10.1 | 632.3 |
| | | | 3 | 5.83 | 563.63 | 6.37 | 559.17 | 5.7 | 572.17 |
| | | Ver | 1 | 14.07 | 654.53 | 13.03 | 656.73 | 12.9 | 658.5 |
| | | | 2 | 11.63 | 623.03 | 11.7 | 627.6 | 10.37 | 634.9 |
| | | | 3 | 6.5 | 563.1 | 7.23 | 558.1 | 6.73 | 574.07 |
| | 12 | Train | 1 | 12.63 | 663.63 | 13.13 | 647.93 | 14.63 | 647.47 |
| | | | 2 | 11.47 | 631.57 | 11.07 | 617.43 | 11.93 | 618.37 |
| | | | 3 | 6.4 | 562.97 | 6.77 | 553.8 | 6.83 | 551.07 |
| | | Ver | 1 | 14.57 | 665.13 | 13.73 | 649.27 | 15.13 | 648.5 |
| | | | 2 | 12.53 | 630.03 | 12.07 | 617 | 12.5 | 619.73 |
| | | | 3 | 7.57 | 563.37 | 7.13 | 547.87 | 7.8 | 550.23 |

Table A.347: 2 States – $(12, 60, 7)_4$ two – Perfect Score is 720 and fuzzy tolerance of 2

| Parameters | | | | 1 Restart | | 15 Restarts | | trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 47.87 | 579.5 | 78.1 | 583.27 | 68.87 | 612.47 |
| | | | 2 | 32.17 | 523.2 | 53.87 | 526.93 | 52.03 | 560.1 |
| | | | 3 | 17 | 427.77 | 28.93 | 427.93 | 27.57 | 454.63 |
| | | Ver | 1 | 47.87 | 581.83 | 80.07 | 587.83 | 67.17 | 615.5 |
| | | | 2 | 30.3 | 523.67 | 53.63 | 529.93 | 49.7 | 561.37 |
| | | | 3 | 14.77 | 427.6 | 29.57 | 427.13 | 26.03 | 452.9 |
| | 2 | Train | 1 | 44.8 | 592 | 68.23 | 621.87 | 59.2 | 633.53 |
| | | | 2 | 32.3 | 527.87 | 49.8 | 567.43 | 41.13 | 581.6 |
| | | | 3 | 18.17 | 428.27 | 27.07 | 466.73 | 22.87 | 494.77 |
| | | Ver | 1 | 45.07 | 589.9 | 68.23 | 623.67 | 56.23 | 631.63 |
| | | | 2 | 33.13 | 532.27 | 51.47 | 567.8 | 41.43 | 584.83 |
| | | | 3 | 16.43 | 425.93 | 24.63 | 461.1 | 21.3 | 491.17 |
| | 7 | Train | 1 | 58.03 | 581.83 | 65.77 | 632.17 | 66.87 | 617.73 |
| | | | 2 | 36.8 | 519.8 | 55.73 | 569.27 | 53.2 | 551.53 |
| | | | 3 | 21.67 | 420.73 | 29.27 | 469.43 | 30.1 | 446.8 |
| | | Ver | 1 | 56.9 | 582.47 | 65.33 | 632.83 | 65.5 | 614.87 |
| | | | 2 | 38.73 | 519.3 | 54.57 | 573.93 | 52.43 | 557.5 |
| | | | 3 | 18.97 | 420.03 | 26.23 | 461.07 | 26 | 444.07 |
| | 12 | Train | 1 | 62.07 | 573.53 | 61.07 | 632.5 | 59.23 | 632.5 |
| | | | 2 | 42.4 | 511.8 | 48.67 | 580.43 | 45.17 | 593.73 |
| | | | 3 | 23.2 | 413.47 | 26.33 | 485.3 | 22.9 | 502.8 |
| | | Ver | 1 | 61.77 | 574.9 | 59.5 | 633.7 | 59.53 | 636.63 |
| | | | 2 | 41.2 | 518.43 | 46.67 | 580 | 42.17 | 597.33 |
| | | | 3 | 22.03 | 415.93 | 24.8 | 479.27 | 22.27 | 501.33 |
| 25 | 1 | Train | 1 | 64.2 | 561.97 | 76.3 | 599.7 | 73.63 | 604.97 |
| | | | 2 | 39.9 | 501.1 | 56.23 | 545.43 | 61.33 | 546.83 |
| | | | 3 | 22.63 | 408.1 | 29.9 | 440.87 | 32.3 | 438.27 |
| | | Ver | 1 | 63.7 | 563.2 | 74.53 | 603.43 | 72.77 | 608.47 |
| | | | 2 | 41.83 | 505.23 | 55.2 | 551.27 | 57.83 | 548.67 |
| | | | 3 | 21.97 | 403.07 | 26.4 | 438.03 | 29.97 | 426.93 |
| | 2 | Train | 1 | 54.57 | 595 | 69.37 | 612.97 | 74.57 | 600.77 |
| | | | 2 | 40.27 | 538.57 | 53.47 | 553.27 | 55.83 | 544.33 |
| | | | 3 | 21.27 | 434.4 | 27.6 | 453.97 | 31.17 | 440.27 |
| | | Ver | 1 | 54.1 | 594.8 | 69.43 | 613.7 | 74.9 | 604.53 |
| | | | 2 | 40.8 | 535.47 | 50.8 | 556.3 | 52.17 | 546.9 |
| | | | 3 | 19.33 | 430.97 | 25.27 | 449.13 | 28.27 | 433.17 |
| | 7 | Train | 1 | 55.7 | 617.07 | 67.47 | 635.87 | 71.97 | 590.8 |
| | | | 2 | 39.83 | 561.43 | 52.53 | 580.63 | 51.87 | 538.77 |
| | | | 3 | 21.9 | 468.97 | 29.4 | 477.3 | 28.87 | 445.43 |
| | | Ver | 1 | 54.4 | 615.23 | 66.5 | 637.47 | 69.3 | 593.7 |
| | | | 2 | 41.43 | 564.5 | 51.4 | 586 | 49.77 | 541.53 |
| | | | 3 | 21.37 | 464.23 | 25.67 | 473.73 | 24.23 | 440.67 |
| | 12 | Train | 1 | 58.37 | 616.6 | 71.67 | 612.83 | 64 | 632.23 |
| | | | 2 | 40.63 | 558.07 | 54.87 | 559.8 | 52.57 | 579.37 |
| | | | 3 | 24 | 466.73 | 31.2 | 461.77 | 28.4 | 484.47 |
| | | Ver | 1 | 59.23 | 618.07 | 70 | 614.33 | 63.4 | 632.03 |
| | | | 2 | 41.5 | 562.23 | 53.63 | 565.13 | 51.07 | 580.93 |
| | | | 3 | 21.2 | 466.1 | 28.23 | 455.53 | 25.2 | 477.6 |
| 51 | 1 | Train | 1 | 65.43 | 581.4 | 67.9 | 617.47 | 82.5 | 594.27 |
| | | | 2 | 40.43 | 516.3 | 46.97 | 564.53 | 61.63 | 530.73 |
| | | | 3 | 24.23 | 420.8 | 25.33 | 476.07 | 33.2 | 420.83 |
| | | Ver | 1 | 67.33 | 581.77 | 68.17 | 621.7 | 81.2 | 596.57 |
| | | | 2 | 42.57 | 521.27 | 46.57 | 567.37 | 59.9 | 536.07 |
| | | | 3 | 21.43 | 423.07 | 23.37 | 474.43 | 29.9 | 414 |
| | 2 | Train | 1 | 55.2 | 610.37 | 74.9 | 616.93 | 75.47 | 609.77 |
| | | | 2 | 39.97 | 564.87 | 58.1 | 562.43 | 54.37 | 556.5 |
| | | | 3 | 21.97 | 475.6 | 31.7 | 462.43 | 29.17 | 452.63 |
| | | Ver | 1 | 56 | 610.13 | 74.4 | 616.53 | 74.53 | 614.27 |
| | | | 2 | 39.9 | 566 | 57.17 | 566.5 | 50.17 | 558.47 |
| | | | 3 | 21.4 | 475.73 | 28.03 | 457.73 | 28.3 | 456.37 |
| | 7 | Train | 1 | 63.07 | 596.6 | 69.63 | 624.53 | 75.3 | 604.9 |
| | | | 2 | 43.33 | 543.03 | 54.7 | 571.6 | 59.37 | 548.7 |
| | | | 3 | 25.17 | 444.8 | 29.13 | 470.9 | 31.4 | 437.03 |
| | | Ver | 1 | 59.87 | 599.93 | 68.57 | 624.8 | 71.7 | 604.23 |
| | | | 2 | 46.07 | 543.7 | 51.53 | 576.23 | 56.57 | 551.93 |
| | | | 3 | 22.83 | 441.97 | 28.27 | 469.37 | 28.77 | 437.37 |
| | 12 | Train | 1 | 72.03 | 586.33 | 79.7 | 603.8 | 74.27 | 618.33 |
| | | | 2 | 50.97 | 530.9 | 60.93 | 541.93 | 53.73 | 565.33 |
| | | | 3 | 28.73 | 428.2 | 31 | 435.5 | 31.2 | 461.63 |
| | | Ver | 1 | 72.37 | 591.27 | 77.27 | 604.47 | 71.6 | 617.37 |
| | | | 2 | 49.9 | 533.1 | 59.47 | 546.1 | 54.13 | 564.17 |
| | | | 3 | 26.63 | 428.23 | 29.87 | 434.4 | 26.83 | 457.7 |

Table A.348: 3 States – $(12, 60, 7)_4$ two – Perfect Score is 720 and fuzzy tolerance of 2

| Parameters | | | | 1 Restart | | 15 Restarts | | trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 117.4 | 477.63 | 147.93 | 543.73 | 152.07 | 529.53 |
| | | | 2 | 67.83 | 388.37 | 92.7 | 451 | 102.93 | 446.4 |
| | | | 3 | 33.7 | 273.1 | 46.3 | 322.23 | 49.4 | 310.67 |
| | | Ver | 1 | 116.87 | 474.3 | 142.67 | 542.73 | 148.87 | 533.67 |
| | | | 2 | 66.73 | 389.33 | 92.57 | 455.57 | 101.13 | 449.37 |
| | | | 3 | 34 | 272.33 | 42.53 | 320.43 | 47.1 | 303.8 |
| | 2 | Train | 1 | 109.4 | 485.17 | 139.27 | 552.9 | 142.43 | 535.67 |
| | | | 2 | 64.47 | 406.13 | 94.93 | 468.83 | 102.53 | 452.63 |
| | | | 3 | 30.23 | 290.77 | 48.8 | 339 | 47.47 | 313.07 |
| | | Ver | 1 | 110 | 491.6 | 135.67 | 559.87 | 138.53 | 539.17 |
| | | | 2 | 64.77 | 405.03 | 91.4 | 469.97 | 99.17 | 452.83 |
| | | | 3 | 31.4 | 297.4 | 44.63 | 330.87 | 46.4 | 313.77 |
| | 7 | Train | 1 | 120.93 | 485.5 | 131.17 | 563.2 | 148.8 | 543.97 |
| | | | 2 | 71.23 | 403.2 | 94.2 | 471.4 | 95.23 | 451.6 |
| | | | 3 | 35.33 | 290.53 | 47.07 | 342.13 | 46.67 | 312.93 |
| | | Ver | 1 | 120.7 | 487.9 | 128.9 | 564.83 | 145.43 | 544.33 |
| | | | 2 | 67.37 | 409.03 | 93.2 | 471.03 | 93.43 | 454.7 |
| | | | 3 | 34.17 | 288.87 | 42.2 | 335.37 | 45.2 | 317 |
| | 12 | Train | 1 | 106.2 | 508.73 | 130.97 | 560.83 | 143.87 | 548.57 |
| | | | 2 | 62.13 | 415.73 | 96.97 | 471.4 | 102.27 | 462.23 |
| | | | 3 | 30.83 | 309.17 | 47.3 | 331.2 | 51 | 320.43 |
| | | Ver | 1 | 105 | 516.27 | 129 | 563 | 141.47 | 552.53 |
| | | | 2 | 62.57 | 423.33 | 95.53 | 474.57 | 101.67 | 469.77 |
| | | | 3 | 29.03 | 307.47 | 42.8 | 329.87 | 47.43 | 320.47 |
| 25 | 1 | Train | 1 | 116.9 | 517.43 | 150.63 | 547.2 | 147.5 | 541.2 |
| | | | 2 | 74.33 | 437 | 99.47 | 464.37 | 100.73 | 454.1 |
| | | | 3 | 37.17 | 311.97 | 50.3 | 331.07 | 51.6 | 316.13 |
| | | Ver | 1 | 115.7 | 521.9 | 147.73 | 553.33 | 143.13 | 543.93 |
| | | | 2 | 75.33 | 432.77 | 97.13 | 463.67 | 99.8 | 453.8 |
| | | | 3 | 35.53 | 311.8 | 46.3 | 330.43 | 46.33 | 313.67 |
| | 2 | Train | 1 | 116.87 | 531.7 | 136 | 553.5 | 130.17 | 558.4 |
| | | | 2 | 71.53 | 436.63 | 90.17 | 466.97 | 98.87 | 469.07 |
| | | | 3 | 34.7 | 329.27 | 44.13 | 338.73 | 48.6 | 330.7 |
| | | Ver | 1 | 113.33 | 531.97 | 132.33 | 553.4 | 125.93 | 562.27 |
| | | | 2 | 71 | 441.07 | 86.43 | 468.43 | 96.13 | 469.1 |
| | | | 3 | 33.3 | 324.4 | 40.5 | 335.03 | 43.73 | 323.77 |
| | 7 | Train | 1 | 103.57 | 555.17 | 136.47 | 550.8 | 138.8 | 544.63 |
| | | | 2 | 68.63 | 463.07 | 96.87 | 462.57 | 91.13 | 461.27 |
| | | | 3 | 34.27 | 337.43 | 48.6 | 330.27 | 44.97 | 334.83 |
| | | Ver | 1 | 101.77 | 555.07 | 134.7 | 558.8 | 135.87 | 546.83 |
| | | | 2 | 68.27 | 464.6 | 94.37 | 467.13 | 86.33 | 462.37 |
| | | | 3 | 32.37 | 335.23 | 43.4 | 330.07 | 40.83 | 330.93 |
| | 12 | Train | 1 | 120.73 | 525.43 | 151.63 | 532.43 | 144.8 | 536.93 |
| | | | 2 | 71.3 | 442.07 | 104.47 | 444.87 | 101.73 | 452 |
| | | | 3 | 36.07 | 318.8 | 48.97 | 313.57 | 50.37 | 319.63 |
| | | Ver | 1 | 120.2 | 529.47 | 148.87 | 534 | 139.9 | 537.93 |
| | | | 2 | 72.23 | 440.97 | 97.37 | 444.97 | 96.03 | 452 |
| | | | 3 | 35.53 | 319.07 | 45.93 | 312.23 | 47.77 | 317.6 |
| 51 | 1 | Train | 1 | 112.1 | 506.4 | 149.8 | 563.47 | 139 | 558.5 |
| | | | 2 | 62.9 | 426.43 | 105 | 472.97 | 98.93 | 471.7 |
| | | | 3 | 34.5 | 317.23 | 51.57 | 346.8 | 48.8 | 344.27 |
| | | Ver | 1 | 109.67 | 511.33 | 148.47 | 564.2 | 135.13 | 559.6 |
| | | | 2 | 63.3 | 425.17 | 101 | 473.17 | 95.5 | 474.6 |
| | | | 3 | 32.3 | 315.07 | 48 | 340.43 | 45.07 | 337.37 |
| | 2 | Train | 1 | 118.37 | 513.53 | 143.1 | 549.63 | 145.67 | 555.97 |
| | | | 2 | 74.83 | 419.33 | 100.33 | 467.3 | 102.53 | 469.37 |
| | | | 3 | 36.2 | 294.3 | 48.07 | 328.4 | 52.8 | 331.17 |
| | | Ver | 1 | 119.43 | 514.3 | 138.13 | 551.7 | 143.47 | 556.6 |
| | | | 2 | 75.73 | 421.27 | 95.37 | 469.13 | 98.7 | 470.33 |
| | | | 3 | 34.07 | 296.4 | 46.77 | 333 | 47.83 | 326.63 |
| | 7 | Train | 1 | 119.13 | 522.83 | 148.73 | 541.07 | 154.6 | 550.3 |
| | | | 2 | 74.73 | 437.37 | 102.73 | 459.37 | 106.4 | 450.73 |
| | | | 3 | 38.47 | 317.53 | 51.43 | 325.33 | 52.4 | 321.33 |
| | | Ver | 1 | 117.87 | 522.27 | 143.9 | 543.97 | 151.47 | 554.3 |
| | | | 2 | 75.13 | 436.07 | 102.13 | 458.73 | 101.57 | 452.77 |
| | | | 3 | 37.53 | 313.57 | 48.8 | 321.03 | 46.4 | 315.63 |
| | 12 | Train | 1 | 121.87 | 541.4 | 138.83 | 563.6 | 135.33 | 573.67 |
| | | | 2 | 80.13 | 453.53 | 88.4 | 471.77 | 95.33 | 497 |
| | | | 3 | 38.07 | 327.73 | 46 | 358.8 | 47.3 | 357.53 |
| | | Ver | 1 | 119 | 540.7 | 132.43 | 565.7 | 129.7 | 570.97 |
| | | | 2 | 78.73 | 457.87 | 84.13 | 475.17 | 89.33 | 498.37 |
| | | | 3 | 36.97 | 326.27 | 39.8 | 352.2 | 43.77 | 356.83 |

Table A.349: 4 States – $(12, 60, 7)_4$ two – Perfect Score is 720 and fuzzy tolerance of 2

| Parameters | | | | Trans 30 Restarts | |
|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy |
| | | Train | 1 | 152.07 | 650.7 |
| | | | 2 | 102.93 | 609.6 |
| | | | 3 | 49.4 | 535.53 |
| | | Ver | 1 | 148.87 | 649.93 |
| | | | 2 | 101.13 | 610.47 |
| | | | 3 | 47.1 | 526.47 |
| | | Train | 1 | 142.2 | 656.43 |
| | | | 2 | 100.77 | 615.5 |
| | | | 3 | 47.1 | 539.47 |
| | | Ver | 1 | 138.3 | 656.6 |
| | | | 2 | 97.87 | 613.8 |
| | | | 3 | 46.8 | 537.03 |
| | | Train | 1 | 142.1 | 654.2 |
| | | | 2 | 95.9 | 613.43 |
| | | | 3 | 46.23 | 537.7 |
| | | Ver | 1 | 142.57 | 655.4 |
| | | | 2 | 91.17 | 613.23 |
| | | | 3 | 45.1 | 540.1 |
| | | Train | 1 | 143.87 | 658.63 |
| | | | 2 | 102.27 | 621.97 |
| | | | 3 | 51 | 551.53 |
| | | Ver | 1 | 141.47 | 660.13 |
| | | | 2 | 101.67 | 621.33 |
| | | | 3 | 47.43 | 547.93 |
| | | Train | 1 | 138.67 | 657 |
| | | | 2 | 98.07 | 620.43 |
| | | | 3 | 49.73 | 547.77 |
| | | Ver | 1 | 134.9 | 656.9 |
| | | | 2 | 96.3 | 619.3 |
| | | | 3 | 43.97 | 541.13 |
| | | Train | 1 | 145.03 | 663.83 |
| | | | 2 | 108.2 | 630.63 |
| | | | 3 | 53.47 | 559.1 |
| | | Ver | 1 | 140.67 | 663.83 |
| | | | 2 | 107.37 | 632.43 |
| | | | 3 | 48.33 | 556.5 |
| | | Train | 1 | 138.8 | 659.7 |
| | | | 2 | 91.13 | 621 |
| | | | 3 | 44.97 | 552.6 |
| | | Ver | 1 | 135.87 | 658.07 |
| | | | 2 | 86.33 | 619.33 |
| | | | 3 | 40.83 | 545.8 |
| | | Train | 1 | 136.8 | 666.4 |
| | | | 2 | 100.5 | 629.6 |
| | | | 3 | 49.3 | 561.13 |
| | | Ver | 1 | 132.17 | 663.77 |
| | | | 2 | 98.27 | 630.33 |
| | | | 3 | 46.93 | 556.27 |
| | | Train | 1 | 137 | 668.37 |
| | | | 2 | 98.27 | 634.43 |
| | | | 3 | 48.53 | 569.1 |
| | | Ver | 1 | 133.73 | 668.77 |
| | | | 2 | 95.7 | 632.73 |
| | | | 3 | 44.83 | 563.23 |
| | | Train | 1 | 145.67 | 660.6 |
| | | | 2 | 102.53 | 626.5 |
| | | | 3 | 52.8 | 552.27 |
| | | Ver | 1 | 143.47 | 658.97 |
| | | | 2 | 98.7 | 624.43 |
| | | | 3 | 47.83 | 554.1 |
| | | Train | 1 | 150.3 | 657.67 |
| | | | 2 | 105.83 | 617.87 |
| | | | 3 | 51.4 | 543.23 |
| | | Ver | 1 | 146.27 | 657.7 |
| | | | 2 | 103.37 | 616.27 |
| | | | 3 | 49.47 | 542.77 |
| | | Train | 1 | 139.17 | 666.63 |
| | | | 2 | 99.6 | 636.37 |
| | | | 3 | 48.43 | 566.37 |
| | | Ver | 1 | 134.67 | 663.97 |
| | | | 2 | 94.2 | 635.07 |
| | | | 3 | 45.93 | 566.03 |
| | | Train | 1 | 144.13 | 662.5 |
| | | | 2 | 101.63 | 622.87 |
| | | | 3 | 51.57 | 555.83 |
| | | Ver | 1 | 141.53 | 660.37 |
| | | | 2 | 100.6 | 624.1 |
| | | | 3 | 45.03 | 550.47 |
| | | Train | 1 | 139.37 | 669.47 |
| | | | 2 | 96.43 | 633.23 |
| | | | 3 | 47.37 | 562.6 |
| | | Ver | 1 | 133.43 | 668.4 |
| | | | 2 | 96.93 | 632.53 |
| | | | 3 | 45.27 | 560.83 |
| | | Train | 1 | 122 | 674.73 |
| | | | 2 | 88.23 | 644.2 |
| | | | 3 | 45.6 | 583.67 |
| | | Ver | 1 | 119.57 | 672.83 |
| | | | 2 | 87.07 | 643.77 |
| | | | 3 | 40.77 | 580.23 |
| | | Train | 1 | 136.27 | 662.53 |
| | | | 2 | 94.27 | 628.33 |
| | | | 3 | 48.97 | 563.9 |
| | | Ver | 1 | 136 | 659.53 |
| | | | 2 | 92.83 | 629.97 |
| | | | 3 | 44.83 | 555.87 |

Table A.350: 4 States – $(12, 60, 7)_4$ two – Perfect Score is 720 and fuzzy tolerance of 3

| Parameters | | | | 30% Mutation | | 4 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 431.27 | 547.53 | 430.4 | 547.43 | 229.8 | 639.87 |
| | | | 2 | 334.87 | 499 | 330.6 | 506.53 | 150.43 | 577.77 |
| | | | 3 | 194.37 | 371.83 | 190.53 | 387.23 | 72.03 | 482.63 |
| | | Ver | 1 | 434.1 | 550.97 | 434.17 | 553.27 | 220.6 | 634.23 |
| | | | 2 | 328.53 | 493.23 | 324.73 | 501.83 | 149.57 | 581.27 |
| | | | 3 | 185.17 | 366.1 | 179.97 | 377.37 | 68.37 | 479.07 |
| | 2 | Train | 1 | 444.93 | 542.83 | 435.7 | 544.9 | 216 | 640.97 |
| | | | 2 | 350.07 | 500.7 | 340.4 | 501.4 | 140.6 | 583.17 |
| | | | 3 | 205.03 | 375.33 | 197 | 372.63 | 68.8 | 484.7 |
| | | Ver | 1 | 452.03 | 548.57 | 439.3 | 548.5 | 215.8 | 641.37 |
| | | | 2 | 339.07 | 493 | 332.9 | 495.07 | 139.23 | 587.13 |
| | | | 3 | 190 | 364.87 | 188.23 | 368.63 | 61.53 | 482.87 |
| | 7 | Train | 1 | 445 | 550.77 | 444.47 | 557.83 | 222.73 | 624.03 |
| | | | 2 | 347.97 | 510.77 | 344.4 | 513.93 | 144.17 | 564.27 |
| | | | 3 | 203.1 | 382.77 | 200.83 | 389.5 | 68.2 | 462.73 |
| | | Ver | 1 | 445.9 | 554.27 | 442.03 | 559 | 216.73 | 623.6 |
| | | | 2 | 334.6 | 501.53 | 334.17 | 506.07 | 142.03 | 564.87 |
| | | | 3 | 193.37 | 379.53 | 189.37 | 386.33 | 64.03 | 463.4 |
| | 12 | Train | 1 | 443.13 | 560.7 | 436.87 | 549.17 | 226.33 | 649.07 |
| | | | 2 | 349.6 | 519.5 | 341.93 | 509.33 | 149.8 | 592.8 |
| | | | 3 | 205.4 | 401.5 | 197.8 | 379.6 | 71.53 | 497.13 |
| | | Ver | 1 | 448.93 | 564.33 | 442.47 | 555.03 | 221.9 | 647 |
| | | | 2 | 336.13 | 510 | 328.83 | 496.2 | 151.8 | 593.9 |
| | | | 3 | 191.03 | 390.3 | 186.93 | 373.8 | 68.57 | 496.8 |
| 25 | 1 | Train | 1 | 427.37 | 545.23 | 440.5 | 552.2 | 231.77 | 626.5 |
| | | | 2 | 335.77 | 502.17 | 338.87 | 512.37 | 152.57 | 566.67 |
| | | | 3 | 193.93 | 373.8 | 200.87 | 389.2 | 70.43 | 467.43 |
| | | Ver | 1 | 427.53 | 548.23 | 444.73 | 557.17 | 231.17 | 626.3 |
| | | | 2 | 324.43 | 498.07 | 327.73 | 501.63 | 143.4 | 568.97 |
| | | | 3 | 177.73 | 364.6 | 190.57 | 381.23 | 66.17 | 470.2 |
| | 2 | Train | 1 | 439.6 | 547.53 | 434.6 | 545.6 | 235.67 | 620 |
| | | | 2 | 348.03 | 509.07 | 343.7 | 508.43 | 159 | 561.43 |
| | | | 3 | 203.63 | 382.93 | 201 | 381.57 | 75.47 | 461.27 |
| | | Ver | 1 | 447.17 | 555.97 | 440.67 | 552.43 | 234.27 | 619.7 |
| | | | 2 | 333.67 | 501 | 333.23 | 501.1 | 153.5 | 564.47 |
| | | | 3 | 186.3 | 371.83 | 191.43 | 375.5 | 73.33 | 460.57 |
| | 7 | Train | 1 | 443.2 | 551.43 | 445.9 | 546.4 | 225.77 | 637.07 |
| | | | 2 | 349.73 | 513.07 | 341.97 | 502.47 | 153.47 | 575.9 |
| | | | 3 | 206.27 | 384.67 | 206.17 | 379.6 | 73.5 | 473.9 |
| | | Ver | 1 | 447.03 | 556.63 | 452.1 | 552.77 | 225.3 | 636.5 |
| | | | 2 | 338.6 | 503.23 | 328.2 | 494.77 | 153.2 | 576.77 |
| | | | 3 | 192.97 | 378.37 | 190.6 | 369.17 | 64.87 | 468.2 |
| | 12 | Train | 1 | 450.67 | 556.33 | 439.87 | 552.63 | 226.33 | 628.17 |
| | | | 2 | 351.03 | 508.9 | 348.9 | 511.6 | 149.7 | 575.43 |
| | | | 3 | 207.3 | 390.1 | 201.37 | 384.53 | 71.57 | 483.07 |
| | | Ver | 1 | 453.4 | 561.5 | 444 | 555.43 | 224.5 | 631.73 |
| | | | 2 | 342.63 | 504.4 | 337.5 | 501.9 | 143.63 | 575.03 |
| | | | 3 | 189.5 | 380.3 | 190.73 | 379.27 | 64.83 | 481.03 |
| 51 | 1 | Train | 1 | 426.1 | 547.8 | 447.13 | 565.37 | 225.03 | 629.27 |
| | | | 2 | 340.27 | 506.63 | 346 | 525.6 | 141.67 | 565.53 |
| | | | 3 | 193.8 | 376.17 | 200.53 | 400.97 | 67.97 | 465.23 |
| | | Ver | 1 | 432.77 | 553.17 | 451.23 | 570.07 | 220.23 | 628.03 |
| | | | 2 | 329.23 | 495.17 | 338.87 | 516.97 | 138.47 | 564.17 |
| | | | 3 | 181.6 | 372.57 | 190.3 | 397.3 | 64.87 | 465.27 |
| | 2 | Train | 1 | 435.97 | 558.63 | 444.17 | 560.77 | 227.53 | 629.93 |
| | | | 2 | 345.77 | 518.4 | 349.7 | 523.07 | 143.63 | 568.9 |
| | | | 3 | 203.3 | 398.03 | 202.1 | 400.3 | 70.97 | 470.53 |
| | | Ver | 1 | 439.9 | 563.6 | 449.13 | 564.3 | 225.1 | 630 |
| | | | 2 | 334.7 | 512.3 | 337.47 | 510.57 | 143.37 | 569.73 |
| | | | 3 | 189.33 | 384.5 | 188.73 | 392.33 | 64.83 | 468.07 |
| | 7 | Train | 1 | 451.73 | 559.57 | 447.8 | 552.17 | 223.63 | 626.9 |
| | | | 2 | 352.13 | 516.13 | 348.53 | 509.23 | 143.9 | 566.33 |
| | | | 3 | 209.03 | 396.7 | 207 | 387.07 | 68.17 | 464.37 |
| | | Ver | 1 | 456.17 | 563.1 | 458.63 | 561.43 | 217.87 | 628.8 |
| | | | 2 | 342.43 | 507.73 | 339.17 | 502.23 | 140.37 | 566.43 |
| | | | 3 | 194.27 | 386.03 | 195.03 | 378.9 | 64.07 | 460.43 |
| | 12 | Train | 1 | 445.43 | 552.33 | 447.4 | 554.3 | 223.73 | 620.33 |
| | | | 2 | 350.17 | 511.3 | 349.7 | 511.23 | 138.53 | 559.4 |
| | | | 3 | 205.07 | 386.97 | 206.53 | 382.47 | 66.57 | 463.93 |
| | | Ver | 1 | 447.53 | 555.83 | 454.47 | 559.47 | 217.73 | 623.57 |
| | | | 2 | 339.97 | 504.1 | 338.73 | 501.47 | 135.17 | 560 |
| | | | 3 | 192.73 | 379.43 | 194.3 | 378.93 | 61.97 | 458.53 |
| 101 | 1 | Train | 1 | 429.5 | 568.83 | 445.2 | 565.93 | 226.57 | 624.2 |
| | | | 2 | 338.63 | 523.83 | 350.8 | 524.93 | 148.33 | 564.23 |
| | | | 3 | 195.03 | 408.5 | 200.23 | 403.77 | 73.93 | 466.53 |
| | | Ver | 1 | 431.53 | 572.07 | 448.37 | 570.43 | 225.1 | 624.73 |
| | | | 2 | 331.3 | 519.93 | 337.9 | 517.57 | 145.33 | 564.23 |
| | | | 3 | 184.67 | 396.83 | 194.33 | 398.5 | 68.4 | 461.43 |
| | 2 | Train | 1 | 450.3 | 553.47 | 444.53 | 561.47 | 222.27 | 620.63 |
| | | | 2 | 347.97 | 511.17 | 347.77 | 517.53 | 139.77 | 559.63 |
| | | | 3 | 205.47 | 385.13 | 204 | 396.97 | 69.17 | 459.1 |
| | | Ver | 1 | 454.73 | 558.13 | 447.87 | 566.83 | 217.23 | 619.43 |
| | | | 2 | 338.73 | 502.6 | 339 | 512.13 | 140.63 | 558.77 |
| | | | 3 | 193.7 | 381.1 | 189.77 | 392.2 | 60.97 | 456.2 |
| | 7 | Train | 1 | 447.67 | 552.67 | 450.13 | 547 | 216.77 | 624.07 |
| | | | 2 | 355.17 | 510.6 | 354.07 | 508.6 | 143.1 | 565.07 |
| | | | 3 | 214.43 | 391.97 | 213.63 | 384.93 | 68.47 | 472.5 |
| | | Ver | 1 | 454.1 | 559.5 | 459.87 | 556.6 | 216.87 | 625.37 |
| | | | 2 | 345.3 | 503.03 | 337.8 | 496.8 | 137.73 | 569.63 |
| | | | 3 | 197.4 | 379.53 | 196.9 | 373.27 | 65.6 | 469 |
| | 12 | Train | 1 | 449.23 | 543.5 | 451.1 | 541.93 | 197.67 | 643.37 |
| | | | 2 | 354.4 | 502.6 | 350.93 | 500.53 | 127.2 | 586.13 |
| | | | 3 | 212.63 | 376.07 | 208.83 | 370.27 | 61.53 | 489 |
| | | Ver | 1 | 460.07 | 551.23 | 458.93 | 550.97 | 194.97 | 639.63 |
| | | | 2 | 340.13 | 492.37 | 335.3 | 488.67 | 128.17 | 587 |
| | | | 3 | 196.67 | 364.17 | 194.9 | 362.93 | 57.33 | 487.07 |

Table A.351: 6 States – $(12, 60, 7)_4$ two – Perfect Score is 720 and fuzzy tolerance of 3

| Parameters | | | | 30% Mutation | | 4 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 581.23 | 635.43 | 561.1 | 630.4 | 351.53 | 554.7 |
| | | | 2 | 490.63 | 585.13 | 459.7 | 567.37 | 221.3 | 450.47 |
| | | | 3 | 306.93 | 464.17 | 275.77 | 435.6 | 106.17 | 317.57 |
| | | Ver | 1 | 572.47 | 631.47 | 550.33 | 624.57 | 343.77 | 550.97 |
| | | | 2 | 469.67 | 575.37 | 447.1 | 564.27 | 217.67 | 447.7 |
| | | | 3 | 281.93 | 452.9 | 249.47 | 422.8 | 99.63 | 311.63 |
| | 2 | Train | 1 | 582.97 | 630.67 | 562.33 | 630.27 | 359.63 | 562.8 |
| | | | 2 | 487.33 | 578.23 | 466.47 | 574.9 | 229.27 | 460.83 |
| | | | 3 | 306.97 | 457.5 | 281.73 | 448.63 | 110.1 | 322.33 |
| | | Ver | 1 | 575.73 | 627.7 | 554.9 | 625.47 | 352.77 | 560.3 |
| | | | 2 | 470.9 | 568.13 | 449.1 | 568.37 | 219.5 | 453.83 |
| | | | 3 | 281.83 | 450.37 | 260.73 | 438.7 | 103.63 | 321.43 |
| | 7 | Train | 1 | 588.27 | 636.03 | 554.23 | 619.3 | 356.2 | 565.83 |
| | | | 2 | 490.17 | 585.67 | 457.37 | 560.47 | 226.87 | 466.37 |
| | | | 3 | 312.7 | 471.17 | 281.57 | 435.1 | 110.87 | 337.63 |
| | | Ver | 1 | 583.87 | 634.43 | 544.73 | 615.37 | 355.27 | 566.87 |
| | | | 2 | 476.1 | 578.27 | 447.27 | 556.8 | 221.6 | 463.47 |
| | | | 3 | 288.97 | 464.37 | 259.73 | 425.8 | 99.3 | 326.8 |
| | 12 | Train | 1 | 578.83 | 631.87 | 553.93 | 616.3 | 351.23 | 542.77 |
| | | | 2 | 483.7 | 579.9 | 461 | 563.37 | 221.87 | 435.8 |
| | | | 3 | 308.27 | 462.3 | 280.53 | 430.03 | 104.17 | 308.4 |
| | | Ver | 1 | 572.77 | 628.43 | 548.23 | 613.73 | 344.97 | 541.23 |
| | | | 2 | 470.07 | 572.83 | 446.07 | 552.53 | 213.6 | 435.67 |
| | | | 3 | 279.47 | 452.17 | 258.3 | 417.87 | 95.3 | 298.17 |
| 25 | 1 | Train | 1 | 575.07 | 624.83 | 568.3 | 627.8 | 358.23 | 555.03 |
| | | | 2 | 485.73 | 573.7 | 471.93 | 574.83 | 229.4 | 451.63 |
| | | | 3 | 312.53 | 451.53 | 291.57 | 454 | 107.07 | 317.67 |
| | | Ver | 1 | 570.3 | 622.27 | 565.23 | 628.97 | 354.53 | 555.13 |
| | | | 2 | 473.3 | 567.9 | 460.13 | 569.77 | 222.03 | 450.07 |
| | | | 3 | 282.07 | 439.17 | 266.47 | 443.87 | 100.13 | 315.23 |
| | 2 | Train | 1 | 578.33 | 632.13 | 579.87 | 638.5 | 365.3 | 567.33 |
| | | | 2 | 485.43 | 580.4 | 484.6 | 589.67 | 228.53 | 462.67 |
| | | | 3 | 300.27 | 456.47 | 302.17 | 473.87 | 107.03 | 328.9 |
| | | Ver | 1 | 570.7 | 631.43 | 575.63 | 636.13 | 359.7 | 568.2 |
| | | | 2 | 462.03 | 568.2 | 469.47 | 583.47 | 221.93 | 461.9 |
| | | | 3 | 275.9 | 449.13 | 276.63 | 464.07 | 103.2 | 327.73 |
| | 7 | Train | 1 | 582.47 | 629.83 | 563.4 | 633.7 | 352.3 | 556.87 |
| | | | 2 | 487.67 | 582.57 | 465.33 | 581.63 | 223.4 | 454.03 |
| | | | 3 | 306.8 | 466.77 | 281.8 | 456.37 | 110.6 | 319.57 |
| | | Ver | 1 | 576.7 | 627.8 | 557.3 | 632.37 | 342.6 | 549.7 |
| | | | 2 | 469.03 | 574.3 | 449.6 | 573.63 | 220.13 | 448.73 |
| | | | 3 | 284.97 | 460.67 | 256.73 | 448.63 | 97.97 | 313.17 |
| | 12 | Train | 1 | 576.77 | 626.03 | 549.9 | 613 | 350.57 | 557.03 |
| | | | 2 | 484.33 | 573.43 | 455.6 | 558.2 | 209.7 | 444.37 |
| | | | 3 | 306.03 | 451.1 | 278.7 | 434 | 102.13 | 316.53 |
| | | Ver | 1 | 570.1 | 622.2 | 546.17 | 611.13 | 346.83 | 558.37 |
| | | | 2 | 467.97 | 566.53 | 446.33 | 550.93 | 207.67 | 442.23 |
| | | | 3 | 279.97 | 436 | 258.2 | 427.37 | 97.57 | 312.6 |
| 51 | 1 | Train | 1 | 571.93 | 620.3 | 578.1 | 632.03 | 337.4 | 545.6 |
| | | | 2 | 479.67 | 568.1 | 483.1 | 581.67 | 202.13 | 439.5 |
| | | | 3 | 299.8 | 445.67 | 301.23 | 463.3 | 100.93 | 317.63 |
| | | Ver | 1 | 565.03 | 618.13 | 571.33 | 628.47 | 333.7 | 543.3 |
| | | | 2 | 463.07 | 558.7 | 471.53 | 574.83 | 196.7 | 434.2 |
| | | | 3 | 274.17 | 436.9 | 285.6 | 464.37 | 89.73 | 311.3 |
| | 2 | Train | 1 | 574.63 | 626.8 | 574.3 | 642.27 | 340.83 | 554.5 |
| | | | 2 | 486.27 | 577.5 | 475.83 | 591.13 | 208.13 | 446.97 |
| | | | 3 | 302.7 | 454.17 | 293.53 | 474.93 | 100.17 | 318.87 |
| | | Ver | 1 | 567.63 | 623.6 | 572 | 641.5 | 336.53 | 553.27 |
| | | | 2 | 462.33 | 563.43 | 459.3 | 584.13 | 205.47 | 449.07 |
| | | | 3 | 281.9 | 448.53 | 272.67 | 470 | 90.77 | 310.43 |
| | 7 | Train | 1 | 581.47 | 630.77 | 568.33 | 623.5 | 334.53 | 551.17 |
| | | | 2 | 487.83 | 578.07 | 473.67 | 572.8 | 209.73 | 447.83 |
| | | | 3 | 312.5 | 462.57 | 294.5 | 454.33 | 98.37 | 320.13 |
| | | Ver | 1 | 576.53 | 628.43 | 566.23 | 622.43 | 327.33 | 548.27 |
| | | | 2 | 471.97 | 570.37 | 464.63 | 567.1 | 207.73 | 445.5 |
| | | | 3 | 284.3 | 448 | 271.2 | 443.33 | 93.17 | 315.8 |
| | 12 | Train | 1 | 578.1 | 630.43 | 565 | 620.7 | 331.5 | 534.3 |
| | | | 2 | 485.5 | 582.3 | 468.43 | 573.43 | 205.67 | 423.83 |
| | | | 3 | 307.77 | 464.17 | 291.83 | 451.8 | 99.2 | 302.13 |
| | | Ver | 1 | 572.7 | 630.6 | 561.67 | 620.87 | 328.8 | 530.27 |
| | | | 2 | 469.9 | 574.6 | 456.47 | 566.73 | 204.3 | 424.63 |
| | | | 3 | 278.37 | 455.77 | 270.73 | 444 | 92.63 | 294.17 |
| 101 | 1 | Train | 1 | 572.07 | 619.43 | 580.67 | 633.1 | 328.2 | 531.93 |
| | | | 2 | 483.5 | 570.63 | 482.57 | 586.77 | 193.23 | 422.23 |
| | | | 3 | 310 | 449.2 | 300.33 | 473.67 | 91.87 | 298.27 |
| | | Ver | 1 | 564.6 | 614.2 | 576.93 | 634.3 | 319.1 | 527.53 |
| | | | 2 | 463.1 | 559.6 | 469.6 | 580.03 | 192.67 | 416.07 |
| | | | 3 | 282 | 434.57 | 276.37 | 464.67 | 85.73 | 294.87 |
| | 2 | Train | 1 | 576.43 | 625.77 | 583.57 | 629.63 | 322.6 | 539.67 |
| | | | 2 | 484.53 | 574.4 | 487.3 | 582.17 | 192.5 | 427.97 |
| | | | 3 | 307.63 | 459.93 | 309.5 | 468.57 | 91.87 | 308.13 |
| | | Ver | 1 | 567.8 | 621.9 | 579.27 | 628.53 | 320.67 | 536.67 |
| | | | 2 | 469.3 | 567.5 | 474.03 | 575.07 | 186.27 | 428.97 |
| | | | 3 | 284.37 | 453.5 | 282.07 | 461.57 | 85.9 | 301.37 |
| | 7 | Train | 1 | 574.33 | 627.27 | 568.77 | 619.13 | 320.5 | 539.73 |
| | | | 2 | 479.77 | 575.33 | 472.07 | 568.23 | 201.17 | 435.93 |
| | | | 3 | 299.43 | 457.43 | 293.43 | 453.5 | 90.97 | 307.43 |
| | | Ver | 1 | 565.57 | 621.63 | 559.57 | 613.57 | 315.43 | 535.07 |
| | | | 2 | 462.73 | 565.43 | 461.5 | 563.13 | 194.17 | 430.27 |
| | | | 3 | 270.8 | 446.1 | 277.07 | 446.87 | 88.23 | 307.57 |
| | 12 | Train | 1 | 567.33 | 613.97 | 561.43 | 619.67 | 318.2 | 532.07 |
| | | | 2 | 479.2 | 561.2 | 465.93 | 570.57 | 192.4 | 422.63 |
| | | | 3 | 306.27 | 438.57 | 283.57 | 452.63 | 93.57 | 301.4 |
| | | Ver | 1 | 558.5 | 608 | 557 | 618.63 | 319.77 | 533.87 |
| | | | 2 | 464.33 | 552.1 | 455.6 | 562.37 | 186.37 | 418.47 |
| | | | 3 | 275.2 | 424.97 | 269.6 | 446.07 | 85.03 | 295.07 |

Table A.352: 12 States – $(12, 60, 7)_4$ two – Perfect Score is 720 and fuzzy tolerance of 3

| Parameters | | | | 30% Mutation | | 4 Restarts | | Trans 30 Restarts | |
|---|---|---|---|---|---|---|---|---|---|
| Pop | Muts | Type | Dist | Exact | Fuzzy | Exact | Fuzzy | Exact | Fuzzy |
| 11 | 1 | Train | 1 | 607.13 | 644.53 | 568.9 | 619.93 | 376.23 | 495.27 |
| | | | 2 | 511.73 | 576.13 | 467.17 | 544.87 | 229 | 361.03 |
| | | | 3 | 327.33 | 423.93 | 290.83 | 397.7 | 109.9 | 226.7 |
| | | Ver | 1 | 598.33 | 640.77 | 559.27 | 614.23 | 368.7 | 492.93 |
| | | | 2 | 484.9 | 564.4 | 449.67 | 537.57 | 218.47 | 353.8 |
| | | | 3 | 286.83 | 405.33 | 258.6 | 382.83 | 100.97 | 219.3 |
| | 2 | Train | 1 | 605.6 | 644.97 | 563.77 | 616.87 | 381.5 | 493.7 |
| | | | 2 | 507.73 | 577.03 | 464.03 | 544.47 | 238.73 | 365.03 |
| | | | 3 | 330.97 | 437.23 | 285.67 | 397.13 | 116.8 | 228.13 |
| | | Ver | 1 | 596.3 | 641.67 | 556.07 | 613.07 | 378.6 | 494.9 |
| | | | 2 | 484.33 | 566.97 | 441.43 | 533.83 | 224.97 | 354.3 |
| | | | 3 | 289.23 | 416.83 | 251.13 | 379.5 | 104.2 | 219.6 |
| | 7 | Train | 1 | 596.97 | 634.5 | 554.17 | 610.27 | 379.67 | 497.9 |
| | | | 2 | 498.1 | 565.43 | 451.23 | 537.83 | 231.43 | 364.63 |
| | | | 3 | 321.67 | 418.73 | 267.9 | 385.27 | 113.13 | 228 |
| | | Ver | 1 | 585.1 | 630 | 541.03 | 604 | 376.5 | 502.07 |
| | | | 2 | 476.87 | 552.63 | 431.47 | 527.77 | 224.67 | 356.17 |
| | | | 3 | 282.43 | 400.3 | 244.4 | 372.3 | 102.57 | 224.03 |
| | 12 | Train | 1 | 594.7 | 635.43 | 539.83 | 598.83 | 375.97 | 489.57 |
| | | | 2 | 497.83 | 567.83 | 442.1 | 527.13 | 232 | 365.03 |
| | | | 3 | 315.37 | 422.97 | 268.3 | 377.6 | 116.27 | 227.8 |
| | | Ver | 1 | 585.7 | 632.27 | 527.7 | 591.87 | 368.37 | 487 |
| | | | 2 | 472.23 | 555.97 | 417.9 | 514.5 | 228.13 | 354.93 |
| | | | 3 | 278.4 | 401.5 | 236.97 | 360.27 | 106.67 | 222.2 |
| 25 | 1 | Train | 1 | 607.23 | 640.5 | 572.83 | 627.67 | 375.67 | 487.4 |
| | | | 2 | 512.43 | 574.3 | 467.6 | 557.23 | 231 | 355.37 |
| | | | 3 | 331.83 | 431.6 | 286.47 | 410.3 | 113.43 | 221.77 |
| | | Ver | 1 | 592.87 | 634.3 | 559.4 | 622.07 | 364.5 | 478.27 |
| | | | 2 | 485.07 | 563.37 | 446.5 | 546.13 | 220.7 | 346.07 |
| | | | 3 | 291.8 | 413.73 | 255.73 | 396.27 | 102.8 | 215.4 |
| | 2 | Train | 1 | 602.03 | 640.47 | 575.63 | 622 | 382.63 | 498.23 |
| | | | 2 | 508.27 | 575.5 | 481.13 | 559.53 | 236.03 | 363.97 |
| | | | 3 | 327.5 | 431.3 | 295.23 | 416.63 | 116.7 | 227.5 |
| | | Ver | 1 | 592.53 | 636.5 | 562.87 | 614.4 | 373.3 | 494.3 |
| | | | 2 | 483.83 | 563.77 | 453.73 | 546.43 | 227.27 | 361.63 |
| | | | 3 | 289.5 | 417.27 | 271.7 | 408.3 | 104.1 | 220.17 |
| | 7 | Train | 1 | 591 | 626.13 | 564.13 | 621 | 377.87 | 486.17 |
| | | | 2 | 498.6 | 557.57 | 464.07 | 556.27 | 233.57 | 360.03 |
| | | | 3 | 318.73 | 407.57 | 286.6 | 412.53 | 113.67 | 221 |
| | | Ver | 1 | 577.5 | 618.93 | 553.53 | 615.87 | 368.83 | 480.43 |
| | | | 2 | 471.23 | 542.87 | 444.87 | 545.1 | 218.53 | 344.33 |
| | | | 3 | 279.27 | 388.13 | 258.9 | 404.4 | 102.4 | 211.97 |
| | 12 | Train | 1 | 582.67 | 628.23 | 556.07 | 610.37 | 375.97 | 494.47 |
| | | | 2 | 497 | 561.5 | 458.5 | 541.27 | 223.7 | 360.93 |
| | | | 3 | 314.1 | 410.43 | 281 | 399.67 | 110.2 | 227.7 |
| | | Ver | 1 | 572.97 | 623.43 | 550.7 | 606.63 | 368.93 | 492.67 |
| | | | 2 | 468.1 | 545.83 | 440.37 | 531.83 | 218.13 | 357.6 |
| | | | 3 | 274.33 | 388.6 | 251.8 | 388.4 | 101.97 | 221.03 |
| 51 | 1 | Train | 1 | 601.67 | 637.57 | 585.97 | 636.3 | 358.83 | 477.6 |
| | | | 2 | 508.7 | 574.77 | 482.8 | 576.33 | 210.53 | 345.2 |
| | | | 3 | 331.53 | 433.83 | 306.93 | 447.67 | 103.17 | 215.53 |
| | | Ver | 1 | 590.17 | 631.2 | 573.5 | 628.53 | 355.17 | 475.9 |
| | | | 2 | 480.37 | 559.93 | 462.9 | 562.67 | 208.1 | 342.13 |
| | | | 3 | 294.17 | 417.33 | 277.73 | 435.8 | 94.07 | 208.23 |
| | 2 | Train | 1 | 597 | 632.53 | 584.7 | 631.23 | 369.3 | 490.37 |
| | | | 2 | 505.67 | 563.4 | 487.67 | 575.07 | 217.8 | 352.3 |
| | | | 3 | 330.23 | 420.07 | 308.13 | 442.3 | 107.57 | 223.33 |
| | | Ver | 1 | 586.93 | 625.77 | 577.27 | 627.8 | 369.23 | 488 |
| | | | 2 | 477.23 | 550.8 | 466.83 | 561.7 | 213.57 | 348.1 |
| | | | 3 | 290.87 | 405.03 | 276.97 | 427.93 | 98 | 216.4 |
| | 7 | Train | 1 | 592 | 632.37 | 579.2 | 626.33 | 359.23 | 484.23 |
| | | | 2 | 499.2 | 567.6 | 478.1 | 566.67 | 217.53 | 353.77 |
| | | | 3 | 321.2 | 426.2 | 302.53 | 436.1 | 105.13 | 224.17 |
| | | Ver | 1 | 579.77 | 626.43 | 568.5 | 622.27 | 357.1 | 483.63 |
| | | | 2 | 475.5 | 556.67 | 462.47 | 558.3 | 211.2 | 345.37 |
| | | | 3 | 282.5 | 407.93 | 275.5 | 431.8 | 97.4 | 215.53 |
| | 12 | Train | 1 | 583.77 | 624.27 | 567.1 | 619.03 | 358.27 | 484.67 |
| | | | 2 | 494.6 | 563.3 | 469.97 | 558.83 | 205.53 | 347.97 |
| | | | 3 | 323.17 | 425.9 | 290 | 419.9 | 104.57 | 222.5 |
| | | Ver | 1 | 572.83 | 618.87 | 560.2 | 613.6 | 355.43 | 484.83 |
| | | | 2 | 470.03 | 550.57 | 445.5 | 547.33 | 203.83 | 345.3 |
| | | | 3 | 284.2 | 409.77 | 264.5 | 408.7 | 96.77 | 215.7 |
| 101 | 1 | Train | 1 | 589.8 | 631.6 | 582.67 | 633.47 | 344.33 | 466.5 |
| | | | 2 | 496.87 | 564.73 | 487 | 576.87 | 200.3 | 332.53 |
| | | | 3 | 318.73 | 421.4 | 309.1 | 451.7 | 99.33 | 207.6 |
| | | Ver | 1 | 578.8 | 626.3 | 576.5 | 630.43 | 346.6 | 468.13 |
| | | | 2 | 472.57 | 554.17 | 468.07 | 570.5 | 191.47 | 324.97 |
| | | | 3 | 280.57 | 404.3 | 282.93 | 443.87 | 93.87 | 205.67 |
| | 2 | Train | 1 | 588.23 | 625.47 | 589.5 | 628 | 339.17 | 466.4 |
| | | | 2 | 496.4 | 565.87 | 498.27 | 574.33 | 200.7 | 337.5 |
| | | | 3 | 322.83 | 426.7 | 322.3 | 443.73 | 95.6 | 212.03 |
| | | Ver | 1 | 577.67 | 621.17 | 581.97 | 623.57 | 338.13 | 466.33 |
| | | | 2 | 467.97 | 549.77 | 473.7 | 560.27 | 193.37 | 329.93 |
| | | | 3 | 285.83 | 408.67 | 293.73 | 433.2 | 90.73 | 203.2 |
| | 7 | Train | 1 | 591.6 | 628.67 | 580.47 | 629.3 | 346.07 | 459.67 |
| | | | 2 | 498.47 | 567 | 482.53 | 577.83 | 201.37 | 328.7 |
| | | | 3 | 323.03 | 430.53 | 307.07 | 448.93 | 98.43 | 203.47 |
| | | Ver | 1 | 581.43 | 623.27 | 573.27 | 626.33 | 346.07 | 465.03 |
| | | | 2 | 478.77 | 556.77 | 466.9 | 568.47 | 198.6 | 324.33 |
| | | | 3 | 288.57 | 415.23 | 280.67 | 443.4 | 91.73 | 199.5 |
| | 12 | Train | 1 | 583 | 621.43 | 574.53 | 625.57 | 343.4 | 465.47 |
| | | | 2 | 493.5 | 560.27 | 475.33 | 571.47 | 201.9 | 334 |
| | | | 3 | 317.47 | 428.83 | 294.6 | 441.7 | 98.4 | 207.4 |
| | | Ver | 1 | 576.77 | 619.3 | 567.77 | 622.47 | 342.73 | 467.27 |
| | | | 2 | 471.4 | 550.8 | 456.5 | 559.6 | 200 | 329.17 |
| | | | 3 | 283.73 | 413.1 | 268.87 | 431.97 | 92.4 | 202.87 |

Table A.353: 18 States – $(12, 60, 7)_4$ two – Perfect Score is 720 and fuzzy tolerance of 3

## A.6 DNA Fragment Assembly

### A.6.1 First Set of Results

#### Results With No Post Optimization

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46858 | 46591.87 | 122.46 | 47044 | 46838.67 | 91.13 | 47154 | 46948.7 | 96.6 | 47100 | 46978.6 | 80.81 |
| | | 2op | 47278 | 47179.8 | 63.65 | 47326 | 47212.03 | 61.3 | 47322 | 47204.93 | 63.03 | 47291 | 47192.77 | 53.54 |
| | 50 | rnd | 46967 | 46620.8 | 135.04 | 47048 | 46846.57 | 103.17 | 47226 | 46971.23 | 107.05 | 47174 | 47051.7 | 81.86 |
| | | 2op | 47296 | 47178.4 | 64.98 | 47311 | 47185.7 | 60.02 | 47296 | 47203.07 | 41.87 | 47315 | 47206 | 52.08 |
| 51 | 20 | rnd | 46899 | 46646.6 | 108.31 | 46997 | 46839.9 | 117.03 | 47093 | 46919.73 | 86.99 | 47194 | 47018.5 | 95.61 |
| | | 2op | 47316 | 47239.8 | 50 | 47312 | 47255.2 | 31.44 | 47344 | 47271.53 | 34.36 | 47355 | 47272.43 | 35.68 |
| | 50 | rnd | 46915 | 46677.97 | 95.34 | 47174 | 46907.53 | 103.16 | 47130 | 46990.63 | 83.94 | 47281 | 47059.73 | 81.41 |
| | | 2op | 47326 | 47207.03 | 60.65 | 47297 | 47242.97 | 34.72 | 47326 | 47255.7 | 45.34 | 47320 | 47250.87 | 38.73 |

Table A.354: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46816 | 46616.4 | 109.47 | 47085 | 46847.23 | 101.66 | 47179 | 46958.53 | 89.17 | 47111 | 46976.73 | 94.74 |
| | | 2op | 47280 | 47165.83 | 72.9 | 47319 | 47181.33 | 54.72 | 47315 | 47224.53 | 44.09 | 47292 | 47182.47 | 49.91 |
| | 50 | rnd | 46924 | 46605.73 | 135.33 | 46990 | 46851.63 | 85.64 | 47200 | 46936.1 | 105.72 | 47211 | 47046.67 | 99.87 |
| | | 2op | 47271 | 47143.9 | 80.38 | 47312 | 47187.07 | 70.47 | 47316 | 47195.07 | 55.72 | 47344 | 47209.77 | 59.25 |
| 51 | 20 | rnd | 46868 | 46637.83 | 116.08 | 47039 | 46850.37 | 95 | 47132 | 46949.03 | 114.08 | 47155 | 47047.37 | 63.7 |
| | | 2op | 47298 | 47226.57 | 46.05 | 47315 | 47251.73 | 43.3 | 47374 | 47268.8 | 40.37 | 47315 | 47263.53 | 30.35 |
| | 50 | rnd | 46834 | 46667.47 | 92.88 | 46992 | 46849.17 | 86.78 | 47120 | 46979.37 | 88.85 | 47317 | 47063.5 | 92.41 |
| | | 2op | 47277 | 47223 | 38.35 | 47322 | 47240.73 | 49.56 | 47333 | 47254.53 | 40.69 | 47336 | 47258.8 | 39.55 |

Table A.355: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46847 | 46714.37 | 84.52 | 47072 | 46853.3 | 87.9 | 47017 | 46877.8 | 70.51 | 47156 | 47032.2 | 70.47 |
| | | 2op | 47323 | 47259.2 | 25.53 | 47344 | 47283.47 | 22.29 | 47331 | 47290.5 | 17.8 | 47354 | 47306.6 | 18.64 |
| | 50 | rnd | 46907 | 46740.1 | 92.63 | 47138 | 46925.53 | 90.61 | 47168 | 47008.8 | 85.41 | 47280 | 47100.3 | 85.96 |
| | | 2op | 47296 | 47262.5 | 22.64 | 47335 | 47282.17 | 25.45 | 47336 | 47301.83 | 17.92 | 47364 | 47312.03 | 27.48 |
| 51 | 20 | rnd | 46908 | 46792.87 | 60.68 | 46992 | 46870.17 | 72.3 | 47009 | 46913.73 | 60.05 | 47113 | 47002.4 | 57.72 |
| | | 2op | 47300 | 47277.97 | 7.31 | 47344 | 47291.13 | 15.41 | 47362 | 47307.4 | 22.51 | 47374 | 47344.8 | 20.27 |
| | 50 | rnd | 47105 | 46921.2 | 82.03 | 47151 | 47036.17 | 54.46 | 47227 | 47073.8 | 68.17 | 47285 | 47154.1 | 67.53 |
| | | 2op | 47358 | 47286.1 | 18.79 | 47352 | 47312.33 | 17.47 | 47380 | 47339.93 | 20.76 | 47406 | 47369.6 | 16.87 |

Table A.356: *acin*1: basicRRGA+IM: 500 – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46987 | 46799.03 | 85.45 | 47130 | 47007 | 79.33 | 47276 | 47075.3 | 77.98 | 47175 | 47044.5 | 87.21 |
| | | 2op | 47318 | 47267.27 | 20.55 | 47332 | 47299.47 | 18.05 | 47365 | 47308.7 | 20.37 | 47301 | 47232.1 | 32.16 |
| | 50 | rnd | 47021 | 46886.33 | 82.8 | 47240 | 47095.4 | 70.24 | 47262 | 47174.97 | 61.49 | 47211 | 47086.67 | 82.55 |
| | | 2op | 47342 | 47284.93 | 24.61 | 47400 | 47326.9 | 29.85 | 47396 | 47351.37 | 26.22 | 47305 | 47216.07 | 31.28 |
| 51 | 20 | rnd | 47115 | 46987.47 | 62.66 | 47235 | 47128.63 | 57.22 | 47282 | 47167.73 | 63.17 | 47172 | 47039.07 | 63.89 |
| | | 2op | 47321 | 47288.63 | 13.15 | 47392 | 47341.9 | 18.61 | 47384 | 47350.77 | 18.47 | 47306 | 47193.83 | 35.92 |
| | 50 | rnd | 47225 | 47156.5 | 39.43 | 47375 | 47279.1 | 41.46 | 47362 | 47281.07 | 39.65 | 47174 | 47028.6 | 67.44 |
| | | 2op | 47374 | 47321.63 | 20.88 | 47413 | 47380.83 | 18.81 | 47411 | 47359.53 | 27.42 | 47235 | 47152.07 | 39.07 |

Table A.357: *acin*1: basicRRGA+IM: 5000 – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 44994 | 44578.53 | 162.22 | 45855 | 45540.5 | 170.78 | 46109 | 45856.3 | 139.37 | 46301 | 46062.07 | 136.54 |
| | | 2op | 47276 | 47274.13 | 0.51 | 47294 | 47276.27 | 7.39 | 47302 | 47283.03 | 9.32 | 47364 | 47312.87 | 19.39 |
| | 50 | rnd | 44843 | 44566.87 | 104.92 | 45741 | 45450.67 | 147.27 | 46057 | 45802.67 | 135.15 | 46430 | 46080.27 | 149.53 |
| | | 2op | 47283 | 47274.77 | 2.19 | 47300 | 47276.2 | 5.64 | 47300 | 47280.3 | 8.05 | 47363 | 47308 | 19.08 |
| 51 | 20 | rnd | 45187 | 44899.87 | 149.12 | 46157 | 45811 | 149.71 | 46399 | 46047.13 | 156.25 | 46517 | 46285.73 | 141.57 |
| | | 2op | 47298 | 47276.13 | 5.67 | 47301 | 47277.67 | 7.62 | 47326 | 47293.4 | 16.25 | 47338 | 47311.77 | 14.98 |
| | 50 | rnd | 45137 | 44882.23 | 125.28 | 46046 | 45775.8 | 119.74 | 46325 | 46061.6 | 135.08 | 46520 | 46301 | 106.53 |
| | | 2op | 47282 | 47274.33 | 1.49 | 47291 | 47275.47 | 3.47 | 47304 | 47282.03 | 9.92 | 47351 | 47316.17 | 18.24 |

Table A.358: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 44735 | 44558.53 | 101.14 | 45754 | 45516.03 | 129.26 | 46074 | 45801.33 | 130.9 | 46251 | 46031.63 | 155.86 |
| | | 2op | 47276 | 47273.97 | 1.07 | 47292 | 47276.13 | 5.24 | 47322 | 47287.33 | 13.98 | 47344 | 47307.17 | 17.63 |
| | 50 | rnd | 44885 | 44571.73 | 131.6 | 45917 | 45500.2 | 157.51 | 45988 | 45782.97 | 111.72 | 46259 | 45979.53 | 158.04 |
| | | 2op | 47276 | 47274.07 | 0.37 | 47298 | 47275.73 | 4.59 | 47307 | 47279.37 | 8.22 | 47361 | 47312.27 | 21.43 |
| 51 | 20 | rnd | 45127 | 44858.2 | 171.57 | 46125 | 45795.43 | 172.87 | 46352 | 46120.77 | 92.64 | 46473 | 46265.53 | 111.55 |
| | | 2op | 47292 | 47275.47 | 4.73 | 47312 | 47281.67 | 11.29 | 47318 | 47286.17 | 13.62 | 47347 | 47312.8 | 16.58 |
| | 50 | rnd | 45038 | 44815.3 | 146.02 | 45994 | 45771.37 | 125.5 | 46288 | 46004.5 | 135.13 | 46479 | 46248.3 | 144.99 |
| | | 2op | 47276 | 47274.2 | 0.61 | 47292 | 47276.37 | 4.77 | 47320 | 47285.57 | 12.7 | 47355 | 47311.6 | 18.75 |

Table A.359: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 149230 | 148025.6 | 610.06 | 149300 | 148429.4 | 537.74 | 148965 | 148301.97 | 413.24 | 148226 | 147431.67 | 635.83 |
| | | 2op | 150493 | 149733.7 | 491.59 | 150383 | 149715.7 | 467.37 | 150483 | 149600.7 | 523.98 | 149782 | 149064.47 | 681.74 |
| | 50 | rnd | 149049 | 148234.57 | 607.84 | 149175 | 148290.4 | 596.04 | 148814 | 148230.23 | 403.84 | 149213 | 148241.77 | 461.91 |
| | | 2op | 150399 | 149520.13 | 479.7 | 150376 | 149662.13 | 492.44 | 150383 | 149540.37 | 473.68 | 150396 | 149365.43 | 429.42 |
| 51 | 20 | rnd | 149183 | 148745.07 | 391.22 | 149275 | 148950.7 | 254.41 | 149283 | 148962.83 | 239.71 | 149120 | 148662.27 | 317.29 |
| | | 2op | 150833 | 150577 | 268.89 | 150758 | 150372.53 | 334.18 | 150778 | 150437.67 | 218.79 | 150727 | 150154.17 | 344.15 |
| | 50 | rnd | 149165 | 148601.27 | 346.89 | 149254 | 148909.3 | 250.87 | 149327 | 148937.97 | 255.12 | 149206 | 148787.43 | 310.16 |
| | | 2op | 150761 | 150265.57 | 409.95 | 150767 | 150343.87 | 269.84 | 150842 | 150371.87 | 235.62 | 150707 | 150239.77 | 264.73 |

Table A.360: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 148867 | 147827.07 | 566.66 | 149135 | 148267.7 | 522.91 | 149002 | 148252.17 | 525.01 | 148394 | 147473.7 | 575.38 |
| | | 2op | 150065 | 149720.97 | 278.57 | 150298 | 149609.67 | 453.29 | 150310 | 149482.1 | 568.51 | 150059 | 149066.7 | 531.33 |
| | 50 | rnd | 149095 | 147927.77 | 740.22 | 149207 | 148279.63 | 556.84 | 149079 | 148189 | 466.97 | 149069 | 148223.67 | 445.43 |
| | | 2op | 150266 | 149556.7 | 426.54 | 150447 | 149638.93 | 450.73 | 150142 | 149544.17 | 350.59 | 150296 | 149158.47 | 606.88 |
| 51 | 20 | rnd | 149149 | 148833.9 | 257.55 | 149289 | 148849.5 | 300.09 | 149303 | 148961.77 | 228.09 | 149170 | 148740.5 | 213.34 |
| | | 2op | 150785 | 150387.43 | 346.51 | 150707 | 150448.7 | 284.73 | 150859 | 150430.9 | 272.94 | 150687 | 150110.27 | 441.98 |
| | 50 | rnd | 149219 | 148682.53 | 340.87 | 149232 | 148838.73 | 342.48 | 149323 | 148912.33 | 309.58 | 149229 | 148937.73 | 208.42 |
| | | 2op | 150839 | 150395.47 | 274.2 | 150754 | 150336.63 | 257.67 | 150788 | 150356.1 | 201.76 | 150691 | 150101.33 | 379.4 |

Table A.361: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 149165 | 148968.03 | 141.8 | 149291 | 149089.93 | 166.37 | 149292 | 149051.67 | 168.64 | 149230 | 148863.57 | 176.65 |
| | | 2op | 150949 | 150730.6 | 180.94 | 150949 | 150790.7 | 119.17 | 150886 | 150737.03 | 128.38 | 150866 | 150623.27 | 131.51 |
| | 50 | rnd | 149191 | 148747.03 | 331.83 | 149314 | 149021.37 | 247.83 | 149355 | 149087.97 | 195 | 149181 | 148880.77 | 236.33 |
| | | 2op | 150949 | 150671.23 | 241.24 | 150867 | 150695.83 | 166.59 | 150867 | 150644.27 | 183.02 | 150852 | 150647.5 | 123.87 |
| 51 | 20 | rnd | 149195 | 149050 | 82.15 | 149254 | 149104.23 | 77.62 | 149295 | 149147.53 | 73.98 | 149367 | 149179.37 | 69.02 |
| | | 2op | 150949 | 150944.7 | 8.16 | 150951 | 150944.07 | 11.5 | 150949 | 150947.13 | 5.77 | 150949 | 150944 | 9.12 |
| | 50 | rnd | 149206 | 149111.73 | 60.54 | 149315 | 149246.03 | 54.23 | 149430 | 149312.57 | 67.29 | 149488 | 149294.77 | 79.19 |
| | | 2op | 150949 | 150937.23 | 22.45 | 150949 | 150943.6 | 12.44 | 151012 | 150946.6 | 15.64 | 150970 | 150939.97 | 24.87 |

Table A.362: *acin*2: basicRRGA+IM: 500 – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 149162 | 148875.2 | 210.35 | 149241 | 148924.17 | 261.66 | 148894 | 148303.3 | 428.13 | 148291 | 145692.17 | 818.28 |
| | | 2op | 150935 | 150755.6 | 154.76 | 150936 | 150766.2 | 111.05 | 150929 | 150454.7 | 246.76 | 150615 | 149634.3 | 457.32 |
| | 50 | rnd | 149187 | 148707.9 | 261.62 | 149150 | 148771.6 | 337.38 | 148801 | 148288.7 | 291.23 | 146766 | 145660.47 | 588.55 |
| | | 2op | 150791 | 150464.5 | 226.56 | 150587 | 150340.6 | 167.83 | 150430 | 149975.33 | 271.35 | 149973 | 148717.6 | 616.28 |
| 51 | 20 | rnd | 149251 | 149123.33 | 84.36 | 149369 | 149188.97 | 86.9 | 149128 | 148792.5 | 170.2 | 147227 | 146519.7 | 398.07 |
| | | 2op | 150949 | 150943.13 | 17.35 | 151012 | 150950.23 | 18.29 | 150938 | 150867.83 | 44.99 | 150528 | 149945.33 | 282.56 |
| | 50 | rnd | 149331 | 149173.93 | 87.38 | 149259 | 149095.57 | 83.07 | 148833 | 148589.93 | 187.5 | 147394 | 146784.67 | 374.19 |
| | | 2op | 150951 | 150898.67 | 46.99 | 150982 | 150812.6 | 90.02 | 150722 | 150475.4 | 162.31 | 150222 | 149464.73 | 428.11 |

Table A.363: *acin*2: basicRRGA+IM: 5000 – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 144566 | 143681.93 | 439.62 | 146174 | 145341.33 | 458.67 | 146583 | 146111.27 | 349.97 | 147164 | 146644.4 | 279.64 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150951 | 150949.13 | 0.51 |
| | 50 | rnd | 145274 | 143729.6 | 562.35 | 146090 | 145154.4 | 541.66 | 146492 | 145833.9 | 375.61 | 147109 | 146443.77 | 325.69 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150951 | 150949.13 | 0.51 |
| 51 | 20 | rnd | 145059 | 144029.07 | 555.62 | 146861 | 146061.07 | 314.68 | 147274 | 146551.4 | 303.09 | 147335 | 146949.47 | 209.64 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150948.27 | 4.02 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 144981 | 143970.7 | 500.18 | 146560 | 145761.3 | 374.15 | 146865 | 146434.47 | 307.13 | 147262 | 146828.37 | 231.19 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150951 | 150949.07 | 0.37 |

Table A.364: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 144961 | 143630.77 | 427.54 | 145998 | 145227.67 | 479 | 146900 | 146050.4 | 465.91 | 147140 | 146603.57 | 308.27 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150951 | 150946.57 | 13.71 | 150951 | 150949.13 | 0.51 |
| | 50 | rnd | 144474 | 143541.03 | 430.79 | 145855 | 145142.17 | 439.2 | 146379 | 145840.8 | 467.29 | 146980 | 146457.23 | 364.9 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150951 | 150949.13 | 0.51 |
| 51 | 20 | rnd | 145325 | 143979.4 | 532.02 | 146647 | 145979.07 | 385.2 | 146954 | 146507.6 | 326.82 | 147422 | 146901.8 | 209.57 |
| | | 2op | 150949 | 150949 | 0 | 150951 | 150949.07 | 0.37 | 150949 | 150949 | 0 | 150951 | 150949.07 | 0.37 |
| | 50 | rnd | 144702 | 143867.6 | 373.99 | 146480 | 145843.57 | 352.39 | 146902 | 146290.67 | 274.23 | 147253 | 146771.87 | 240.18 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150951 | 150949.07 | 0.37 | 150949 | 150949 | 0 |

Table A.365: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163715 | 162973.97 | 510.6 | 163953 | 163150.3 | 367.82 | 163627 | 163023.63 | 346.49 | 162859 | 162154.4 | 437.91 |
| | | 2op | 165762 | 165171.93 | 360.48 | 165577 | 165096.37 | 357.85 | 165538 | 164589.1 | 493.75 | 165078 | 164075 | 483.19 |
| | 50 | rnd | 163678 | 163040.63 | 441.54 | 163856 | 163336.03 | 445.45 | 163788 | 163262.4 | 356.98 | 163442 | 162993.3 | 237.46 |
| | | 2op | 165502 | 164824.3 | 442.96 | 165548 | 164864.83 | 408.51 | 165553 | 164711.07 | 493.65 | 165142 | 164450.17 | 368.1 |
| 51 | 20 | rnd | 163588 | 163320.1 | 256.03 | 163924 | 163516.37 | 219.47 | 163814 | 163458.6 | 224.63 | 163358 | 163026.23 | 214.82 |
| | | 2op | 165976 | 165711.97 | 220.64 | 166011 | 165707.03 | 178.91 | 165866 | 165571.43 | 197.22 | 165742 | 165178.5 | 351.35 |
| | 50 | rnd | 163668 | 163367.1 | 264.57 | 164013 | 163572.9 | 261.42 | 164079 | 163640.27 | 210.57 | 163737 | 163368.8 | 228.16 |
| | | 2op | 165896 | 165572.83 | 205.62 | 165966 | 165662.7 | 201.22 | 165824 | 165598.27 | 177.48 | 165736 | 165307.9 | 318.22 |

Table A.366: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163619 | 162840.3 | 488.18 | 163877 | 162978.13 | 467.14 | 163479 | 162946.63 | 331.28 | 162735 | 162081.47 | 350.91 |
| | | 2op | 165532 | 164883.07 | 503.99 | 165525 | 164969.4 | 393.44 | 165429 | 164564.6 | 459.61 | 164922 | 163867.87 | 552.8 |
| | 50 | rnd | 163739 | 163092.5 | 471.24 | 163766 | 163134.37 | 341.8 | 163792 | 163164.97 | 319.57 | 163543 | 162861.57 | 290.25 |
| | | 2op | 165640 | 164858.73 | 470.29 | 165636 | 164704.77 | 488.85 | 165512 | 164798.3 | 399.85 | 165345 | 164461.13 | 445.86 |
| 51 | 20 | rnd | 163872 | 163319.27 | 243.46 | 163982 | 163497.87 | 254.94 | 163799 | 163440.73 | 216.88 | 163385 | 163003 | 266.2 |
| | | 2op | 165957 | 165680.33 | 271.87 | 165951 | 165636.83 | 211.23 | 165891 | 165560.23 | 233.83 | 165471 | 165053.3 | 266.17 |
| | 50 | rnd | 163739 | 163333.9 | 260.92 | 164046 | 163532.27 | 227.75 | 164002 | 163630.1 | 244.99 | 163820 | 163358.8 | 212.06 |
| | | 2op | 165917 | 165472.53 | 314.6 | 165900 | 165641.3 | 159.09 | 165784 | 165524.77 | 198.03 | 165756 | 165375.1 | 273.94 |

Table A.367: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163793 | 163453.17 | 186.89 | 164147 | 163606.1 | 199.15 | 163922 | 163596.5 | 158.31 | 163708 | 163338.53 | 217.92 |
| | | 2op | 166127 | 165955.37 | 121.21 | 166172 | 166015.73 | 80.87 | 166047 | 165812.2 | 137.29 | 165964 | 165602.2 | 181.66 |
| | 50 | rnd | 163834 | 163405.77 | 172.7 | 163900 | 163629.37 | 178.81 | 164249 | 163719 | 219.76 | 163888 | 163347.8 | 359.35 |
| | | 2op | 166186 | 165948.47 | 117.83 | 166049 | 165917.43 | 72.15 | 166067 | 165849.6 | 151.59 | 165953 | 165599.57 | 200.78 |
| 51 | 20 | rnd | 163929 | 163625.2 | 162.52 | 164173 | 163719.3 | 169.98 | 164045 | 163673.43 | 150.16 | 164073 | 163720.3 | 194.75 |
| | | 2op | 166172 | 166168.9 | 7.17 | 166172 | 166167.1 | 14.23 | 166243 | 166170.97 | 22.47 | 166295 | 166178.03 | 30.36 |
| | 50 | rnd | 164083 | 163645.97 | 206.67 | 164265 | 163812.43 | 191.96 | 164202 | 163890.4 | 144.27 | 164259 | 163847.63 | 224.07 |
| | | 2op | 166172 | 166161.27 | 18.76 | 166315 | 166172.97 | 44.04 | 166277 | 166170.73 | 34.2 | 166172 | 166150.57 | 26.2 |

Table A.368: *acin*3: basicRRGA+IM: 500 – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163951 | 163521.3 | 198.25 | 163745 | 163390.2 | 159.56 | 163171 | 162475.37 | 314.81 | 161252 | 159809.07 | 850.86 |
| | | 2op | 166241 | 165985.8 | 92.39 | 166118 | 165854.63 | 154.79 | 165902 | 165592.2 | 179.78 | 165457 | 164684.07 | 476.52 |
| | 50 | rnd | 163712 | 163359.07 | 260.52 | 163692 | 163138.63 | 223.31 | 162889 | 162315.77 | 313.43 | 160963 | 159917.83 | 531.85 |
| | | 2op | 165931 | 165662.97 | 145.54 | 165753 | 165346.57 | 172.45 | 165374 | 164872.97 | 305.94 | 164632 | 163695.7 | 500.47 |
| 51 | 20 | rnd | 164106 | 163685.33 | 193.78 | 163780 | 163539.33 | 146.62 | 163565 | 162952.03 | 247.85 | 161379 | 160557.9 | 375.03 |
| | | 2op | 166172 | 166169.13 | 8.84 | 166326 | 166210.37 | 63.31 | 166153 | 165980.07 | 78.38 | 165488 | 165013.17 | 214.67 |
| | 50 | rnd | 163989 | 163715.57 | 171.49 | 163752 | 163401.13 | 203.01 | 163027 | 162674.43 | 223.6 | 161759 | 160924.53 | 327.04 |
| | | 2op | 166202 | 166127.13 | 57.89 | 166107 | 165864.63 | 150.15 | 165634 | 165398.3 | 136.91 | 165195 | 164523.37 | 331.33 |

Table A.369: *acin*3: basicRRGA+IM: 5000 – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 156836 | 155512.43 | 591.58 | 158890 | 157603.23 | 651.3 | 159634 | 158830.57 | 444.83 | 160281 | 159582.2 | 406.66 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166171.5 | 2.74 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 156338 | 155360.4 | 452.77 | 158662 | 157553.93 | 642.4 | 159719 | 158787.6 | 525.84 | 160256 | 159313.8 | 462.05 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| 51 | 20 | rnd | 157857 | 155964.97 | 761.5 | 159875 | 158659.57 | 526.88 | 160362 | 159508.87 | 381.66 | 160866 | 160278.43 | 308.22 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 157893 | 155821.1 | 637.29 | 159673 | 158505.73 | 642.96 | 159956 | 159399.8 | 448.24 | 160962 | 160207.43 | 344.05 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |

Table A.370: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 156653 | 155651.1 | 565.61 | 158837 | 157505.07 | 702.77 | 159563 | 158658.33 | 614.63 | 160260 | 159672.8 | 410.65 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 156501 | 155314.9 | 563.72 | 158479 | 157474.13 | 675.1 | 159594 | 158664.97 | 617.91 | 159936 | 159427.33 | 403.51 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| 51 | 20 | rnd | 156968 | 156062.03 | 564.82 | 159458 | 158635.1 | 564.92 | 160360 | 159654.27 | 386.77 | 160726 | 160257.7 | 251.22 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 157448 | 156029.2 | 700.53 | 160044 | 158706.37 | 539.02 | 159957 | 159378.17 | 326.37 | 160780 | 160135.93 | 319.36 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |

Table A.371: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 159030 | 158689.57 | 199.97 | 159224 | 158823.23 | 189.64 | 158923 | 158604.97 | 177.51 | 158340 | 157824.9 | 238.3 |
| | | 2op | 161736 | 161293.93 | 299.48 | 161495 | 161148.4 | 211.55 | 161510 | 160799.1 | 297.8 | 161206 | 160230.93 | 423.27 |
| | 50 | rnd | 159199 | 158708.3 | 302.25 | 159324 | 159049.33 | 184.96 | 159116 | 158819.07 | 180.17 | 158823 | 158504.57 | 210.12 |
| | | 2op | 161507 | 161158.53 | 271.97 | 161469 | 161055.33 | 225.07 | 161228 | 160895.43 | 260.01 | 161230 | 160545.57 | 333.2 |
| 51 | 20 | rnd | 159056 | 158731.2 | 237 | 159288 | 158991.4 | 156.11 | 159188 | 158851.3 | 157.35 | 158650 | 158338.97 | 222.33 |
| | | 2op | 162088 | 161792.27 | 165.3 | 161924 | 161725.93 | 120.82 | 161827 | 161554.83 | 194.7 | 161587 | 161104.47 | 245.9 |
| | 50 | rnd | 158960 | 158748.83 | 157.35 | 159448 | 159077.1 | 178.28 | 159456 | 159168.63 | 132.69 | 159023 | 158715.13 | 156.7 |
| | | 2op | 162023 | 161702.8 | 174.01 | 162131 | 161675.07 | 209.75 | 161804 | 161512.53 | 153.87 | 161724 | 161317.73 | 210.66 |

Table A.372: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 159194 | 158665.9 | 296.26 | 159245 | 158841.87 | 196.15 | 158977 | 158452.97 | 222.15 | 158230 | 157688.57 | 326.18 |
| | | 2op | 161768 | 161298.5 | 308.45 | 161432 | 160995.83 | 250.31 | 161077 | 160618.17 | 302.63 | 161107 | 160183.1 | 421.42 |
| | 50 | rnd | 159150 | 158735.17 | 171.47 | 159339 | 159049.67 | 187.25 | 159098 | 158852.9 | 137.17 | 158817 | 158375.57 | 192.43 |
| | | 2op | 161545 | 161098.27 | 254.2 | 161399 | 160934.87 | 266.27 | 161289 | 160774.63 | 255.71 | 160878 | 160417.13 | 302.07 |
| 51 | 20 | rnd | 158994 | 158778.23 | 147.16 | 159133 | 158984.43 | 143.46 | 159164 | 158834.9 | 200.94 | 158887 | 158407.3 | 227.73 |
| | | 2op | 162146 | 161827.1 | 176.47 | 161985 | 161767.47 | 145.67 | 161965 | 161512.23 | 201.71 | 161657 | 161206.3 | 297.71 |
| | 50 | rnd | 159080 | 158764.83 | 188.08 | 159319 | 159125.8 | 167.25 | 159322 | 159065.4 | 201.11 | 158989 | 158697.53 | 163.99 |
| | | 2op | 161980 | 161711.97 | 155.73 | 161916 | 161646.03 | 197.13 | 161809 | 161534.5 | 199.23 | 161510 | 161245.53 | 250.97 |

Table A.373: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158974 | 158758.33 | 127.56 | 159232 | 159008.4 | 123.69 | 159172 | 158882.07 | 123.74 | 159220 | 158681.5 | 298.83 |
| | | 2op | 162261 | 162062.5 | 133.84 | 162166 | 161984.8 | 105.5 | 162187 | 161842.73 | 132.79 | 161988 | 161701.73 | 185.67 |
| | 50 | rnd | 158988 | 158706.17 | 118.77 | 159398 | 159134.4 | 121.4 | 159273 | 159094.93 | 154.62 | 159347 | 158856.8 | 309.4 |
| | | 2op | 162225 | 162030.2 | 124.6 | 162170 | 161973.9 | 183.07 | 162151 | 161895.57 | 153.94 | 162131 | 161648.77 | 203.8 |
| 51 | 20 | rnd | 159085 | 158771.4 | 147.42 | 158980 | 158832.77 | 99.25 | 159131 | 158868.13 | 123.96 | 159064 | 158798.47 | 140.7 |
| | | 2op | 162329 | 162322.4 | 14.41 | 162334 | 162324.77 | 11.42 | 162331 | 162324.7 | 12.16 | 162333 | 162319 | 18.86 |
| | 50 | rnd | 159050 | 158806.3 | 107.43 | 159250 | 159002.67 | 146.22 | 159251 | 159010.43 | 100.7 | 159165 | 159000.57 | 120.98 |
| | | 2op | 162331 | 162315.07 | 18.74 | 162331 | 162309.8 | 25.01 | 162332 | 162318.53 | 16.01 | 162334 | 162286.73 | 35.74 |

Table A.374: *acin*5: basicRRGA+IM: 500 – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158944 | 158722.43 | 149.79 | 158645 | 158450.5 | 135.39 | 158129 | 157670.07 | 351.44 | 158251 | 156154.83 | 953.4 |
| | | 2op | 162329 | 162126.33 | 83.65 | 162200 | 161975.1 | 126.16 | 161885 | 161628.23 | 177.42 | 161433 | 161117.63 | 198.77 |
| | 50 | rnd | 159084 | 158783.07 | 188.47 | 158642 | 158384.93 | 154.92 | 158062 | 157639.13 | 192.46 | 156507 | 155882.03 | 333.88 |
| | | 2op | 162069 | 161732.9 | 162.33 | 161746 | 161334.83 | 214.07 | 161703 | 160810.53 | 363.03 | 160954 | 160060.57 | 420.76 |
| 51 | 20 | rnd | 158827 | 158654.6 | 105.11 | 158544 | 158278.4 | 115.42 | 158132 | 157795.83 | 162.59 | 156692 | 156001.57 | 358.6 |
| | | 2op | 162331 | 162321.7 | 15.88 | 162332 | 162323.77 | 14.68 | 162244 | 162104.57 | 80.22 | 161660 | 161355.73 | 158.54 |
| | 50 | rnd | 158907 | 158677.97 | 111.35 | 158443 | 158246.47 | 95.5 | 157992 | 157686.83 | 131.42 | 156828 | 156452.93 | 190.81 |
| | | 2op | 162331 | 162288.43 | 62.22 | 162220 | 162004.3 | 140.38 | 161914 | 161479.17 | 178.84 | 161242 | 160818.53 | 232.05 |

Table A.375: *acin*5: basicRRGA+IM: 5000 – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 148806 | 147880.37 | 368.41 | 150458 | 149680.27 | 433.25 | 151150 | 150504.7 | 333.45 | 151802 | 151202.37 | 297.66 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 149099 | 147881.43 | 437.15 | 151005 | 149529.3 | 587.3 | 150899 | 150266.1 | 387.19 | 152085 | 151035.77 | 459.77 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| 51 | 20 | rnd | 149783 | 148378.93 | 524.18 | 151774 | 150406.13 | 544.19 | 152121 | 151223.63 | 439.22 | 152528 | 151936.6 | 362.93 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 148913 | 148099.9 | 380.94 | 151077 | 150209.37 | 501.59 | 151616 | 151053.2 | 339.01 | 152421 | 151863.63 | 319.04 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |

Table A.376: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 148644 | 147960.97 | 345 | 150488 | 149665.97 | 492.04 | 151736 | 150440.4 | 550.89 | 151696 | 151049.8 | 340.67 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 148524 | 147746.97 | 369.51 | 150657 | 149414.33 | 500.35 | 151397 | 150317.3 | 495.85 | 151793 | 151053.83 | 391.01 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162331 | 162329.07 | 0.37 |
| 51 | 20 | rnd | 149463 | 148284.63 | 416.63 | 151467 | 150289.4 | 547.37 | 152000 | 151090.9 | 393.66 | 152467 | 151831.43 | 295.09 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 148796 | 148149.13 | 330.71 | 150843 | 150230.17 | 397.52 | 151765 | 151148.23 | 286.62 | 152506 | 151933.67 | 288.95 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162331 | 162329.07 | 0.37 |

Table A.377: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 175002 | 174665.37 | 163.14 | 175098 | 174768.7 | 118.51 | 174890 | 174505.33 | 198.76 | 174070 | 173654.33 | 202.03 |
| | | 2op | 178758 | 178383.43 | 177.93 | 178453 | 178131 | 143.58 | 178286 | 177775.9 | 206.45 | 177998 | 177304.43 | 347.39 |
| | 50 | rnd | 175133 | 174748.77 | 171.38 | 175366 | 175092.2 | 145.58 | 175354 | 174932.13 | 146.6 | 174629 | 174355.7 | 166.03 |
| | | 2op | 178612 | 178192.87 | 210.67 | 178354 | 178088.63 | 189.99 | 178157 | 177828.73 | 265.83 | 177912 | 177491.73 | 256.8 |
| 51 | 20 | rnd | 174911 | 174612.53 | 139.59 | 175419 | 174893.93 | 158.91 | 175159 | 174828.4 | 192.04 | 175095 | 174319.23 | 331.24 |
| | | 2op | 179238 | 178900.63 | 142.96 | 179033 | 178753.47 | 139.73 | 178808 | 178465.5 | 221.7 | 178500 | 178126.7 | 245.33 |
| | 50 | rnd | 175050 | 174693.4 | 153.09 | 175273 | 175094.5 | 129.27 | 175351 | 175055.33 | 129.24 | 175320 | 174645.07 | 253.51 |
| | | 2op | 179189 | 178826 | 156.82 | 179070 | 178707.1 | 185.11 | 178840 | 178563.53 | 160.94 | 178611 | 178185.63 | 225.22 |

Table A.378: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 174891 | 174613.43 | 258.33 | 175004 | 174742.43 | 126.22 | 174843 | 174386.77 | 197.09 | 174014 | 173527.6 | 152.08 |
| | | 2op | 178690 | 178351.5 | 170.31 | 178424 | 178106.1 | 216.21 | 178065 | 177723.07 | 232.22 | 177967 | 177254.5 | 325.66 |
| | 50 | rnd | 175216 | 174730.47 | 234.55 | 175474 | 175047 | 178.26 | 175061 | 174837.9 | 130.89 | 175084 | 174314.13 | 252.81 |
| | | 2op | 178691 | 178171.13 | 214.27 | 178465 | 178016.5 | 222.32 | 178155 | 177717.33 | 255.96 | 177872 | 177419.3 | 266.52 |
| 51 | 20 | rnd | 174854 | 174647.8 | 123.7 | 175195 | 174870.77 | 129.27 | 175021 | 174727.03 | 183.55 | 175054 | 174362.83 | 353.05 |
| | | 2op | 179082 | 178914.43 | 105.26 | 179084 | 178721.93 | 164.11 | 178890 | 178414.9 | 180.08 | 178678 | 178124.1 | 227.92 |
| | 50 | rnd | 174970 | 174650.8 | 145.83 | 175392 | 175134.77 | 126.74 | 175373 | 175016.37 | 147.07 | 175510 | 174721.7 | 289.41 |
| | | 2op | 178995 | 178770.03 | 114.35 | 178989 | 178665.93 | 177.59 | 178802 | 178522.93 | 157.09 | 178496 | 178134.53 | 213.01 |

Table A.379: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 174867 | 174570.13 | 136.94 | 175020 | 174796.4 | 144.39 | 175119 | 174816.63 | 141.27 | 175093 | 174600.7 | 370.56 |
| | | 2op | 179328 | 179129.87 | 117.37 | 179225 | 179002.67 | 131.03 | 179045 | 178710.33 | 207.74 | 178829 | 178492.53 | 199.45 |
| | 50 | rnd | 175057 | 174666.33 | 162.37 | 175251 | 175051.87 | 114.69 | 175343 | 175010.1 | 163.84 | 175448 | 174942.07 | 388.33 |
| | | 2op | 179274 | 179067.5 | 101.98 | 179252 | 179020.47 | 129.05 | 179133 | 178868.07 | 141.98 | 179081 | 178586.97 | 219.67 |
| 51 | 20 | rnd | 174937 | 174650.3 | 142.45 | 175009 | 174616.27 | 186.52 | 174905 | 174646.53 | 154.19 | 174845 | 174598.17 | 134.87 |
| | | 2op | 179375 | 179370.83 | 11.93 | 179375 | 179372.3 | 8.32 | 179375 | 179366.07 | 19.8 | 179375 | 179365.1 | 12.72 |
| | 50 | rnd | 174960 | 174650.77 | 170.82 | 175057 | 174775.73 | 147.38 | 175036 | 174797.37 | 158.48 | 175095 | 174834.43 | 146.39 |
| | | 2op | 179375 | 179359.27 | 20.59 | 179375 | 179367.4 | 12.41 | 179375 | 179363.27 | 17.51 | 179375 | 179332.37 | 36.95 |

Table A.380: *acin*7: basicRRGA+IM: 500 – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 174682 | 174433.3 | 123.36 | 174277 | 174007.63 | 149.67 | 173714 | 173402 | 207.47 | 173789 | 172035.33 | 1129.16 |
| | | 2op | 179345 | 179189.33 | 121.62 | 179129 | 178937.57 | 134.95 | 179045 | 178598.97 | 238.07 | 178549 | 178106.07 | 274.62 |
| | 50 | rnd | 174813 | 174543.67 | 119.75 | 174147 | 173976.87 | 137.63 | 173691 | 173232.9 | 259.43 | 173363 | 171801.07 | 425.49 |
| | | 2op | 179250 | 178959.77 | 179.89 | 178913 | 178498.6 | 207.62 | 178670 | 177912.1 | 358.78 | 178127 | 177369.27 | 312.13 |
| 51 | 20 | rnd | 174509 | 174216.8 | 135.07 | 173978 | 173680.27 | 123.83 | 173558 | 173261.53 | 149.82 | 172002 | 171496.37 | 278.89 |
| | | 2op | 179375 | 179375 | 0 | 179375 | 179373.4 | 5.16 | 179268 | 179162.93 | 67.12 | 178667 | 178414.6 | 153.85 |
| | 50 | rnd | 174542 | 174239.2 | 118.69 | 173896 | 173660.4 | 116.31 | 173574 | 173226.37 | 164.3 | 173144 | 171992.47 | 334.74 |
| | | 2op | 179375 | 179360.9 | 23.5 | 179349 | 179126.57 | 109.2 | 178945 | 178618.1 | 156.39 | 178234 | 177906.93 | 151.45 |

Table A.381: *acin*7: basicRRGA+IM: 5000 – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163764 | 162917.03 | 331.64 | 164610 | 163988.77 | 395.32 | 164976 | 164670.9 | 215.2 | 165297 | 165089.03 | 183.13 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179375 | 179373.27 | 0.69 | 179375 | 179373.67 | 0.96 |
| | 50 | rnd | 163349 | 162840.8 | 264.17 | 164567 | 163977.6 | 304.89 | 164963 | 164549.9 | 228.68 | 165224 | 165070.93 | 118.08 |
| | | 2op | 179375 | 179373.07 | 0.37 | 179373 | 179373 | 0 | 179375 | 179373.13 | 0.51 | 179375 | 179373.67 | 0.96 |
| 51 | 20 | rnd | 163593 | 162994.67 | 273.6 | 164841 | 164573.63 | 258.03 | 165178 | 165036.9 | 109.17 | 165532 | 165413.9 | 64.03 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179375 | 179373.27 | 0.69 | 179375 | 179373.47 | 0.86 |
| | 50 | rnd | 163882 | 162986.63 | 326.51 | 164817 | 164489.5 | 214.17 | 165131 | 164954.27 | 115.42 | 165491 | 165355.77 | 96.93 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179375 | 179373.13 | 0.51 | 179375 | 179373.67 | 0.96 |

Table A.382: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163333 | 162870.4 | 221.85 | 164707 | 164025.77 | 376.72 | 165050 | 164647.5 | 235.11 | 165310 | 165020.33 | 179.66 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179375 | 179373.13 | 0.51 | 179375 | 179373.73 | 0.98 |
| | 50 | rnd | 163386 | 162837.37 | 213.98 | 164312 | 163937.8 | 249.27 | 164922 | 164493.07 | 277.27 | 165244 | 164986.5 | 169.82 |
| | | 2op | 179373 | 179373 | 0 | 179375 | 179373.07 | 0.37 | 179375 | 179373.27 | 0.69 | 179375 | 179373.67 | 0.96 |
| 51 | 20 | rnd | 163540 | 162932.17 | 290.29 | 164832 | 164523.8 | 228.39 | 165170 | 165007.87 | 149.63 | 165497 | 165385.03 | 73.21 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179375 | 179373.27 | 0.69 | 179375 | 179373.8 | 1 |
| | 50 | rnd | 163610 | 163006.47 | 287.29 | 164817 | 164476.93 | 240.42 | 165099 | 164976.93 | 94.03 | 165470 | 165357.73 | 75.05 |
| | | 2op | 179373 | 179373 | 0 | 179375 | 179373.07 | 0.37 | 179375 | 179373.07 | 0.37 | 179375 | 179373.4 | 0.81 |

Table A.383: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 336713 | 335732.3 | 480.95 | 335100 | 334142.3 | 605.24 | 332282 | 330481.97 | 993.91 | 328931 | 324944.07 | 1720.22 |
| | | 2op | 341730 | 340982.27 | 490.1 | 340897 | 339219.3 | 990.43 | 339968 | 337417.9 | 1354.95 | 336836 | 333430.03 | 1787.15 |
| | 50 | rnd | 336864 | 335964.6 | 525.09 | 336468 | 335346.7 | 582.02 | 335553 | 334110.97 | 741.29 | 332292 | 330742.33 | 891.42 |
| | | 2op | 341433 | 340628.03 | 511.24 | 341121 | 340140.43 | 566.82 | 339969 | 338966.43 | 746.05 | 338968 | 336937.73 | 1420.81 |
| 51 | 20 | rnd | 336803 | 336321.1 | 347.44 | 336509 | 335556.73 | 541.92 | 335674 | 334276.87 | 638.19 | 332878 | 330675.07 | 1236.43 |
| | | 2op | 342027 | 341573.77 | 227.12 | 341737 | 340966.97 | 437.34 | 340727 | 339816.73 | 756.33 | 339700 | 338051.53 | 1070.36 |
| | 50 | rnd | 336982 | 336398.33 | 385.58 | 337033 | 336145.47 | 423.38 | 336534 | 335655.97 | 447.82 | 335420 | 334099.27 | 670.54 |
| | | 2op | 341846 | 341500.17 | 330.57 | 342003 | 341356.27 | 309.91 | 341548 | 340694.17 | 513.46 | 340799 | 339575.03 | 717.39 |

Table A.384: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 336753 | 335988.63 | 543.11 | 335228 | 333882.17 | 665.17 | 332541 | 330477.57 | 1034.16 | 326463 | 323870.63 | 1395.64 |
| | | 2op | 341488 | 340567.87 | 509.17 | 340374 | 338864.63 | 831.88 | 338466 | 336565.73 | 1247.01 | 336185 | 332724.4 | 1580.76 |
| | 50 | rnd | 336689 | 335661.8 | 747.64 | 335931 | 335016.5 | 671.41 | 335102 | 333542.53 | 762.07 | 332143 | 329767.73 | 1075.63 |
| | | 2op | 341247 | 340509.4 | 521.29 | 341006 | 339892.43 | 691.8 | 339954 | 338525.27 | 843.98 | 338511 | 335849.5 | 1161.6 |
| 51 | 20 | rnd | 336862 | 336261.43 | 408.84 | 336474 | 335540.87 | 544.1 | 335558 | 334104.93 | 785.86 | 333240 | 330728.57 | 1072.01 |
| | | 2op | 342000 | 341487.47 | 445.65 | 341516 | 340830.37 | 433.83 | 341143 | 339634.17 | 725.02 | 340189 | 337920.37 | 1261.26 |
| | 50 | rnd | 336957 | 336343.37 | 382.29 | 336944 | 336311.43 | 393.03 | 336252 | 335358.5 | 358.53 | 334866 | 333679.23 | 684.56 |
| | | 2op | 341989 | 341469.5 | 266.99 | 341868 | 341194.13 | 391.58 | 341549 | 340679.37 | 497.58 | 340707 | 339345.5 | 918.11 |

Table A.385: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 336790 | 336487.63 | 233.11 | 337038 | 336236.6 | 394.98 | 336409 | 335594.23 | 456.66 | 336163 | 334177.83 | 1160.49 |
| | | 2op | 342163 | 341916.9 | 216.74 | 341938 | 341506.9 | 269.82 | 341682 | 340921.23 | 429.36 | 341667 | 340071.23 | 654.04 |
| | 50 | rnd | 336981 | 336495.57 | 241.5 | 336922 | 336535.23 | 255.94 | 336933 | 336050.23 | 467.63 | 335851 | 334401.63 | 763.36 |
| | | 2op | 342178 | 341891.37 | 166.31 | 342034 | 341717.63 | 246.35 | 341974 | 341341.2 | 273.25 | 341321 | 340542.17 | 497.41 |
| 51 | 20 | rnd | 336909 | 336675.97 | 126.72 | 336888 | 336632.13 | 143.92 | 336987 | 336734.03 | 125.16 | 336951 | 336679.8 | 139.16 |
| | | 2op | 342208 | 342201.17 | 19.08 | 342208 | 342197.63 | 18.14 | 342208 | 342187.8 | 23.28 | 342208 | 342170.2 | 25.15 |
| | 50 | rnd | 336925 | 336703.67 | 117.06 | 337054 | 336806.97 | 118.92 | 337020 | 336789.2 | 115.53 | 337069 | 336813.57 | 133.71 |
| | | 2op | 342208 | 342194.67 | 20.33 | 342208 | 342191.9 | 18.53 | 342208 | 342166 | 28.89 | 342208 | 342077.47 | 92.11 |

Table A.386: *acin*9: basicRRGA+IM: 500 – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 336706 | 336286.7 | 262.75 | 335805 | 335100.67 | 415.07 | 334828 | 332404.7 | 1472.22 | 325023 | 321076.7 | 1595.66 |
| | | 2op | 342126 | 341974.63 | 143.51 | 341949 | 341355.17 | 322.27 | 341434 | 340499.73 | 558.26 | 340202 | 338748.23 | 1027.74 |
| | 50 | rnd | 336946 | 336258.4 | 323.77 | 335400 | 334181.87 | 684.89 | 330619 | 327559.07 | 1388.27 | 322490 | 319194.13 | 1635.08 |
| | | 2op | 342161 | 341849.13 | 193.39 | 341820 | 341247.7 | 407.94 | 341618 | 339752.53 | 630.87 | 339050 | 337133.9 | 983.76 |
| 51 | 20 | rnd | 336510 | 336358.47 | 83.52 | 336045 | 335673.77 | 177.62 | 335233 | 334413.67 | 484.52 | 327897 | 325501.93 | 957.53 |
| | | 2op | 342208 | 342202.03 | 13.38 | 342208 | 342179.4 | 56.6 | 342084 | 341804.53 | 154.52 | 340904 | 339622.1 | 656.8 |
| | 50 | rnd | 336525 | 336254.8 | 164.64 | 335149 | 334779.13 | 291.72 | 333043 | 330792.3 | 967.27 | 324792 | 323493.67 | 749.1 |
| | | 2op | 342208 | 342198.67 | 15.71 | 342153 | 341936.83 | 116.07 | 341558 | 340920.37 | 344.87 | 340420 | 338432.2 | 810.61 |

Table A.387: *acin*9: basicRRGA+IM: 5000 – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 323508 | 322282.8 | 486.41 | 326613 | 324980.33 | 815.09 | 327840 | 326328.27 | 816.66 | 328993 | 327697.2 | 576.84 |
| | | 2op | 342208 | 342138.87 | 18.52 | 342208 | 342162.87 | 35.96 | 342206 | 342172.47 | 36.46 | 342208 | 342201.57 | 18.38 |
| | 50 | rnd | 322955 | 322103.73 | 477.71 | 326211 | 324620.17 | 824.68 | 327866 | 326016.03 | 852.71 | 329043 | 327553.77 | 850.81 |
| | | 2op | 342134 | 342134 | 0 | 342206 | 342158 | 34.52 | 342206 | 342177.2 | 35.88 | 342208 | 342203.8 | 12.82 |
| 51 | 20 | rnd | 323358 | 322616 | 477.85 | 327611 | 326221.13 | 1011.25 | 329223 | 328163.77 | 600.08 | 330197 | 329422.67 | 402.56 |
| | | 2op | 342206 | 342143.6 | 24.89 | 342206 | 342170 | 36.62 | 342208 | 342186.87 | 32.43 | 342208 | 342206.2 | 0.61 |
| | 50 | rnd | 324127 | 322463.07 | 662.69 | 327687 | 325916 | 871.08 | 328495 | 327848.97 | 536.47 | 330297 | 329208.13 | 519.25 |
| | | 2op | 342136 | 342134.07 | 0.37 | 342208 | 342160.47 | 35.38 | 342206 | 342182 | 34.52 | 342208 | 342201.47 | 18.35 |

Table A.388: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 323226 | 322153.6 | 495.65 | 326091 | 324628.3 | 740.62 | 328013 | 326124.37 | 862.6 | 328947 | 327752.3 | 724.43 |
| | | 2op | 342206 | 342138.8 | 18.27 | 342206 | 342148.4 | 29.29 | 342208 | 342170.2 | 36.55 | 342208 | 342203.8 | 13.2 |
| | 50 | rnd | 323564 | 322037.77 | 609.02 | 326086 | 324341.3 | 716.23 | 327798 | 326111.3 | 957.52 | 329212 | 327464.33 | 908.96 |
| | | 2op | 342134 | 342134 | 0 | 342206 | 342165.33 | 36.17 | 342206 | 342172.53 | 36.39 | 342208 | 342198.67 | 20.76 |
| 51 | 20 | rnd | 324413 | 322925.07 | 703.35 | 327930 | 326115.4 | 906.4 | 329472 | 328083.67 | 662.65 | 330066 | 329205.87 | 459.28 |
| | | 2op | 342206 | 342138.8 | 18.27 | 342206 | 342165.2 | 36.29 | 342208 | 342182.07 | 34.57 | 342208 | 342201.73 | 18.43 |
| | 50 | rnd | 324829 | 322733.13 | 710.83 | 327664 | 326149.3 | 899.29 | 328854 | 327841.9 | 588.61 | 330153 | 329202.27 | 436.89 |
| | | 2op | 342206 | 342136.4 | 13.15 | 342206 | 342158 | 34.52 | 342206 | 342174.8 | 36.29 | 342208 | 342203.93 | 12.85 |

Table A.389: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179688 | 175252.93 | 2367.43 | 187774 | 182513.27 | 2488.27 | 191370 | 186144.77 | 2036.07 | 191701 | 187741.03 | 1900.3 |
| | | 2op | 224842 | 223524.67 | 860.47 | 225071 | 224044.8 | 659.95 | 225111 | 224144.8 | 656.57 | 223637 | 222208.93 | 726.71 |
| | 50 | rnd | 181378 | 174955.4 | 3469.14 | 190269 | 184014.7 | 2193.58 | 190191 | 187265.63 | 1726.04 | 193883 | 190041.63 | 1642.35 |
| | | 2op | 224468 | 223553.6 | 644.75 | 225074 | 224086.6 | 559.21 | 225170 | 224108.37 | 698.96 | 224831 | 224002.3 | 496.66 |
| 51 | 20 | rnd | 182215 | 175638.8 | 3138.43 | 187202 | 181079.57 | 2695.76 | 188360 | 182097.1 | 2105.7 | 189561 | 184348.1 | 2505.71 |
| | | 2op | 225018 | 224235.17 | 352.64 | 225216 | 224641.03 | 381.71 | 225204 | 224719.1 | 295.02 | 224827 | 224091.6 | 440.39 |
| | 50 | rnd | 178946 | 174517.43 | 2109 | 183011 | 179804.13 | 2127.3 | 190153 | 183758.33 | 2340.28 | 191789 | 186647.57 | 2110.49 |
| | | 2op | 225034 | 224242.5 | 518.29 | 225148 | 224540.87 | 442.03 | 225230 | 224715.77 | 388.36 | 225238 | 224798.8 | 377.33 |

Table A.390: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179944 | 174546.7 | 2758.91 | 189799 | 183749.97 | 2203.72 | 191018 | 186900.3 | 2486.79 | 191603 | 187169.67 | 2424.4 |
| | | 2op | 224900 | 223445.77 | 959.91 | 224845 | 223927.43 | 652.6 | 225238 | 223945.7 | 695.98 | 224656 | 222110.7 | 951.78 |
| | 50 | rnd | 181203 | 175225.8 | 2225.86 | 188941 | 184049.8 | 2288.58 | 191582 | 187663.9 | 2025.02 | 194787 | 190667.97 | 1444.45 |
| | | 2op | 225075 | 223614.43 | 834.42 | 225163 | 223918.97 | 558.55 | 225173 | 224134.33 | 563.89 | 224950 | 223606.2 | 700.64 |
| 51 | 20 | rnd | 179633 | 174764.4 | 2266.74 | 183971 | 179919.67 | 2005.25 | 186137 | 182083.2 | 2566.54 | 187898 | 183912.93 | 1651.11 |
| | | 2op | 224866 | 224216.4 | 399.7 | 225192 | 224631.8 | 345.33 | 225181 | 224774.63 | 372.78 | 224947 | 224155.73 | 450.34 |
| | 50 | rnd | 179440 | 175311.13 | 2099.87 | 185195 | 180974.63 | 2121.63 | 188541 | 184593.4 | 2175.05 | 192058 | 185717.1 | 2241.7 |
| | | 2op | 224985 | 224248.93 | 501.13 | 225198 | 224598.43 | 392.22 | 225224 | 224683 | 328.27 | 225227 | 224791.63 | 327.89 |

Table A.391: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 177309 | 172830.7 | 2488.01 | 179693 | 176278.13 | 2325.88 | 182388 | 177082.53 | 3220.87 | 181974 | 177398.77 | 2462.63 |
| | | 2op | 224881 | 224329.8 | 226.78 | 225213 | 224637.3 | 327.36 | 225263 | 225016.5 | 234.98 | 225097 | 224373.7 | 329.22 |
| | 50 | rnd | 181334 | 175013.07 | 2832.45 | 184228 | 178186.57 | 2906.41 | 187511 | 179494.93 | 2732.24 | 187301 | 181982.03 | 2527.25 |
| | | 2op | 225034 | 224473.6 | 213.35 | 225222 | 224832.2 | 299.79 | 225266 | 224980.97 | 261.12 | 225266 | 224986.57 | 196.67 |
| 51 | 20 | rnd | 180976 | 173943.87 | 2608.5 | 179944 | 175324.17 | 2310.32 | 180066 | 175209.2 | 2925.84 | 181510 | 176935.77 | 2209.12 |
| | | 2op | 224851 | 224371 | 145.51 | 225068 | 224571.2 | 222.7 | 225266 | 224905.97 | 289.03 | 225266 | 225118.03 | 213.01 |
| | 50 | rnd | 180289 | 175941.77 | 2371.83 | 181124 | 177135.27 | 2428.18 | 183420 | 178954.23 | 2467.7 | 184848 | 179451.33 | 2857.21 |
| | | 2op | 225230 | 224561.87 | 317.93 | 225266 | 224945.9 | 244.21 | 225266 | 225121.43 | 233.98 | 225283 | 225252.8 | 32.7 |

Table A.392: *bx*842596_4: basicRRGA+IM: 500 – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 180955 | 175998.57 | 2134.07 | 184561 | 179622.83 | 2087.36 | 185464 | 181230.57 | 2167.26 | 184969 | 182136.47 | 1841.83 |
| | | 2op | 224998 | 224492.2 | 285.97 | 225263 | 225010.77 | 270.03 | 225200 | 224742.47 | 342.07 | 223439 | 222748.9 | 402.57 |
| | 50 | rnd | 182820 | 177836.47 | 2013.44 | 187219 | 183812.17 | 2140.34 | 190150 | 186606.57 | 1767.81 | 191243 | 186843.93 | 3176.62 |
| | | 2op | 225221 | 224679.67 | 302.53 | 225266 | 224972.77 | 247.57 | 225256 | 224940.8 | 259.6 | 223140 | 222255.47 | 534.02 |
| 51 | 20 | rnd | 184709 | 179166.57 | 2664.8 | 188077 | 181159.9 | 2146.75 | 187713 | 181824.5 | 2552.07 | 186166 | 182146.87 | 2097.52 |
| | | 2op | 225257 | 224688.2 | 295.13 | 225266 | 225161.13 | 211.25 | 225260 | 225048.63 | 209.73 | 223469 | 222617.8 | 386.06 |
| | 50 | rnd | 184260 | 180364.9 | 2113.99 | 186525 | 183647.63 | 1480.19 | 189639 | 184591.97 | 1677.36 | 190071 | 184660.9 | 2585.75 |
| | | 2op | 225280 | 225027.43 | 243.57 | 225283 | 225260.2 | 15.54 | 225194 | 224791.73 | 224.43 | 222919 | 221791.43 | 464.29 |

Table A.393: *bx*842596_4: basicRRGA+IM: 5000 – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12039 | 10527.8 | 639.86 | 15949 | 14221.17 | 1062.88 | 17598 | 15614.53 | 1192.68 | 19408 | 17027.6 | 1263.68 |
| | | 2op | 224344 | 224310.17 | 6.39 | 224640 | 224328.7 | 65.13 | 224532 | 224350.3 | 70.11 | 225004 | 224569.53 | 199.3 |
| | 50 | rnd | 11764 | 10513.8 | 456.06 | 16041 | 14032.67 | 904.88 | 17225 | 15513.87 | 910.5 | 18855 | 16547.83 | 1117.31 |
| | | 2op | 224309 | 224309 | 0 | 224462 | 224314.3 | 27.92 | 224524 | 224352.3 | 73.91 | 224985 | 224480.83 | 163.88 |
| 51 | 20 | rnd | 12979 | 11841.13 | 571.41 | 18803 | 16933.97 | 905.81 | 20856 | 18355.4 | 963.57 | 21473 | 19607.2 | 1170.76 |
| | | 2op | 224315 | 224309.2 | 1.1 | 224603 | 224336.17 | 71.28 | 224640 | 224359.87 | 86.46 | 225034 | 224617.63 | 213.53 |
| | 50 | rnd | 13090 | 11974.5 | 574.45 | 18656 | 16884.67 | 936.94 | 19896 | 18379.2 | 678.51 | 22632 | 20135.3 | 1203 |
| | | 2op | 224458 | 224314.17 | 27.19 | 224612 | 224341.93 | 73.47 | 224845 | 224401.63 | 130.25 | 224976 | 224544.1 | 175.2 |

Table A.394: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12143 | 10404.17 | 690.82 | 15322 | 13755.23 | 879.43 | 16756 | 15390.8 | 778.53 | 18517 | 16732.77 | 1050.91 |
| | | 2op | 224315 | 224309.2 | 1.1 | 224512 | 224315.93 | 37.04 | 224787 | 224422.03 | 139.57 | 225049 | 224538.87 | 221.54 |
| | 50 | rnd | 11523 | 10211.43 | 597.07 | 16755 | 13958.67 | 947.56 | 18687 | 15632.17 | 1072.12 | 19420 | 16526.57 | 1362.06 |
| | | 2op | 224315 | 224309.2 | 1.1 | 224496 | 224321.67 | 39.83 | 224787 | 224369.2 | 110.04 | 224900 | 224537.53 | 192.73 |
| 51 | 20 | rnd | 13162 | 11887.23 | 603.77 | 18005 | 16456.5 | 657.41 | 19720 | 18057.6 | 869.41 | 21617 | 19744.2 | 1019.96 |
| | | 2op | 224462 | 224314.5 | 27.9 | 224649 | 224342.3 | 76.29 | 224662 | 224409.13 | 115.01 | 225036 | 224563.37 | 196.57 |
| | 50 | rnd | 13254 | 11808.23 | 564.7 | 18268 | 16594.53 | 904.93 | 20176 | 18053.27 | 890.49 | 21718 | 19934.97 | 1057.92 |
| | | 2op | 224309 | 224309 | 0 | 224462 | 224323.23 | 42.63 | 224611 | 224369.83 | 100.9 | 225218 | 224548.13 | 223.33 |

Table A.395: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 344717 | 336940.13 | 3735.55 | 352082 | 348271.8 | 2682.99 | 358467 | 351434.3 | 3545.61 | 360230 | 351729.07 | 4365.52 |
| | | 2op | 437500 | 437212.53 | 252.7 | 437569 | 436965.87 | 363.8 | 435906 | 435048.57 | 535.76 | 434496 | 432223.97 | 916.21 |
| | 50 | rnd | 344472 | 336003.17 | 3905.03 | 360562 | 352088.93 | 4226.95 | 361298 | 356016.5 | 2760.52 | 366684 | 359500.2 | 4321.65 |
| | | 2op | 437706 | 437284.83 | 252.41 | 437790 | 437432.17 | 251.86 | 437645 | 437021.87 | 362.36 | 435829 | 434770.97 | 588.27 |
| 51 | 20 | rnd | 344529 | 336218.5 | 4012.94 | 351617 | 342371.67 | 4205.69 | 349676 | 342749.57 | 2590.93 | 350395 | 343786.03 | 3891.45 |
| | | 2op | 437566 | 437299.7 | 167.37 | 437818 | 437380.4 | 222.52 | 437147 | 436600.93 | 306.5 | 436047 | 434921.13 | 684.96 |
| | 50 | rnd | 343361 | 334027.17 | 3924.65 | 355514 | 345857.9 | 4511.06 | 355987 | 349544.6 | 2919.79 | 358672 | 350454.2 | 3933.76 |
| | | 2op | 437716 | 437405.9 | 151.37 | 437834 | 437533.77 | 161.41 | 437771 | 437365.97 | 238.57 | 437158 | 436265.47 | 482.78 |

Table A.396: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 341472 | 335298.67 | 4105.08 | 354662 | 348119.73 | 3581.08 | 357328 | 350889.43 | 3447.24 | 359140 | 351333.97 | 5657 |
| | | 2op | 437650 | 437255.6 | 250.4 | 437552 | 436998.97 | 362.06 | 436157 | 435009.93 | 652.12 | 434032 | 431475.63 | 1181.02 |
| | 50 | rnd | 344273 | 337609.37 | 3629.74 | 356416 | 352295.77 | 2681.6 | 361501 | 356961.87 | 2610.56 | 368068 | 358607.83 | 5320.96 |
| | | 2op | 437757 | 437261.23 | 291.13 | 437660 | 437281.43 | 391.64 | 437521 | 436814.3 | 411.21 | 436123 | 434619.13 | 796.86 |
| 51 | 20 | rnd | 344786 | 335455.77 | 5096.74 | 349873 | 342882 | 3695.83 | 349636 | 343756.33 | 3234.93 | 351970 | 345127.7 | 3855.34 |
| | | 2op | 437680 | 437390 | 179.67 | 437761 | 437336.57 | 202.46 | 437209 | 436552.97 | 315.02 | 436465 | 434926.5 | 618.62 |
| | 50 | rnd | 344422 | 335350.2 | 4435.49 | 350265 | 344547.57 | 2873.39 | 356759 | 349955.4 | 3635.58 | 359096 | 350666.1 | 3761.32 |
| | | 2op | 437658 | 437416.83 | 128.02 | 437808 | 437540.33 | 167.1 | 437820 | 437369.8 | 222.56 | 436873 | 436209.27 | 355.48 |

Table A.397: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 339734 | 332272.7 | 4112.24 | 342408 | 335037.83 | 3590.17 | 341886 | 333779.4 | 3762.97 | 346052 | 335787.53 | 3860.88 |
| | | 2op | 437625 | 437467.43 | 97.79 | 437714 | 437501.9 | 132.47 | 437400 | 437033.2 | 169.75 | 436988 | 436208.77 | 404.95 |
| | 50 | rnd | 340800 | 333136.7 | 4224.13 | 346611 | 338288.33 | 3463.32 | 347474 | 338463.87 | 3762.69 | 348251 | 339297 | 4083.08 |
| | | 2op | 437651 | 437417.77 | 135.75 | 437778 | 437590.03 | 119.95 | 437746 | 437456.83 | 161.79 | 437087 | 436598.5 | 326.11 |
| 51 | 20 | rnd | 342723 | 332777.23 | 4591 | 339876 | 332053.17 | 3615.93 | 340079 | 332391.27 | 3672 | 339879 | 333255.57 | 3932.24 |
| | | 2op | 437655 | 437477.7 | 95.31 | 437757 | 437608.7 | 91.42 | 437810 | 437663.67 | 93.24 | 437860 | 437692.03 | 76.2 |
| | 50 | rnd | 338530 | 334165.17 | 2344.5 | 344965 | 336298.3 | 3927.61 | 341396 | 335590.9 | 4475.37 | 341780 | 335446.7 | 3339.28 |
| | | 2op | 437743 | 437477.6 | 111.5 | 437802 | 437655.23 | 98.55 | 437889 | 437737 | 74.76 | 437847 | 437682.43 | 106.06 |

Table A.398: *bx*842596_7: basicRRGA+IM: 500 – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 338057 | 331583.07 | 3075.92 | 338836 | 333021.2 | 3142.72 | 341086 | 334433.9 | 3634.33 | 345562 | 335276.93 | 3130.22 |
| | | 2op | 437628 | 437468.1 | 111.96 | 437621 | 437374.57 | 180.14 | 436841 | 436483.17 | 239.04 | 435950 | 435126.97 | 481.12 |
| | 50 | rnd | 344256 | 336205.1 | 3941.58 | 348027 | 340894.5 | 3092.11 | 347670 | 341605.1 | 2517.19 | 349966 | 344986.27 | 3067.64 |
| | | 2op | 437701 | 437419.2 | 123.67 | 437755 | 437502.1 | 139.77 | 436803 | 436141.37 | 437.21 | 434868 | 434075.87 | 514.42 |
| 51 | 20 | rnd | 336684 | 332085.67 | 2735.84 | 335879 | 330991.77 | 2373.23 | 335515 | 330026.83 | 2958.3 | 333932 | 328305.5 | 3586.26 |
| | | 2op | 437715 | 437526.6 | 99.25 | 437811 | 437675.23 | 91.6 | 437459 | 437280.6 | 117.69 | 436676 | 435852.07 | 444.33 |
| | 50 | rnd | 342156 | 336535.63 | 2770.03 | 343714 | 336360.8 | 3477.97 | 341232 | 335557.47 | 3322.54 | 341025 | 336494.73 | 2049.45 |
| | | 2op | 437781 | 437597.3 | 112.17 | 437901 | 437682.87 | 119.3 | 436872 | 436316.8 | 277.06 | 435195 | 434125.6 | 513.3 |

Table A.399: *bx*842596_7: basicRRGA+IM: 5000 – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19614 | 18158.77 | 753.59 | 25163 | 23440.63 | 918.58 | 27994 | 25456.63 | 1076.9 | 29654 | 27184.47 | 1361.91 |
| | | 2op | 437421 | 437398.77 | 4.2 | 437578 | 437418.37 | 41.45 | 437650 | 437469.07 | 74.99 | 437714 | 437554.47 | 76.99 |
| | 50 | rnd | 19394 | 18363 | 487.67 | 24528 | 23267.43 | 1011.63 | 27281 | 25633.8 | 886.98 | 29333 | 27457.8 | 821.86 |
| | | 2op | 437529 | 437408.23 | 30.35 | 437475 | 437400.57 | 14.06 | 437608 | 437442.63 | 54.73 | 437710 | 437556.73 | 82.9 |
| 51 | 20 | rnd | 21418 | 20146.23 | 666.15 | 28561 | 26273.5 | 973.41 | 30540 | 28586.47 | 1218.12 | 31499 | 29964.13 | 902.96 |
| | | 2op | 437475 | 437402.17 | 15.1 | 437650 | 437428.3 | 54.5 | 437652 | 437502.93 | 79.34 | 437746 | 437614.47 | 85.73 |
| | 50 | rnd | 21709 | 20519.03 | 801.76 | 27565 | 26148.87 | 832.33 | 30568 | 28432.2 | 890.01 | 33380 | 30019.37 | 1361.78 |
| | | 2op | 437417 | 437398.63 | 3.47 | 437573 | 437410.8 | 34.92 | 437602 | 437458.8 | 66.78 | 437710 | 437578.57 | 77.55 |

Table A.400: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19691 | 17943.5 | 728.61 | 25428 | 23106.33 | 1016.59 | 27618 | 25058.27 | 1257.18 | 29228 | 26970.4 | 1205.3 |
| | | 2op | 437474 | 437404 | 19.26 | 437609 | 437436.1 | 61.56 | 437650 | 437458.57 | 78.36 | 437697 | 437535.27 | 84.65 |
| | 50 | rnd | 19325 | 18151.2 | 598.03 | 24464 | 22841.47 | 856.19 | 27121 | 25358.43 | 947.7 | 29186 | 26904.4 | 1260.81 |
| | | 2op | 437398 | 437398 | 0 | 437571 | 437412.73 | 38.16 | 437573 | 437427.53 | 39.69 | 437690 | 437557.83 | 82.26 |
| 51 | 20 | rnd | 21667 | 20267.07 | 760.4 | 27774 | 26152.13 | 966.33 | 30261 | 28132.8 | 1057.6 | 31658 | 29924.77 | 956.26 |
| | | 2op | 437475 | 437406.67 | 23.37 | 437609 | 437443.73 | 57.25 | 437650 | 437470.33 | 66.05 | 437734 | 437585.33 | 78.16 |
| | 50 | rnd | 22120 | 20268 | 720.11 | 27220 | 25863.2 | 937.44 | 30788 | 28211.87 | 1135.3 | 31516 | 29694.9 | 988.27 |
| | | 2op | 437432 | 437399.13 | 6.21 | 437573 | 437418.37 | 42.25 | 437613 | 437478.6 | 63.17 | 437710 | 437554.53 | 90.57 |

Table A.401: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 91820 | 89429.3 | 1632.27 | 96652 | 94576 | 1193.78 | 98251 | 97120.43 | 663.59 | 100279 | 97958 | 1310.61 |
| | | 2op | 115230 | 115065.63 | 143.45 | 115346 | 115050.3 | 176.49 | 115264 | 115147.4 | 63.68 | 115217 | 114998.17 | 132.31 |
| | 50 | rnd | 93545 | 90822.37 | 1460.91 | 97600 | 95256.73 | 1153.01 | 98943 | 97372.17 | 1001.43 | 101964 | 99306.03 | 1269.53 |
| | | 2op | 115218 | 115060.03 | 139.02 | 115342 | 115092.33 | 113.62 | 115345 | 115150.43 | 118.09 | 115545 | 115178.27 | 128.64 |
| 51 | 20 | rnd | 93360 | 89833.13 | 1931.94 | 95030 | 92827 | 1223.07 | 95474 | 93757 | 861.27 | 96842 | 94856.83 | 1230.79 |
| | | 2op | 115227 | 115094.63 | 61.88 | 115293 | 115159.57 | 58.04 | 115287 | 115163.37 | 70.47 | 115268 | 115150.43 | 56.61 |
| | 50 | rnd | 92975 | 89702.77 | 1508.45 | 96144 | 93077.43 | 1399.12 | 97962 | 95210.8 | 1293.37 | 99076 | 96566.2 | 1104.99 |
| | | 2op | 115239 | 115132.9 | 52.83 | 115266 | 115144.8 | 52.34 | 115364 | 115195.77 | 69.95 | 115342 | 115230.93 | 60.3 |

Table A.402: *j*02459_7: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 93433 | 90332.3 | 1640.49 | 97571 | 95134.43 | 1315.21 | 99303 | 96815.47 | 1143.82 | 100053 | 98506.7 | 822.52 |
| | | 2op | 115239 | 115059.7 | 109.35 | 115282 | 115079.3 | 178.46 | 115300 | 115159.7 | 81.43 | 115157 | 115015.63 | 93.78 |
| | 50 | rnd | 92517 | 89951.8 | 1495.15 | 99138 | 95598.8 | 1204.07 | 99367 | 97173.37 | 987.43 | 101344 | 99373.2 | 1059.47 |
| | | 2op | 115223 | 115014.3 | 169.57 | 115263 | 115102.9 | 128.36 | 115283 | 115092.57 | 161.72 | 115483 | 115180.43 | 95.38 |
| 51 | 20 | rnd | 93296 | 89233.03 | 1493.5 | 94587 | 92202.87 | 1510.3 | 95542 | 94023.5 | 1144.68 | 96926 | 95236.77 | 1093.05 |
| | | 2op | 115192 | 115097.63 | 79.23 | 115271 | 115145.23 | 70.66 | 115288 | 115170.47 | 63.85 | 115284 | 115138 | 66.36 |
| | 50 | rnd | 92830 | 90196.6 | 1619.14 | 95752 | 93489.9 | 1177.38 | 96798 | 94913.83 | 1097.58 | 98580 | 96647.27 | 859.62 |
| | | 2op | 115189 | 115048.1 | 121.73 | 115247 | 115152.7 | 61.35 | 115384 | 115190.47 | 74.99 | 115490 | 115191.07 | 96.57 |

Table A.403: *j*02459_7: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 92776 | 88986.03 | 1422.14 | 94933 | 90900.83 | 1649.21 | 94426 | 91713.47 | 1403.3 | 94387 | 92227 | 1098.63 |
| | | 2op | 115272 | 115116.73 | 53.79 | 115266 | 115157.87 | 36.08 | 115315 | 115180.77 | 43.57 | 115264 | 115152.33 | 49.69 |
| | 50 | rnd | 93477 | 90166 | 1236.81 | 94792 | 92578.93 | 1124.2 | 96468 | 93297.77 | 1144.69 | 96337 | 94254.77 | 1154.81 |
| | | 2op | 115206 | 115131.23 | 47.54 | 115306 | 115164.63 | 51.87 | 115316 | 115214.2 | 45.06 | 115386 | 115233.13 | 62.82 |
| 51 | 20 | rnd | 91666 | 89603.87 | 1422.06 | 93516 | 90938.43 | 1156.98 | 93977 | 90726.1 | 1607.97 | 93601 | 91149.23 | 1270.02 |
| | | 2op | 115212 | 115154.57 | 24.83 | 115272 | 115196.07 | 39.7 | 115272 | 115211.77 | 36.72 | 115334 | 115243.8 | 41.68 |
| | 50 | rnd | 93318 | 91156.1 | 1132.83 | 94754 | 92451 | 1318.64 | 96020 | 93096 | 1268.46 | 96427 | 93481.03 | 1533.04 |
| | | 2op | 115245 | 115155.6 | 29.55 | 115310 | 115219.67 | 48.61 | 115362 | 115261.27 | 45.42 | 115425 | 115314.4 | 43.83 |

Table A.404: *j*02459_7: basicRRGA+IM: 500 – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 93945 | 90689.5 | 1325.24 | 95772 | 93242.93 | 1348.09 | 97130 | 94214.37 | 1162.47 | 97564 | 94963.27 | 1182.93 |
| | | 2op | 115206 | 115134.63 | 44.3 | 115282 | 115204.93 | 43.23 | 115291 | 115200.1 | 51.06 | 114943 | 114731.5 | 113.56 |
| | 50 | rnd | 94193 | 92132.73 | 1347.05 | 97857 | 95960.97 | 1062.47 | 98878 | 97179.43 | 993.8 | 100534 | 98090.3 | 999.81 |
| | | 2op | 115260 | 115159.53 | 65.31 | 115326 | 115234.43 | 47.7 | 115356 | 115241.2 | 45.4 | 114902 | 114704.27 | 114.64 |
| 51 | 20 | rnd | 95009 | 92019.33 | 1323.31 | 96373 | 93691.1 | 1207.69 | 95636 | 94290.03 | 1011.5 | 96582 | 95035.73 | 1146.94 |
| | | 2op | 115252 | 115174.03 | 33.95 | 115320 | 115241.8 | 39.64 | 115306 | 115243.57 | 39.08 | 114984 | 114628.27 | 128.84 |
| | 50 | rnd | 95582 | 93096.43 | 1522.54 | 97892 | 95735.1 | 1185.79 | 97885 | 96370.4 | 900.93 | 98491 | 96536.1 | 1170.43 |
| | | 2op | 115342 | 115232.03 | 45.92 | 115421 | 115318.27 | 44.17 | 115334 | 115236.9 | 46.07 | 114774 | 114506 | 139.79 |

Table A.405: *j*02459_7: basicRRGA+IM: 5000 – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10344 | 9329.43 | 569.85 | 14027 | 12793.3 | 664.41 | 16059 | 14215.73 | 769.45 | 16473 | 14769.6 | 833.36 |
| | | 2op | 114851 | 114820.2 | 8.37 | 114853 | 114823.37 | 11.19 | 115038 | 114846.37 | 40.34 | 115171 | 114925.03 | 86.05 |
| | 50 | rnd | 10491 | 9300.2 | 434.67 | 13968 | 12879.3 | 609.23 | 15444 | 14153.63 | 603.95 | 16708 | 14864.23 | 659.95 |
| | | 2op | 115038 | 114828.07 | 40.54 | 114853 | 114825.57 | 13.18 | 115071 | 114843.13 | 46.83 | 115111 | 114908.97 | 79.18 |
| 51 | 20 | rnd | 11467 | 10331.83 | 468.36 | 15050 | 14263.27 | 484.72 | 16711 | 15490.47 | 598.98 | 18166 | 16225.03 | 585.3 |
| | | 2op | 114851 | 114819.1 | 6.02 | 114889 | 114831.17 | 19.09 | 115046 | 114867.27 | 63.94 | 115186 | 114945.9 | 105.45 |
| | 50 | rnd | 10962 | 10286.6 | 365.26 | 15629 | 14346.6 | 503.84 | 16113 | 15401.73 | 485.95 | 17632 | 16364.73 | 591.39 |
| | | 2op | 114851 | 114822.93 | 11.38 | 115037 | 114834.1 | 40.74 | 115071 | 114843.37 | 45.54 | 115115 | 114925.83 | 96.98 |

Table A.406: *j*02459_7: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10397 | 9195.7 | 489.36 | 14614 | 12896.87 | 648.47 | 15094 | 13970.67 | 632.15 | 15600 | 14442.3 | 505.04 |
| | | 2op | 114826 | 114818.27 | 1.46 | 114858 | 114827.07 | 15.38 | 115102 | 114859.63 | 62.2 | 115182 | 114935.83 | 99.18 |
| | 50 | rnd | 10266 | 9379.17 | 377.21 | 13899 | 12794.6 | 606.02 | 14543 | 13805.17 | 428.86 | 16310 | 14888.1 | 774.65 |
| | | 2op | 115038 | 114828.63 | 40.8 | 114857 | 114825.3 | 12.68 | 114895 | 114838.53 | 22.3 | 115150 | 114928.63 | 95.71 |
| 51 | 20 | rnd | 11419 | 10312.77 | 488.4 | 15707 | 14541.43 | 433.88 | 16716 | 15430.4 | 617.44 | 17338 | 16182.8 | 739.28 |
| | | 2op | 114826 | 114818.27 | 1.46 | 114886 | 114829.03 | 18.54 | 114886 | 114847.67 | 20.02 | 115144 | 114962.93 | 102.59 |
| | 50 | rnd | 11011 | 10271.73 | 363.22 | 15538 | 14214.4 | 572.86 | 16852 | 15309.63 | 659.94 | 17842 | 16169.63 | 589.23 |
| | | 2op | 114826 | 114819.07 | 2.77 | 115038 | 114833.47 | 41.07 | 115038 | 114846.13 | 42 | 115175 | 114932.97 | 108.27 |

Table A.407: *j*02459_7: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 33821 | 32741.13 | 720.37 | 35375 | 33933.37 | 563.26 | 35318 | 34539.77 | 481.37 | 36170 | 35024.77 | 475.15 |
| | | 2op | 38409 | 38279.13 | 112.36 | 38420 | 38233.13 | 189.3 | 38422 | 38287 | 153.41 | 38425 | 38293.33 | 134.48 |
| | 50 | rnd | 34902 | 33590.3 | 613.23 | 35791 | 34355.7 | 527.74 | 36347 | 34847.27 | 520.06 | 36307 | 35310.93 | 617.43 |
| | | 2op | 38439 | 38266.7 | 151.18 | 38434 | 38244.53 | 200.16 | 38425 | 38233.63 | 165.2 | 38434 | 38301.83 | 135.98 |
| 51 | 20 | rnd | 33754 | 32390.4 | 656.4 | 34691 | 33303.1 | 571.58 | 34415 | 33567.7 | 583.65 | 35149 | 34094.17 | 646.06 |
| | | 2op | 38409 | 38363.3 | 68.53 | 38434 | 38385.93 | 39.29 | 38430 | 38395.33 | 42.57 | 38435 | 38407.8 | 16.69 |
| | 50 | rnd | 35149 | 34083.23 | 727.88 | 35357 | 34274.3 | 527.17 | 35784 | 34489.73 | 576.27 | 36057 | 35153.57 | 492.48 |
| | | 2op | 38434 | 38372.9 | 86.18 | 38434 | 38386.53 | 45.76 | 38439 | 38396.3 | 55.84 | 38439 | 38408.27 | 39.76 |

Table A.408: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 34365 | 32827.27 | 668.6 | 35404 | 33940.3 | 616.23 | 35805 | 34613.2 | 542.4 | 35995 | 35039.33 | 499.32 |
| | | 2op | 38403 | 38209.5 | 187.81 | 38412 | 38167.03 | 206.8 | 38434 | 38224.13 | 186.28 | 38430 | 38227.5 | 175.37 |
| | 50 | rnd | 34541 | 33348.9 | 549.84 | 35201 | 34272.4 | 587.93 | 35697 | 34658 | 578.84 | 36263 | 35202.17 | 462.05 |
| | | 2op | 38434 | 38214.47 | 234.14 | 38423 | 38247.33 | 151.16 | 38410 | 38262.63 | 185.17 | 38419 | 38232.83 | 153.3 |
| 51 | 20 | rnd | 34387 | 32652.97 | 602.21 | 34535 | 33145.67 | 766.3 | 34966 | 33630.07 | 600.09 | 35117 | 34024.87 | 599.45 |
| | | 2op | 38411 | 38361.17 | 52.41 | 38434 | 38396.07 | 28.21 | 38434 | 38412.33 | 21.65 | 38434 | 38415.2 | 15.48 |
| | 50 | rnd | 35212 | 34006.8 | 564.33 | 35148 | 34276.37 | 515.51 | 35572 | 34417.87 | 533.93 | 36094 | 34904.97 | 586.5 |
| | | 2op | 38415 | 38370.27 | 60.77 | 38434 | 38392.33 | 42.31 | 38435 | 38374.4 | 74.56 | 38439 | 38399.37 | 34.53 |

Table A.409: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 34908 | 32915.57 | 864.38 | 34146 | 33520.37 | 399.05 | 35286 | 33858.27 | 651.56 | 35343 | 34129.2 | 615.36 |
| | | 2op | 38422 | 38381.53 | 38 | 38434 | 38408.8 | 12.95 | 38439 | 38414.53 | 12.8 | 38439 | 38423.77 | 10.91 |
| | 50 | rnd | 34979 | 33731.7 | 584.09 | 35863 | 34355.4 | 595.29 | 35797 | 34928.6 | 467.56 | 35999 | 35129.27 | 460.41 |
| | | 2op | 38434 | 38393.17 | 27.65 | 38434 | 38408.33 | 24.03 | 38439 | 38422.23 | 14.09 | 38439 | 38425.4 | 15.35 |
| 51 | 20 | rnd | 34847 | 33201.4 | 790.78 | 34646 | 33527.17 | 590.64 | 35099 | 33756 | 593.66 | 35602 | 34396.57 | 563.81 |
| | | 2op | 38434 | 38405.97 | 11.71 | 38434 | 38411.57 | 6.38 | 38439 | 38420.2 | 12.05 | 38439 | 38433.27 | 9.49 |
| | 50 | rnd | 35061 | 34026.07 | 587.7 | 36332 | 34639.47 | 708.62 | 35592 | 34911.1 | 393.23 | 36241 | 35350.8 | 534.36 |
| | | 2op | 38434 | 38413.3 | 10.49 | 38439 | 38430.93 | 11.04 | 38439 | 38435.6 | 7.59 | 38439 | 38438.13 | 1.78 |

Table A.410: $m15421\_5$: basicRRGA+IM: 500 – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 34304 | 33212.73 | 520.27 | 36094 | 34739.3 | 564.8 | 36508 | 35063.67 | 695.5 | 36266 | 35518.07 | 469.68 |
| | | 2op | 38434 | 38401.33 | 20.45 | 38439 | 38427.97 | 10.01 | 38439 | 38433.2 | 7.02 | 38439 | 38434.57 | 3.36 |
| | 50 | rnd | 35628 | 34202.73 | 618.24 | 36313 | 35274.67 | 561.45 | 36506 | 35653.63 | 546.85 | 37132 | 36048.33 | 448.92 |
| | | 2op | 38434 | 38411.77 | 15.23 | 38439 | 38429.53 | 10.86 | 38439 | 38434.83 | 3.24 | 38439 | 38436.7 | 2.64 |
| 51 | 20 | rnd | 35446 | 33843.3 | 704.23 | 35851 | 34733.73 | 583.2 | 36096 | 34949.3 | 563.16 | 36278 | 35398.13 | 530.24 |
| | | 2op | 38439 | 38414.53 | 13.7 | 38439 | 38435.73 | 6.49 | 38439 | 38437.53 | 2.13 | 38439 | 38433.53 | 7.14 |
| | 50 | rnd | 35568 | 34354.63 | 519.81 | 35998 | 35198.63 | 416.95 | 36541 | 35546.73 | 459.62 | 36476 | 35810.7 | 418.89 |
| | | 2op | 38439 | 38423.57 | 11.48 | 38439 | 38437.87 | 2.26 | 38439 | 38437.97 | 1.92 | 38439 | 38436.3 | 3 |

Table A.411: $m15421\_5$: basicRRGA+IM: 5000 – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7931 | 6800.27 | 514.71 | 11159 | 9469.9 | 667.62 | 11275 | 10259.4 | 508.13 | 12764 | 11036.87 | 787.2 |
| | | 2op | 38409 | 38345.03 | 68 | 38409 | 38389.77 | 39.47 | 38414 | 38406.6 | 5.94 | 38414 | 38409.23 | 1.41 |
| | 50 | rnd | 7644 | 6663.73 | 652.41 | 11172 | 9754.47 | 655.17 | 11294 | 10536.3 | 462.37 | 12612 | 11130.77 | 746.2 |
| | | 2op | 38409 | 38321.83 | 78.04 | 38409 | 38393.17 | 29.6 | 38411 | 38405.87 | 6.69 | 38434 | 38410.53 | 4.87 |
| 51 | 20 | rnd | 8454 | 7461.2 | 533.43 | 12266 | 10381.13 | 680.8 | 11997 | 11168.77 | 551.55 | 12692 | 11647.33 | 536.59 |
| | | 2op | 38409 | 38342.87 | 69.57 | 38414 | 38400.9 | 10.23 | 38409 | 38406.93 | 5.61 | 38414 | 38409.93 | 1.89 |
| | 50 | rnd | 8078 | 7476.13 | 453.76 | 11159 | 10261.77 | 439.16 | 13198 | 11214.13 | 645.36 | 13107 | 11746.27 | 623.24 |
| | | 2op | 38397 | 38329.4 | 75.59 | 38409 | 38398.13 | 9.73 | 38414 | 38407.83 | 4.3 | 38414 | 38409.83 | 1.9 |

Table A.412: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8041 | 6798.77 | 586.17 | 11095 | 9646.47 | 516.84 | 11856 | 10448.27 | 700.18 | 12565 | 10991.17 | 688.71 |
| | | 2op | 38401 | 38300.23 | 77.4 | 38409 | 38390.87 | 28.97 | 38409 | 38405.4 | 6.9 | 38434 | 38408.57 | 20.93 |
| | 50 | rnd | 7895 | 6623.1 | 605.22 | 10571 | 9728.83 | 529.98 | 11923 | 10581.13 | 594.17 | 12333 | 11113 | 694.39 |
| | | 2op | 38404 | 38321.63 | 78.21 | 38414 | 38398.23 | 10.7 | 38414 | 38406.33 | 6.29 | 38434 | 38408.3 | 13.96 |
| 51 | 20 | rnd | 8842 | 7410.03 | 575.29 | 12093 | 10295.83 | 816.88 | 12630 | 10978 | 738.12 | 12703 | 11632.1 | 680.08 |
| | | 2op | 38404 | 38321.93 | 74.98 | 38409 | 38401.9 | 9.95 | 38409 | 38407.4 | 4.11 | 38434 | 38410.6 | 5.3 |
| | 50 | rnd | 8149 | 7163.9 | 536.04 | 11510 | 10162.4 | 657.75 | 12001 | 10762.67 | 488.72 | 12633 | 11641.73 | 648.32 |
| | | 2op | 38404 | 38336.47 | 71.77 | 38410 | 38396.1 | 11.56 | 38414 | 38407.7 | 2.52 | 38414 | 38410 | 2.03 |

Table A.413: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38820 | 37830.63 | 683.24 | 40759 | 39550.2 | 604.52 | 41493 | 40415.77 | 492.73 | 42547 | 41071.37 | 652.52 |
| | | 2op | 47387 | 47198.17 | 207.92 | 47403 | 47317.27 | 100.73 | 47403 | 47319.13 | 135.01 | 47403 | 47351.13 | 127.14 |
| | 50 | rnd | 40204 | 38542.2 | 742.25 | 41275 | 39709.43 | 790.84 | 41494 | 40590.83 | 547.91 | 42685 | 41407.4 | 586.96 |
| | | 2op | 47403 | 47265.6 | 126.05 | 47403 | 47288.23 | 115.75 | 47403 | 47296.97 | 126.85 | 47403 | 47320.23 | 136.62 |
| 51 | 20 | rnd | 39356 | 37616.1 | 912.54 | 39861 | 38440.33 | 777.53 | 40276 | 38965.27 | 728.13 | 40862 | 39974.7 | 508.54 |
| | | 2op | 47403 | 47283.9 | 81.45 | 47403 | 47316.3 | 97.31 | 47403 | 47377.87 | 38.43 | 47403 | 47389.4 | 19.07 |
| | 50 | rnd | 40277 | 39067.97 | 662.74 | 40828 | 39499.9 | 734.25 | 41244 | 39889.1 | 607.81 | 41918 | 40532.1 | 526.7 |
| | | 2op | 47403 | 47313.43 | 125.86 | 47403 | 47349.93 | 75.19 | 47403 | 47374.07 | 41.77 | 47403 | 47397.03 | 11.54 |

Table A.414: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 39508 | 37677.23 | 992.67 | 40903 | 39471.23 | 719.44 | 41618 | 40497.6 | 621.78 | 42235 | 41123.37 | 601.31 |
| | | 2op | 47387 | 47175.13 | 222.95 | 47403 | 47299.27 | 122.47 | 47403 | 47312.63 | 133.58 | 47403 | 47326.07 | 117.45 |
| | 50 | rnd | 40302 | 38582.9 | 800.82 | 41105 | 39849.93 | 587.97 | 42053 | 40633.4 | 650.25 | 42922 | 41378.33 | 598.27 |
| | | 2op | 47403 | 47171.27 | 270.46 | 47403 | 47250.33 | 167.81 | 47403 | 47331.27 | 121.32 | 47403 | 47305.83 | 121.84 |
| 51 | 20 | rnd | 39167 | 37635.13 | 710.24 | 40271 | 38346.7 | 844.21 | 40149 | 39059.3 | 598.73 | 41047 | 39933.5 | 714.9 |
| | | 2op | 47387 | 47250.67 | 80.06 | 47403 | 47340.1 | 69.67 | 47403 | 47372.77 | 42.85 | 47403 | 47391.2 | 9.24 |
| | 50 | rnd | 39849 | 38708.17 | 635.84 | 40414 | 39461.83 | 623.36 | 41401 | 40154.23 | 585.93 | 42055 | 40628.2 | 711.84 |
| | | 2op | 47403 | 47305.47 | 158.87 | 47403 | 47325.2 | 97.21 | 47403 | 47384.17 | 31.05 | 47403 | 47391.17 | 12.76 |

Table A.415: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 39389 | 37548.7 | 739.1 | 40170 | 38507.37 | 845.04 | 40327 | 38755.63 | 810.28 | 40810 | 39205.53 | 786.74 |
| | | 2op | 47387 | 47258 | 72.39 | 47403 | 47343.17 | 65.8 | 47403 | 47378.7 | 38.61 | 47403 | 47398.2 | 7.46 |
| | 50 | rnd | 40420 | 38714.33 | 736.33 | 41176 | 39818.6 | 658.41 | 41391 | 39899.4 | 648.2 | 41775 | 40654.8 | 561.8 |
| | | 2op | 47403 | 47324.57 | 83.2 | 47403 | 47386.4 | 29.08 | 47403 | 47389.1 | 29.46 | 47403 | 47398.73 | 7.2 |
| 51 | 20 | rnd | 39687 | 38194.93 | 591.24 | 40462 | 38615.4 | 858.67 | 40192 | 38606 | 731.84 | 40314 | 38955.67 | 598.01 |
| | | 2op | 47387 | 47289.5 | 73.74 | 47403 | 47368.87 | 52.03 | 47403 | 47392.33 | 7.67 | 47403 | 47400.03 | 6.15 |
| | 50 | rnd | 40622 | 39468.83 | 588.79 | 41114 | 40208.53 | 608.32 | 41314 | 40052.43 | 646.92 | 41912 | 40749.63 | 656.32 |
| | | 2op | 47403 | 47374.5 | 48.36 | 47403 | 47394.47 | 8.12 | 47403 | 47398.73 | 7.2 | 47403 | 47403 | 0 |

Table A.416: $m15421\_6$: basicRRGA+IM: 500 – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 39174 | 38388.43 | 498.91 | 41182 | 40062.73 | 632.51 | 41843 | 40840.57 | 506.84 | 41833 | 40908.1 | 435.6 |
| | | 2op | 47403 | 47321.17 | 81.2 | 47403 | 47393.1 | 8.38 | 47403 | 47399.27 | 6.88 | 47403 | 47398 | 6.93 |
| | 50 | rnd | 40123 | 39071.23 | 572.49 | 42495 | 40655.47 | 617.57 | 42601 | 41622.93 | 527.39 | 43197 | 41926.07 | 559.47 |
| | | 2op | 47403 | 47387.63 | 23.76 | 47403 | 47398.73 | 7.2 | 47403 | 47401.93 | 4.06 | 47403 | 47402.87 | 0.57 |
| 51 | 20 | rnd | 40231 | 38861.9 | 833.56 | 41221 | 39817.27 | 526.87 | 41541 | 40384.27 | 604.33 | 41707 | 40753.93 | 497.81 |
| | | 2op | 47403 | 47357.87 | 60.69 | 47403 | 47398.2 | 7.46 | 47403 | 47400.87 | 5.53 | 47403 | 47387.47 | 10.51 |
| | 50 | rnd | 40779 | 39661.53 | 678.86 | 41823 | 40852.6 | 572.71 | 42416 | 41260.97 | 605.96 | 43074 | 41745.37 | 537.04 |
| | | 2op | 47403 | 47390.07 | 29.63 | 47403 | 47401.93 | 4.06 | 47403 | 47403 | 0 | 47403 | 47399.4 | 5.79 |

Table A.417: $m15421\_6$: basicRRGA+IM: 5000 – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6653 | 6012.83 | 391.81 | 9980 | 9014.43 | 515.82 | 10934 | 9724.37 | 577.36 | 12199 | 10375.73 | 710.48 |
| | | 2op | 47236 | 47181.93 | 21.41 | 47387 | 47205.1 | 46.93 | 47387 | 47242 | 54.08 | 47403 | 47317.2 | 75.72 |
| | 50 | rnd | 6638 | 5909.03 | 403.3 | 10117 | 8946.27 | 573.54 | 11022 | 9638.7 | 659.48 | 11205 | 10338.57 | 523.51 |
| | | 2op | 47263 | 47178.77 | 19.6 | 47323 | 47195.7 | 37.43 | 47386 | 47240.07 | 60.34 | 47387 | 47309.4 | 71.01 |
| 51 | 20 | rnd | 7328 | 6709.17 | 411.68 | 11101 | 9799.4 | 593.02 | 11803 | 10695.97 | 471.08 | 12365 | 11307.67 | 512.81 |
| | | 2op | 47259 | 47180.57 | 21.61 | 47387 | 47216.57 | 49.41 | 47387 | 47244.2 | 60.07 | 47403 | 47332.5 | 72.48 |
| | 50 | rnd | 7098 | 6541.3 | 281.46 | 10908 | 9715.4 | 561.57 | 11722 | 10477.7 | 555.72 | 11801 | 10908.63 | 547.71 |
| | | 2op | 47236 | 47180 | 18.96 | 47322 | 47203.63 | 37.59 | 47387 | 47238.6 | 51.33 | 47402 | 47313.03 | 70.92 |

Table A.418: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6872 | 5981.4 | 441.8 | 9850 | 8951.07 | 467.67 | 10885 | 9914.27 | 475.27 | 11238 | 10241.57 | 535.61 |
| | | 2op | 47238 | 47180.27 | 19.08 | 47316 | 47208.27 | 37.45 | 47387 | 47253.43 | 56.84 | 47403 | 47315.07 | 75.75 |
| | 50 | rnd | 6635 | 5939.6 | 464.52 | 9725 | 8961.8 | 384.43 | 11165 | 9853.77 | 575.48 | 10961 | 10032.8 | 532.8 |
| | | 2op | 47238 | 47177.23 | 14.64 | 47259 | 47207.43 | 31.91 | 47387 | 47262.07 | 59.87 | 47403 | 47318.07 | 75.62 |
| 51 | 20 | rnd | 7266 | 6662.9 | 451.18 | 10379 | 9789.07 | 397.89 | 11602 | 10468.53 | 534.47 | 11606 | 10800.43 | 554.16 |
| | | 2op | 47236 | 47177.93 | 15.84 | 47323 | 47204.17 | 38.27 | 47387 | 47239.37 | 49.8 | 47387 | 47268.87 | 57.83 |
| | 50 | rnd | 7365 | 6559.3 | 339.5 | 10513 | 9642.6 | 430.36 | 11172 | 10422.67 | 457.48 | 12580 | 11066.7 | 596.83 |
| | | 2op | 47238 | 47175.3 | 11.86 | 47323 | 47201.77 | 39.55 | 47384 | 47223.33 | 41.65 | 47403 | 47303.73 | 71.08 |

Table A.419: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46314 | 44009.7 | 814.4 | 47617 | 46257.4 | 673.47 | 49022 | 47368.2 | 712.39 | 49246 | 48091.2 | 618.42 |
| | | 2op | 54742 | 54585.83 | 148.79 | 54741 | 54594.83 | 154.14 | 54733 | 54640.17 | 74.63 | 54742 | 54668.67 | 54.1 |
| | 50 | rnd | 45937 | 44674.3 | 970.7 | 48723 | 46467.3 | 917.19 | 48934 | 47298.1 | 736.04 | 49328 | 48088.53 | 499.34 |
| | | 2op | 54738 | 54539.03 | 177.21 | 54750 | 54562.5 | 138.47 | 54742 | 54631.63 | 100.35 | 54726 | 54601.5 | 209.64 |
| 51 | 20 | rnd | 45801 | 43637.83 | 920.67 | 46422 | 45213.17 | 766.3 | 47781 | 45772.8 | 705.78 | 47731 | 46621.53 | 592.91 |
| | | 2op | 54730 | 54673.53 | 54.93 | 54742 | 54667.07 | 77.75 | 54742 | 54694.93 | 49.31 | 54750 | 54723.57 | 19.3 |
| | 50 | rnd | 47043 | 45526.23 | 843.94 | 48423 | 46237.93 | 774.29 | 48190 | 47011.63 | 739.46 | 48448 | 47462.97 | 464.67 |
| | | 2op | 54741 | 54675.07 | 38.14 | 54751 | 54687.8 | 47.05 | 54742 | 54705.67 | 43.71 | 54735 | 54690.23 | 37.01 |

Table A.420: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 45592 | 43927.17 | 787.87 | 48002 | 46432.37 | 700.23 | 48602 | 47353.3 | 570.15 | 49734 | 48246.47 | 603.93 |
| | | 2op | 54704 | 54550.27 | 147.45 | 54732 | 54558.87 | 173.69 | 54742 | 54643.53 | 77.07 | 54735 | 54666.6 | 48.16 |
| | 50 | rnd | 46144 | 44668.67 | 650.25 | 47207 | 46291.03 | 617.73 | 48513 | 47532.13 | 567.11 | 49616 | 48254.63 | 604.22 |
| | | 2op | 54712 | 54540.47 | 135.55 | 54738 | 54644.37 | 70.2 | 54747 | 54649.1 | 84.51 | 54750 | 54677.63 | 45.18 |
| 51 | 20 | rnd | 45543 | 43686.47 | 957.84 | 46725 | 45283.47 | 799.21 | 47688 | 45913.63 | 816.29 | 47855 | 46606.5 | 685.76 |
| | | 2op | 54742 | 54661.17 | 65.21 | 54738 | 54694.67 | 36.06 | 54742 | 54704.3 | 34.18 | 54742 | 54707.5 | 28.64 |
| | 50 | rnd | 47044 | 45235.3 | 843.59 | 47554 | 46305.1 | 775.93 | 48038 | 46783.43 | 669.41 | 49370 | 47396.2 | 723.87 |
| | | 2op | 54742 | 54677.67 | 50.34 | 54742 | 54675.3 | 50.11 | 54743 | 54688.17 | 48.56 | 54751 | 54701.57 | 40.18 |

Table A.421: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46368 | 44050.63 | 966.14 | 46557 | 44730.63 | 977.71 | 46988 | 45490.13 | 706.22 | 47790 | 45875.3 | 841.93 |
| | | 2op | 54742 | 54703.57 | 30.44 | 54751 | 54725.93 | 19.12 | 54751 | 54731 | 19.3 | 54751 | 54739.93 | 6.53 |
| | 50 | rnd | 46907 | 45168.03 | 856.35 | 47557 | 46204.17 | 598.68 | 47623 | 46649.53 | 515.77 | 48444 | 47333.63 | 541.13 |
| | | 2op | 54750 | 54706.27 | 38.92 | 54751 | 54728.2 | 15.6 | 54751 | 54735.3 | 12.99 | 54765 | 54742.9 | 7.27 |
| 51 | 20 | rnd | 46706 | 44630.37 | 816.49 | 47161 | 45243.37 | 803.92 | 47201 | 45241.5 | 835.69 | 47001 | 45881.17 | 746.06 |
| | | 2op | 54742 | 54731.13 | 17.49 | 54751 | 54742.43 | 2.45 | 54751 | 54743.2 | 3.11 | 54751 | 54745.57 | 4.45 |
| | 50 | rnd | 47155 | 45998.27 | 696.82 | 48302 | 46401.47 | 955.19 | 48118 | 46859.8 | 666.85 | 48370 | 47281.53 | 592.9 |
| | | 2op | 54742 | 54734.47 | 15.5 | 54751 | 54743.6 | 6.16 | 54751 | 54745.6 | 4.48 | 54751 | 54748 | 4.32 |

Table A.422: $m15421\_7$: basicRRGA+IM: 500 – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46188 | 44563.47 | 843.36 | 48110 | 46679.7 | 738.19 | 49018 | 47264.13 | 656.33 | 48510 | 47700.07 | 514.78 |
| | | 2op | 54751 | 54716.1 | 27.52 | 54750 | 54737.23 | 11.31 | 54751 | 54739.73 | 14.77 | 54751 | 54741.8 | 5.83 |
| | 50 | rnd | 47304 | 45820.27 | 715.99 | 48547 | 47533.5 | 602.31 | 49892 | 48531.37 | 562.83 | 49889 | 48955.77 | 488.44 |
| | | 2op | 54742 | 54720.9 | 29.41 | 54751 | 54742.13 | 6.8 | 54751 | 54744.4 | 5.89 | 54760 | 54745.63 | 5.95 |
| 51 | 20 | rnd | 48391 | 45478.83 | 982.37 | 47917 | 46831.2 | 646.7 | 48731 | 47426.8 | 693.08 | 48804 | 47651.93 | 612.26 |
| | | 2op | 54751 | 54741.2 | 6.07 | 54751 | 54745.9 | 4.54 | 54751 | 54749.2 | 3.66 | 54742 | 54725.33 | 17.7 |
| | 50 | rnd | 47175 | 46327.93 | 429.63 | 48823 | 47779.07 | 415.42 | 49689 | 48307.03 | 631.85 | 50060 | 48585.6 | 556.75 |
| | | 2op | 54751 | 54741.2 | 7.58 | 54751 | 54747.1 | 4.54 | 54766 | 54750.6 | 4 | 54750 | 54734.4 | 9.98 |

Table A.423: $m15421\_7$: basicRRGA+IM: 5000 – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7884 | 6679.3 | 481.47 | 12431 | 10703.7 | 730.3 | 13519 | 11652.2 | 694.63 | 13574 | 12620.07 | 480.03 |
| | | 2op | 54742 | 54694.1 | 16.97 | 54742 | 54716.63 | 20.45 | 54750 | 54738.07 | 11.99 | 54751 | 54742.6 | 2.28 |
| | 50 | rnd | 7705 | 6851.8 | 517.51 | 11495 | 10540.13 | 600.29 | 12628 | 11421.57 | 636.59 | 13804 | 12250.2 | 789.36 |
| | | 2op | 54741 | 54695.27 | 17.75 | 54742 | 54723.93 | 20.44 | 54742 | 54739 | 9.94 | 54751 | 54743.5 | 3.41 |
| 51 | 20 | rnd | 8832 | 7660.97 | 495.89 | 13101 | 11901.2 | 533.55 | 14038 | 12788.63 | 595.8 | 14815 | 13231.7 | 761.28 |
| | | 2op | 54742 | 54702.23 | 20.95 | 54742 | 54721.1 | 20.85 | 54742 | 54737.87 | 12.06 | 54751 | 54741.5 | 7.75 |
| | 50 | rnd | 8284 | 7410.83 | 417.7 | 12585 | 11413.43 | 707.84 | 13568 | 12477.2 | 525.56 | 14703 | 13258.73 | 626.32 |
| | | 2op | 54740 | 54691.77 | 15.01 | 54742 | 54726.53 | 20.01 | 54742 | 54732.03 | 16.73 | 54751 | 54743.1 | 8.58 |

Table A.424: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8130 | 6600.43 | 585.56 | 11793 | 10371.6 | 759.18 | 13319 | 11667.13 | 881.8 | 13721 | 12193.5 | 680.43 |
| | | 2op | 54742 | 54690.7 | 19 | 54742 | 54713.87 | 19.5 | 54742 | 54729.67 | 18.36 | 54751 | 54743.33 | 3.2 |
| | 50 | rnd | 8030 | 6896.03 | 519.18 | 12346 | 10423.73 | 847.57 | 12870 | 11362.5 | 625.94 | 13472 | 12366.7 | 547.47 |
| | | 2op | 54729 | 54688.33 | 13.76 | 54742 | 54719.9 | 21.59 | 54742 | 54733.47 | 15.8 | 54751 | 54741.27 | 7.58 |
| 51 | 20 | rnd | 8682 | 7376.77 | 551.23 | 12378 | 11396.57 | 469.4 | 13835 | 12701.53 | 531.82 | 14281 | 13166.2 | 508.31 |
| | | 2op | 54741 | 54692.5 | 16.68 | 54742 | 54722.57 | 20.2 | 54742 | 54736.63 | 13.52 | 54751 | 54742.6 | 2.28 |
| | 50 | rnd | 8211 | 7361.37 | 423.77 | 12420 | 11309.17 | 640.7 | 13609 | 12507.2 | 710.4 | 14070 | 13217.77 | 551.43 |
| | | 2op | 54742 | 54691.93 | 17.29 | 54742 | 54719.17 | 21.5 | 54742 | 54739 | 9.93 | 54751 | 54744.07 | 3.89 |

Table A.425: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10858 | 10341.37 | 254.25 | 11025 | 10606.37 | 227.68 | 11225 | 10710.03 | 221.49 | 11154 | 10843.27 | 165.31 |
| | | 2op | 11109 | 10866.23 | 172.74 | 11305 | 10998.37 | 139.76 | 11305 | 11037.6 | 155.44 | 11305 | 11036.07 | 134.52 |
| | 50 | rnd | 11152 | 10540.67 | 271.64 | 11103 | 10753.7 | 220.24 | 11216 | 10865.87 | 209.33 | 11285 | 10968.1 | 180.46 |
| | | 2op | 11305 | 10914.03 | 183.09 | 11305 | 10994.77 | 151.64 | 11256 | 11072.53 | 94.45 | 11305 | 11136.87 | 134.97 |
| 51 | 20 | rnd | 10999 | 10298.3 | 312.99 | 11314 | 10614.53 | 264.64 | 11024 | 10617.8 | 223.7 | 11057 | 10757.07 | 202.74 |
| | | 2op | 11109 | 10991.47 | 101.08 | 11109 | 11069.57 | 48.51 | 11305 | 11101.67 | 77.27 | 11305 | 11114.5 | 76.05 |
| | 50 | rnd | 11003 | 10641.1 | 216.83 | 11115 | 10661.63 | 245.9 | 11304 | 10876.97 | 227.09 | 11247 | 10927.97 | 180.39 |
| | | 2op | 11109 | 10996.2 | 113.48 | 11373 | 11091 | 104.53 | 11305 | 11142.57 | 106 | 11394 | 11169.7 | 118.04 |

Table A.426: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11062 | 10377.73 | 294.35 | 11198 | 10728.5 | 229.73 | 11182 | 10735.27 | 217.23 | 11138 | 10875.1 | 195.6 |
| | | 2op | 11256 | 10789.37 | 223.34 | 11305 | 11010.57 | 140.85 | 11256 | 11028.33 | 127.49 | 11373 | 11099.8 | 157.17 |
| | 50 | rnd | 11128 | 10483 | 314.03 | 11285 | 10745.27 | 190.71 | 11245 | 10874.37 | 175.2 | 11181 | 10970.47 | 139.38 |
| | | 2op | 11256 | 10922.93 | 169.45 | 11256 | 11008.37 | 174.59 | 11305 | 11085.7 | 91.25 | 11394 | 11115.3 | 126.48 |
| 51 | 20 | rnd | 10957 | 10415.13 | 271.04 | 10975 | 10478.3 | 250.53 | 11007 | 10662.4 | 205.31 | 11411 | 10793.87 | 227.01 |
| | | 2op | 11109 | 11037.7 | 45.22 | 11209 | 11034.3 | 84.24 | 11256 | 11081.03 | 54.47 | 11273 | 11160.2 | 82.29 |
| | 50 | rnd | 11170 | 10593.27 | 219.36 | 11195 | 10723.47 | 241.73 | 11181 | 10837.53 | 198.02 | 11270 | 10934.13 | 157.96 |
| | | 2op | 11256 | 11031.47 | 114.45 | 11256 | 11091.4 | 97.19 | 11373 | 11103.97 | 138.39 | 11305 | 11179.9 | 83.39 |

Table A.427: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10947 | 10410.77 | 277.53 | 11214 | 10664.37 | 251.71 | 11304 | 10767.57 | 259.8 | 11226 | 10905.8 | 187.83 |
| | | 2op | 11109 | 11057.37 | 65.61 | 11213 | 11108.7 | 26.08 | 11305 | 11118.77 | 53.88 | 11373 | 11179.87 | 88.66 |
| | 50 | rnd | 10964 | 10588.43 | 203.24 | 11215 | 10874.5 | 185.95 | 11310 | 10904.53 | 193.95 | 11369 | 11067.93 | 156.01 |
| | | 2op | 11209 | 11052.63 | 75.97 | 11373 | 11137.83 | 89.2 | 11305 | 11190.47 | 79.75 | 11394 | 11244.53 | 80.74 |
| 51 | 20 | rnd | 11043 | 10571.57 | 218.3 | 11062 | 10697.57 | 202.16 | 11308 | 10831.2 | 213.97 | 11280 | 10893.5 | 225.3 |
| | | 2op | 11109 | 11079.87 | 42.68 | 11109 | 11109 | 0 | 11305 | 11138.4 | 67.6 | 11394 | 11243.97 | 74.24 |
| | 50 | rnd | 11195 | 10675.1 | 249.81 | 11183 | 10858.53 | 220.81 | 11226 | 10908.8 | 181.11 | 11226 | 11040.13 | 155.68 |
| | | 2op | 11151 | 11098.13 | 30.99 | 11305 | 11133.27 | 59.93 | 11373 | 11207.83 | 92.75 | 11373 | 11281.37 | 46.33 |

Table A.428: $x60189\_4$: basicRRGA+IM: 500 – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10941 | 10447.13 | 216.73 | 11100 | 10843.03 | 137.4 | 11287 | 10911.83 | 196.53 | 11393 | 11029.53 | 177.11 |
| | | 2op | 11109 | 11065.63 | 49.38 | 11305 | 11154.03 | 89.23 | 11373 | 11205.17 | 85.79 | 11373 | 11256.53 | 66.25 |
| | 50 | rnd | 11102 | 10640.9 | 229.49 | 11308 | 10945.13 | 170.35 | 11343 | 11038 | 170.88 | 11411 | 11116.2 | 144.32 |
| | | 2op | 11213 | 11074.33 | 57.5 | 11305 | 11176.1 | 90.34 | 11373 | 11242.43 | 77.48 | 11394 | 11305.73 | 50.47 |
| 51 | 20 | rnd | 11137 | 10610.9 | 235.75 | 11242 | 10827.3 | 183.88 | 11235 | 10947.83 | 179.88 | 11309 | 10988.73 | 188.91 |
| | | 2op | 11109 | 11093.67 | 34.87 | 11305 | 11118.73 | 39.3 | 11305 | 11160.5 | 77.83 | 11305 | 11257.77 | 59.69 |
| | 50 | rnd | 11121 | 10747.67 | 176.49 | 11280 | 10993.57 | 163.08 | 11411 | 11102.7 | 152.33 | 11411 | 11116.67 | 124.54 |
| | | 2op | 11151 | 11110.4 | 7.67 | 11373 | 11205.47 | 94.95 | 11394 | 11265.77 | 81.62 | 11373 | 11296.23 | 49.48 |

Table A.429: $x60189\_4$: basicRRGA+IM: 5000 – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7157 | 6468.47 | 454.26 | 8182 | 7543.87 | 345.35 | 8415 | 7882.37 | 298.21 | 9061 | 8344.5 | 334.87 |
| | | 2op | 11095 | 11011.63 | 35.49 | 11109 | 11060.3 | 62.57 | 11109 | 11102.6 | 23.28 | 11109 | 11105.73 | 16.77 |
| | 50 | rnd | 7296 | 6445.33 | 437.61 | 8388 | 7605.67 | 391.83 | 8953 | 7929.53 | 389.53 | 9118 | 8395.6 | 382.31 |
| | | 2op | 11107 | 11028.73 | 35.28 | 11109 | 11064.53 | 46.7 | 11109 | 11099.73 | 28.05 | 11305 | 11120.93 | 44.42 |
| 51 | 20 | rnd | 7328 | 6363.93 | 429.51 | 8377 | 7546.03 | 430.57 | 8746 | 7827.7 | 402.79 | 8765 | 8313.3 | 298.62 |
| | | 2op | 11107 | 11025.57 | 35.64 | 11109 | 11061.03 | 51.22 | 11109 | 11105.87 | 16.79 | 11109 | 11108.73 | 0.69 |
| | 50 | rnd | 7364 | 6637.17 | 399.6 | 8232 | 7573.07 | 347.03 | 8620 | 7925.4 | 339.21 | 9024 | 8379.17 | 287.82 |
| | | 2op | 11107 | 11034.27 | 40.65 | 11109 | 11076.6 | 43.66 | 11109 | 11105.73 | 16.77 | 11109 | 11108.87 | 0.51 |

Table A.430: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7355 | 6538.93 | 383.13 | 8232 | 7598.87 | 419.51 | 9026 | 7921.8 | 453.88 | 8985 | 8394.63 | 328.02 |
| | | 2op | 11107 | 11036.57 | 44.6 | 11109 | 11045.2 | 60.15 | 11109 | 11095 | 32.22 | 11151 | 11112.53 | 11.79 |
| | 50 | rnd | 7301 | 6556.87 | 416.32 | 8196 | 7550.1 | 309.86 | 8425 | 7965.33 | 295.18 | 9121 | 8374.27 | 373.98 |
| | | 2op | 11107 | 11041.6 | 45 | 11109 | 11070.6 | 45.35 | 11109 | 11095.2 | 31.69 | 11109 | 11108.03 | 3.85 |
| 51 | 20 | rnd | 7460 | 6482.07 | 472.24 | 8282 | 7593.43 | 358.94 | 8590 | 7986.67 | 312.48 | 9128 | 8517.1 | 299.28 |
| | | 2op | 11107 | 11028.53 | 52.58 | 11109 | 11072.2 | 45.84 | 11109 | 11098.17 | 33.6 | 11109 | 11108.93 | 0.37 |
| | 50 | rnd | 7435 | 6601.13 | 373.78 | 8369 | 7638.67 | 337.28 | 8513 | 7763.8 | 415.99 | 9172 | 8310.63 | 331.87 |
| | | 2op | 11107 | 11034.47 | 40.41 | 11109 | 11085.93 | 39.65 | 11109 | 11094.6 | 32.47 | 11256 | 11106.33 | 49.22 |

Table A.431: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13461 | 12870.67 | 318.43 | 13715 | 13240.63 | 200.8 | 13940 | 13357.07 | 228.86 | 13834 | 13460.83 | 221.06 |
| | | 2op | 13930 | 13772.43 | 97.9 | 13930 | 13822.33 | 69 | 14064 | 13850.13 | 80.96 | 13990 | 13850.13 | 87.42 |
| | 50 | rnd | 13487 | 12983.17 | 287.34 | 13723 | 13291.63 | 175.19 | 13831 | 13436.9 | 159.5 | 13873 | 13551.7 | 128.04 |
| | | 2op | 13899 | 13717.8 | 153.91 | 13967 | 13812.77 | 94.7 | 14038 | 13858.17 | 92.81 | 14071 | 13899.53 | 71.29 |
| 51 | 20 | rnd | 13351 | 12867.2 | 274.51 | 13358 | 13032.43 | 212.8 | 13729 | 13140.13 | 208.26 | 13731 | 13297.5 | 272.57 |
| | | 2op | 13835 | 13758.77 | 44.91 | 13899 | 13835.2 | 38.43 | 13967 | 13858.63 | 37.2 | 13967 | 13866.9 | 40.59 |
| | 50 | rnd | 13622 | 13191.83 | 216.82 | 13759 | 13313.47 | 249.6 | 13761 | 13408.83 | 206.05 | 14010 | 13540.47 | 217.28 |
| | | 2op | 13967 | 13793.7 | 73.31 | 13967 | 13856.47 | 50.94 | 13967 | 13867.13 | 30.91 | 13998 | 13890.7 | 55.56 |

Table A.432: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13531 | 12855.1 | 265.34 | 13863 | 13217.63 | 229.21 | 13620 | 13311.67 | 177.67 | 13658 | 13389 | 187.84 |
| | | 2op | 13874 | 13741.03 | 104.67 | 14038 | 13836.3 | 82.6 | 14008 | 13821.73 | 101.56 | 13967 | 13833.77 | 79.59 |
| | 50 | rnd | 13575 | 13050.7 | 289.74 | 13777 | 13288.77 | 223.68 | 13925 | 13507.57 | 159.96 | 13938 | 13562.87 | 190.55 |
| | | 2op | 13967 | 13738.83 | 130.56 | 14038 | 13826.37 | 104.34 | 13996 | 13877.87 | 69.45 | 14038 | 13899.1 | 78.61 |
| 51 | 20 | rnd | 13301 | 12891.17 | 265.67 | 13530 | 13094.83 | 258.11 | 13655 | 13268.17 | 201.62 | 13819 | 13367.3 | 232.43 |
| | | 2op | 13873 | 13754.03 | 60.42 | 13967 | 13835.3 | 42.34 | 13967 | 13851.33 | 37.3 | 13967 | 13858.07 | 32.65 |
| | 50 | rnd | 13553 | 12976.67 | 304.53 | 13580 | 13221.5 | 211.62 | 13745 | 13336.73 | 211.72 | 13746 | 13455.27 | 178.94 |
| | | 2op | 13873 | 13787.9 | 70.84 | 13967 | 13855.3 | 35.02 | 13967 | 13870.5 | 30.79 | 13970 | 13891.5 | 45.14 |

Table A.433: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13542 | 12967.13 | 235.3 | 13698 | 13305.63 | 212.5 | 13710 | 13350.17 | 227.97 | 13954 | 13513.4 | 199.59 |
| | | 2op | 13967 | 13800 | 66 | 13967 | 13859 | 26.93 | 13967 | 13873.73 | 36.72 | 13967 | 13892.43 | 38.55 |
| | 50 | rnd | 14077 | 13167.1 | 260.85 | 13796 | 13357.37 | 200.85 | 13762 | 13510.57 | 169.45 | 13836 | 13542.9 | 181.35 |
| | | 2op | 13967 | 13820.63 | 70.23 | 13967 | 13863.97 | 33.5 | 14064 | 13880.6 | 46.66 | 14038 | 13934.77 | 55.44 |
| 51 | 20 | rnd | 13810 | 13215.73 | 238.59 | 13608 | 13273.53 | 194.48 | 13810 | 13396.2 | 200.15 | 13744 | 13406.57 | 155.05 |
| | | 2op | 13874 | 13812.9 | 60 | 13878 | 13859.33 | 17.44 | 13899 | 13862.1 | 18.16 | 14064 | 13898.17 | 51.38 |
| | 50 | rnd | 13740 | 13251.3 | 237.07 | 13829 | 13401.37 | 192.64 | 14038 | 13524.63 | 189.43 | 13948 | 13613.17 | 204.15 |
| | | 2op | 13967 | 13850.97 | 42.25 | 13967 | 13874.43 | 23.99 | 13967 | 13900.87 | 42.03 | 14064 | 13941.87 | 59.95 |

Table A.434: $x60189\_5$: basicRRGA+IM: 500 – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13510 | 13092.03 | 282.15 | 13819 | 13438.03 | 235.72 | 13985 | 13540.37 | 210.08 | 14055 | 13590.73 | 214.32 |
| | | 2op | 13874 | 13831.87 | 39.51 | 13967 | 13874.7 | 34.38 | 13968 | 13904.87 | 48.08 | 14064 | 13944.03 | 55.72 |
| | 50 | rnd | 13598 | 13143.53 | 250.01 | 13813 | 13508.1 | 171.46 | 14023 | 13598.33 | 168.99 | 14038 | 13706.37 | 193.89 |
| | | 2op | 13967 | 13856.57 | 48.79 | 13970 | 13906 | 47.21 | 14064 | 13933.47 | 57.44 | 14064 | 13945.1 | 51.4 |
| 51 | 20 | rnd | 13828 | 13128.87 | 278.36 | 13761 | 13378 | 214.98 | 13798 | 13488.8 | 174.86 | 14045 | 13629.5 | 177.45 |
| | | 2op | 13878 | 13835.1 | 44.88 | 13967 | 13864.1 | 24.74 | 13967 | 13878.73 | 29.4 | 13967 | 13906.93 | 44.38 |
| | 50 | rnd | 13657 | 13333.6 | 174.97 | 13812 | 13527.57 | 143.07 | 14133 | 13633.4 | 185.6 | 14018 | 13736.67 | 114.85 |
| | | 2op | 13967 | 13856.8 | 35.75 | 13967 | 13893.2 | 38.53 | 13967 | 13918.33 | 45.05 | 14058 | 13951.27 | 51.66 |

Table A.435: $x60189\_5$: basicRRGA+IM: 5000 – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8398 | 7517.2 | 484.28 | 9520 | 8930.77 | 304.68 | 9931 | 9307.07 | 346.81 | 10284 | 9732.9 | 320.66 |
| | | 2op | 13819 | 13733.27 | 19.96 | 13874 | 13764.53 | 33.38 | 13874 | 13789.37 | 51.34 | 13878 | 13854.2 | 41.34 |
| | 50 | rnd | 8516 | 7542.57 | 595.02 | 9751 | 9040.97 | 385.7 | 10062 | 9314.9 | 398.06 | 10456 | 9856.73 | 279.43 |
| | | 2op | 13764 | 13738.13 | 14.12 | 13874 | 13773.67 | 45.38 | 13874 | 13783.87 | 48.5 | 13883 | 13832.27 | 53.28 |
| 51 | 20 | rnd | 8588 | 7714.1 | 368.06 | 9815 | 9030.1 | 293.23 | 10136 | 9390.47 | 325.33 | 10593 | 9766.67 | 384.5 |
| | | 2op | 13774 | 13734.53 | 15.25 | 13874 | 13765.63 | 36.15 | 13878 | 13809.4 | 56.91 | 13878 | 13841.7 | 51.05 |
| | 50 | rnd | 8440 | 7734.6 | 394.46 | 9765 | 8937.47 | 482.35 | 9928 | 9395.73 | 371.15 | 10469 | 9679.87 | 365.78 |
| | | 2op | 13817 | 13739.13 | 23.81 | 13874 | 13761.37 | 32.41 | 13876 | 13782.2 | 48.57 | 13878 | 13828.7 | 54.4 |

Table A.436: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8641 | 7544.7 | 397.57 | 9676 | 9000.7 | 302.41 | 10065 | 9403.57 | 432.29 | 10296 | 9782.8 | 397.07 |
| | | 2op | 13817 | 13736.77 | 27.11 | 13872 | 13771.6 | 42.41 | 13874 | 13807.83 | 58.46 | 13878 | 13841.2 | 50.02 |
| | 50 | rnd | 8265 | 7558.2 | 507.72 | 9957 | 9015.67 | 462.84 | 10243 | 9416.87 | 425.25 | 10424 | 9774.4 | 264.98 |
| | | 2op | 13819 | 13750.97 | 34.04 | 13869 | 13769.7 | 35.09 | 13878 | 13791.23 | 48.97 | 13883 | 13863.27 | 29.83 |
| 51 | 20 | rnd | 8152 | 7661.07 | 349.08 | 9717 | 9068.63 | 376.82 | 9969 | 9344.07 | 315.72 | 10422 | 9744.67 | 316.69 |
| | | 2op | 13874 | 13744.23 | 31.15 | 13872 | 13764.47 | 30.37 | 13878 | 13815.5 | 57.23 | 13878 | 13856.57 | 39.94 |
| | 50 | rnd | 8861 | 7810.3 | 482.14 | 9460 | 8950.8 | 280.44 | 10113 | 9255.7 | 430.91 | 10438 | 9743.23 | 389.51 |
| | | 2op | 13817 | 13735.5 | 20.2 | 13874 | 13760.3 | 32.22 | 13874 | 13792.73 | 53.23 | 13878 | 13837.3 | 52.8 |

Table A.437: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17139 | 16193.2 | 431.11 | 17171 | 16419.93 | 384.31 | 17485 | 16753.17 | 374.15 | 17229 | 16792.93 | 250.27 |
| | | 2op | 18017 | 17920.73 | 182.22 | 18017 | 17975.97 | 68.09 | 18017 | 17989.8 | 53.79 | 18017 | 17981.9 | 76.94 |
| | 50 | rnd | 17171 | 16330.83 | 346.12 | 17418 | 16809.57 | 264.19 | 17543 | 16963.23 | 315.84 | 17513 | 16999.43 | 250.59 |
| | | 2op | 18017 | 17928.83 | 113.44 | 18017 | 17986.37 | 86.11 | 18017 | 17990.17 | 72.65 | 18017 | 17997.9 | 42.02 |
| 51 | 20 | rnd | 17150 | 16219.97 | 405.49 | 17254 | 16347 | 357.33 | 16978 | 16467.23 | 264.54 | 17150 | 16556.3 | 274.57 |
| | | 2op | 18017 | 18009.97 | 21.98 | 18017 | 18014.07 | 9.31 | 18017 | 18008.17 | 26.3 | 18017 | 18017 | 0 |
| | 50 | rnd | 17071 | 16188.63 | 326.13 | 17271 | 16635.13 | 290.43 | 17394 | 16709.33 | 282.62 | 17426 | 16869.33 | 313.35 |
| | | 2op | 18017 | 18001.37 | 38.19 | 18017 | 17979.4 | 107.13 | 18017 | 18016.8 | 1.1 | 18017 | 18017 | 0 |

Table A.438: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16850 | 16209.53 | 375.85 | 17578 | 16585.67 | 340.02 | 17311 | 16696.47 | 267.53 | 17478 | 16887.67 | 270.02 |
| | | 2op | 18017 | 17948.77 | 118.58 | 18017 | 17915.7 | 136.46 | 18017 | 17965.43 | 106.65 | 18017 | 17973.97 | 70.72 |
| | 50 | rnd | 16848 | 16280.2 | 388.02 | 17266 | 16681.33 | 252.1 | 17355 | 16823.07 | 232.48 | 17471 | 16981.13 | 279.64 |
| | | 2op | 18017 | 17932.5 | 157.51 | 18017 | 17976.63 | 100.01 | 18017 | 17980.8 | 74.01 | 18017 | 17985.17 | 82.76 |
| 51 | 20 | rnd | 16977 | 16115.77 | 404.3 | 16997 | 16373.1 | 370.76 | 17177 | 16435.37 | 324.18 | 17324 | 16567.03 | 370.33 |
| | | 2op | 18017 | 17995.13 | 74.97 | 18017 | 18008.23 | 16.35 | 18017 | 18015.23 | 7.08 | 18017 | 18017 | 0 |
| | 50 | rnd | 17065 | 16323.97 | 346.47 | 17417 | 16538.33 | 383.31 | 17322 | 16751.33 | 302.41 | 17339 | 16919.93 | 281.86 |
| | | 2op | 18017 | 17988.37 | 51.91 | 18017 | 18003.33 | 35.09 | 18017 | 18017 | 0 | 18017 | 18013.9 | 16.98 |

Table A.439: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16899 | 16264.27 | 399.66 | 17070 | 16472.53 | 327.07 | 17239 | 16550.7 | 347.17 | 17352 | 16722.3 | 305.05 |
| | | 2op | 18017 | 18016.4 | 3.29 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 17306 | 16384.6 | 486.95 | 17414 | 16780.07 | 293.99 | 17378 | 16898.07 | 268.1 | 17440 | 16980.07 | 270.41 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| 51 | 20 | rnd | 17200 | 16449.37 | 360.13 | 17234 | 16643.63 | 315.47 | 17316 | 16628.27 | 365.09 | 17287 | 16813.97 | 228.2 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 16965 | 16435.3 | 353.36 | 17556 | 16817.6 | 260.8 | 17399 | 16795.67 | 321.96 | 17457 | 17037.53 | 245.68 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |

Table A.440: $x60189\_6$: basicRRGA+IM: 500 – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17035 | 16343.17 | 367.25 | 17399 | 16836.67 | 269.48 | 17480 | 17005.97 | 215.05 | 17664 | 17081.2 | 244.58 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 17308 | 16558.57 | 317.22 | 17680 | 17049.1 | 292.95 | 17598 | 17091.47 | 254.46 | 17824 | 17238.67 | 233.17 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18016.73 | 1.46 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| 51 | 20 | rnd | 16847 | 16400.97 | 265.54 | 17407 | 16585.67 | 325.89 | 17439 | 16825.97 | 293.17 | 17374 | 16993.53 | 217.43 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 17170 | 16644.6 | 228.2 | 17533 | 16998.87 | 267.52 | 17733 | 17081.4 | 257.05 | 17556 | 17189.13 | 199.68 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |

Table A.441: $x60189\_6$: basicRRGA+IM: 5000 – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 9514 | 8700.53 | 401.98 | 11818 | 10723.6 | 481.16 | 12256 | 11247.7 | 441.61 | 12522 | 11638.33 | 478.72 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 10199 | 8572.23 | 583.82 | 11789 | 10612.93 | 493.23 | 12116 | 11064.67 | 469.11 | 12689 | 11719.2 | 486.32 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18016.2 | 4.2 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| 51 | 20 | rnd | 9341 | 8808.93 | 305.36 | 11936 | 10765.2 | 523.38 | 11961 | 11193.6 | 419.13 | 12897 | 11744.1 | 494.01 |
| | | 2op | 18017 | 18009.33 | 11.03 | 18017 | 18016.9 | 0.31 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 9819 | 8850.3 | 442.85 | 11351 | 10401.97 | 391.96 | 12099 | 11042.8 | 488.26 | 12617 | 11701.17 | 410.32 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |

Table A.442: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 9480 | 8608.37 | 410.79 | 11595 | 10687.2 | 440.26 | 11778 | 11212.6 | 350.98 | 12775 | 11750.63 | 498.48 |
| | | 2op | 18017 | 18003 | 13.5 | 18017 | 18016.97 | 0.18 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 9499 | 8658.37 | 446.99 | 11268 | 10516.13 | 398.4 | 11899 | 11112.5 | 401.04 | 12489 | 11698.83 | 422.95 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| 51 | 20 | rnd | 9743 | 8799.67 | 387.67 | 12023 | 10720.77 | 549.31 | 11952 | 11251.27 | 411.93 | 12773 | 11860 | 425.42 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 9549 | 8781.57 | 437.78 | 11635 | 10751.27 | 514.23 | 11908 | 11141 | 395.69 | 12358 | 11599.97 | 428.86 |
| | | 2op | 18017 | 18002.43 | 11.27 | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |

Table A.443: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19933 | 18949.6 | 421.78 | 20245 | 19518.4 | 265.24 | 20234 | 19649.7 | 287.14 | 20401 | 19890.63 | 272.2 |
| | | 2op | 20939 | 20765.77 | 104.6 | 20991 | 20793.77 | 106.57 | 20957 | 20793.3 | 91.59 | 21005 | 20839.7 | 59.75 |
| | 50 | rnd | 20092 | 19180.37 | 362.41 | 20316 | 19668.6 | 275.87 | 20286 | 19786.47 | 264.15 | 20635 | 20029 | 254.01 |
| | | 2op | 20889 | 20750.63 | 108.45 | 20951 | 20809.3 | 71.23 | 21042 | 20867.03 | 72.65 | 20997 | 20804.73 | 124.93 |
| 51 | 20 | rnd | 19918 | 19057.17 | 376.02 | 20373 | 19211.33 | 457.58 | 20447 | 19467.33 | 339.62 | 20283 | 19662.13 | 323.06 |
| | | 2op | 20829 | 20770.7 | 94.29 | 20829 | 20816.83 | 28.28 | 20944 | 20819.77 | 35.26 | 20889 | 20833.3 | 19.86 |
| | 50 | rnd | 19721 | 19251.93 | 321.49 | 20245 | 19565.1 | 348.34 | 20320 | 19803.9 | 239.76 | 20547 | 20043.63 | 234.65 |
| | | 2op | 20892 | 20809.77 | 39.4 | 20836 | 20814.53 | 31.27 | 20921 | 20824.73 | 58.45 | 21057 | 20883 | 76.23 |

Table A.444: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19947 | 19095.03 | 408.29 | 20182 | 19492.17 | 323.09 | 20312 | 19747.47 | 233.94 | 20584 | 19948.5 | 293.31 |
| | | 2op | 20829 | 20733.57 | 111.95 | 20889 | 20757.37 | 85.55 | 20999 | 20784.77 | 90.27 | 21057 | 20833.4 | 89.81 |
| | 50 | rnd | 20164 | 19194.83 | 436.84 | 20322 | 19655.97 | 274.79 | 20396 | 19776.57 | 279.82 | 20482 | 19915.13 | 316.85 |
| | | 2op | 20889 | 20738.53 | 113.31 | 21051 | 20783.73 | 117.74 | 21007 | 20834.77 | 100.9 | 21059 | 20868.33 | 102.96 |
| 51 | 20 | rnd | 20148 | 19092.2 | 397.89 | 20006 | 19218.23 | 315.71 | 20015 | 19297.93 | 334.03 | 20204 | 19658.87 | 292.32 |
| | | 2op | 20829 | 20805.57 | 37.38 | 20829 | 20811.43 | 25.62 | 20889 | 20831 | 20.53 | 20933 | 20841.37 | 36.15 |
| | 50 | rnd | 19850 | 19160.8 | 389.72 | 20107 | 19567 | 306.94 | 20302 | 19632.97 | 309.07 | 20630 | 19846.73 | 327.13 |
| | | 2op | 20829 | 20769.5 | 78.12 | 20889 | 20813.93 | 35.01 | 20967 | 20839.07 | 42.22 | 20997 | 20863.3 | 58.45 |

Table A.445: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19971 | 19169.83 | 383.28 | 20176 | 19528.97 | 325.45 | 20218 | 19638.13 | 263.25 | 20161 | 19719.43 | 264.08 |
| | | 2op | 20829 | 20822.97 | 18.44 | 20944 | 20830.7 | 23.02 | 20938 | 20831.73 | 23.22 | 20997 | 20878.4 | 60.48 |
| | 50 | rnd | 20016 | 19273.97 | 314.99 | 20639 | 19815.3 | 326.58 | 20550 | 19960.6 | 234.46 | 20710 | 20027.83 | 265.31 |
| | | 2op | 20889 | 20809.03 | 41.19 | 20997 | 20838.63 | 37.04 | 20999 | 20856.2 | 50.09 | 21059 | 20938.07 | 71.44 |
| 51 | 20 | rnd | 20061 | 19334.43 | 334.03 | 20258 | 19562.1 | 372.72 | 20356 | 19676.1 | 325.56 | 20536 | 19823.47 | 278.79 |
| | | 2op | 20829 | 20829 | 0 | 20944 | 20832.83 | 21 | 20889 | 20831 | 10.95 | 20997 | 20884.87 | 59.6 |
| | 50 | rnd | 20053 | 19558.37 | 242.36 | 20312 | 19757.87 | 290.96 | 20516 | 19937.23 | 269.33 | 20623 | 20170.23 | 257.27 |
| | | 2op | 20847 | 20829.6 | 3.29 | 20944 | 20836.83 | 25.31 | 21057 | 20877.73 | 71.37 | 21059 | 20984.03 | 57.53 |

Table A.446: $x60189\_7$: basicRRGA+IM: 500 – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 20102 | 19343.07 | 325.06 | 20356 | 19727.7 | 325.14 | 20377 | 19882.77 | 247.77 | 20478 | 20113.2 | 251.75 |
| | | 2op | 20829 | 20826.3 | 12.61 | 21051 | 20857.2 | 57.56 | 21057 | 20898.73 | 68.25 | 21059 | 20964.8 | 76.75 |
| | 50 | rnd | 20057 | 19419.17 | 334.79 | 20565 | 20021.87 | 280.12 | 20569 | 20107 | 205.16 | 20734 | 20286.03 | 246.57 |
| | | 2op | 20951 | 20837.67 | 29.33 | 21059 | 20890.77 | 65.26 | 21057 | 20953.57 | 83.7 | 21059 | 21016.6 | 46.68 |
| 51 | 20 | rnd | 20509 | 19469.9 | 409.61 | 20588 | 19827.63 | 251.9 | 20588 | 19982.23 | 254.3 | 20731 | 20193.27 | 269.02 |
| | | 2op | 20829 | 20829 | 0 | 20889 | 20833 | 15.22 | 21051 | 20851.13 | 49.42 | 21059 | 20938 | 70.28 |
| | 50 | rnd | 20249 | 19540.57 | 288.88 | 20731 | 20030.07 | 287.14 | 20468 | 20111.3 | 218.42 | 20846 | 20196.63 | 262.38 |
| | | 2op | 20889 | 20831 | 10.95 | 20991 | 20868.5 | 46.6 | 21057 | 20908.17 | 65.73 | 21059 | 20981.97 | 68.16 |

Table A.447: $x60189\_7$: basicRRGA+IM: 5000 – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11751 | 10522.43 | 543.34 | 13645 | 12776.83 | 342.33 | 14345 | 13379.7 | 460.96 | 14817 | 13920.9 | 424.48 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20827.27 | 9.49 | 20829 | 20827.93 | 5.84 | 20829 | 20829 | 0 |
| | 50 | rnd | 11241 | 10648.43 | 318.99 | 13482 | 12683.83 | 395.31 | 14482 | 13414.07 | 512.22 | 14818 | 13997.37 | 383.46 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 11728 | 10943.1 | 357.72 | 14303 | 12963.7 | 570.25 | 14255 | 13411.47 | 439.45 | 14760 | 14048.23 | 429.81 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20826.8 | 12.05 | 20829 | 20829 | 0 |
| | 50 | rnd | 11503 | 10712.2 | 439.41 | 13589 | 12694.83 | 386.28 | 14584 | 13300.37 | 519.68 | 15000 | 13999.73 | 474.88 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.448: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11605 | 10455.2 | 534.67 | 13785 | 12839.57 | 583.16 | 13872 | 13144.77 | 471.33 | 14682 | 14001.33 | 475 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 11515 | 10657.7 | 513.41 | 14312 | 12853.67 | 529.71 | 14908 | 13533.1 | 584.93 | 14641 | 14046.87 | 470.35 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 12045 | 10763.2 | 589.71 | 13839 | 12848.23 | 397.71 | 14538 | 13549.6 | 565.07 | 14681 | 14011.67 | 341.94 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 11346 | 10757.77 | 401.36 | 13646 | 12785.73 | 437.38 | 14143 | 13272.3 | 456.2 | 15013 | 13928.23 | 471.83 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.449: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 592 | 587.03 | 4.13 | 592 | 589.17 | 2.05 | 594 | 590.53 | 2.39 | 595 | 590.6 | 2.49 |
| | | 2op | 595 | 588.57 | 4.19 | 595 | 590.83 | 3.6 | 595 | 591.6 | 2.08 | 595 | 592.3 | 1.91 |
| | 50 | rnd | 593 | 586.3 | 3.72 | 595 | 591.27 | 2.68 | 595 | 591.5 | 2.16 | 595 | 591.73 | 1.78 |
| | | 2op | 596 | 589.63 | 4.29 | 595 | 592.17 | 2.17 | 596 | 592.8 | 1.75 | 596 | 593.23 | 1.63 |
| 51 | 20 | rnd | 593 | 586 | 3.55 | 595 | 589.93 | 3.08 | 595 | 590.9 | 2.86 | 595 | 591.27 | 1.93 |
| | | 2op | 595 | 590.7 | 2.81 | 594 | 590.53 | 2.01 | 596 | 591.9 | 2.81 | 596 | 593.9 | 1.6 |
| | 50 | rnd | 595 | 589.13 | 2.53 | 595 | 591.6 | 2.51 | 595 | 592.33 | 1.77 | 595 | 592.17 | 1.88 |
| | | 2op | 595 | 591.37 | 3.09 | 596 | 593.4 | 1.79 | 596 | 593.93 | 1.46 | 596 | 594.13 | 1.07 |

Table A.450: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 594 | 585.23 | 4.26 | 595 | 588.13 | 2.46 | 596 | 590.57 | 2.43 | 595 | 590.9 | 2.51 |
| | | 2op | 596 | 588.87 | 4.16 | 595 | 590.67 | 3.06 | 595 | 591.77 | 2.37 | 596 | 591.8 | 2.31 |
| | 50 | rnd | 595 | 586.57 | 4.19 | 594 | 590.27 | 2.38 | 595 | 592.17 | 1.91 | 595 | 592.37 | 1.92 |
| | | 2op | 595 | 589.97 | 2.76 | 596 | 592.63 | 2.3 | 595 | 592.2 | 1.9 | 595 | 592.93 | 1.89 |
| 51 | 20 | rnd | 595 | 585.3 | 5.26 | 593 | 588.8 | 2.64 | 595 | 590.03 | 2.81 | 596 | 591.4 | 2.5 |
| | | 2op | 596 | 590.93 | 3.82 | 596 | 592.7 | 2.29 | 596 | 592.17 | 2.73 | 595 | 593.4 | 1.9 |
| | 50 | rnd | 594 | 588.23 | 3.09 | 595 | 591.13 | 2.26 | 595 | 592 | 2.08 | 596 | 593.17 | 1.64 |
| | | 2op | 596 | 591.87 | 2.8 | 596 | 592.97 | 1.75 | 596 | 593.27 | 1.8 | 595 | 593.47 | 1.72 |

Table A.451: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 586.97 | 3.92 | 595 | 591 | 2.36 | 596 | 591.8 | 2.41 | 596 | 592.57 | 1.83 |
| | | 2op | 595 | 591.57 | 3.04 | 595 | 593.57 | 1.92 | 596 | 593.8 | 2.02 | 596 | 594.17 | 1.44 |
| | 50 | rnd | 594 | 587.87 | 3.03 | 596 | 592.13 | 2.56 | 595 | 593.1 | 1.69 | 596 | 593.2 | 1.79 |
| | | 2op | 596 | 592.9 | 2.47 | 595 | 593.67 | 1.75 | 596 | 594.07 | 1.39 | 596 | 594.4 | 1.07 |
| 51 | 20 | rnd | 595 | 589.1 | 3.68 | 595 | 591.63 | 2.13 | 596 | 593.13 | 2 | 596 | 593.47 | 1.68 |
| | | 2op | 596 | 594.23 | 1.14 | 596 | 595.07 | 0.45 | 596 | 595.17 | 0.38 | 596 | 595.2 | 0.41 |
| | 50 | rnd | 595 | 590.67 | 2.58 | 596 | 593.4 | 1.54 | 596 | 594.43 | 1.41 | 596 | 594.6 | 1.07 |
| | | 2op | 596 | 594.57 | 1.17 | 596 | 595.1 | 0.55 | 596 | 595.1 | 0.84 | 596 | 595.37 | 0.49 |

Table A.452: $f25\_305$: basicRRGA+IM: 500 – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 594 | 586.97 | 3.72 | 595 | 592.37 | 2.3 | 596 | 593 | 1.84 | 596 | 592.77 | 1.85 |
| | | 2op | 596 | 592.1 | 2.86 | 596 | 594.3 | 1.44 | 596 | 594.13 | 1.5 | 596 | 595 | 0.69 |
| | 50 | rnd | 594 | 588.8 | 3.6 | 596 | 593.2 | 1.61 | 596 | 592.83 | 1.62 | 596 | 594.07 | 1.2 |
| | | 2op | 596 | 593.33 | 2.17 | 596 | 594.63 | 0.76 | 596 | 594.57 | 1.01 | 596 | 594.83 | 0.79 |
| 51 | 20 | rnd | 595 | 590.43 | 3.37 | 596 | 592.27 | 1.87 | 596 | 594.2 | 1.27 | 596 | 593.7 | 1.37 |
| | | 2op | 596 | 594.47 | 0.86 | 596 | 595.13 | 0.57 | 596 | 595.13 | 0.35 | 596 | 595.2 | 0.48 |
| | 50 | rnd | 595 | 590.93 | 2.3 | 596 | 594.03 | 1.52 | 596 | 594.43 | 1.01 | 595 | 594.1 | 0.96 |
| | | 2op | 596 | 594.27 | 1.36 | 596 | 594.9 | 0.66 | 596 | 595.07 | 0.37 | 596 | 595.27 | 0.52 |

Table A.453: $f25\_305$: basicRRGA+IM: 5000 – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 558 | 491.5 | 23.37 | 569 | 529.57 | 27.11 | 585 | 542.33 | 28.27 | 582 | 555.9 | 22.66 |
| | | 2op | 595 | 591.67 | 2.11 | 595 | 593.1 | 2.48 | 595 | 593.93 | 1.55 | 595 | 593.93 | 1.53 |
| | 50 | rnd | 567 | 499.07 | 20.98 | 569 | 535.93 | 25.12 | 581 | 542.17 | 29.81 | 588 | 563.83 | 18.68 |
| | | 2op | 595 | 591.73 | 1.8 | 595 | 594.13 | 0.94 | 595 | 594.07 | 1.34 | 595 | 594.57 | 0.73 |
| 51 | 20 | rnd | 544 | 492.87 | 19.69 | 571 | 529.5 | 25.6 | 576 | 538.67 | 27.56 | 578 | 562.4 | 13.21 |
| | | 2op | 594 | 590.9 | 2.25 | 595 | 593.47 | 1.78 | 595 | 594.13 | 1.01 | 595 | 594.3 | 0.7 |
| | 50 | rnd | 554 | 497.97 | 23.8 | 569 | 526.13 | 26.57 | 582 | 541.83 | 26.11 | 589 | 556.5 | 21.54 |
| | | 2op | 594 | 591.07 | 1.84 | 595 | 594.17 | 0.91 | 595 | 594.23 | 1.25 | 595 | 594.6 | 0.97 |

Table A.454: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 556 | 495.27 | 31.16 | 572 | 523.17 | 25.73 | 574 | 535.67 | 24.7 | 585 | 559.77 | 22.59 |
| | | 2op | 594 | 591.33 | 1.63 | 595 | 593.3 | 1.93 | 595 | 593.8 | 1.61 | 595 | 594.53 | 1.04 |
| | 50 | rnd | 556 | 488.37 | 30.98 | 575 | 526.83 | 26.19 | 573 | 537.57 | 21.59 | 585 | 566.37 | 12.61 |
| | | 2op | 594 | 591.4 | 1.22 | 595 | 593.63 | 1.71 | 595 | 594.33 | 0.71 | 595 | 594.5 | 1.33 |
| 51 | 20 | rnd | 528 | 492.07 | 15.96 | 570 | 528.97 | 27.93 | 573 | 538.9 | 24.23 | 582 | 561.57 | 15.9 |
| | | 2op | 594 | 591.37 | 1.97 | 595 | 593.87 | 1.17 | 595 | 593.97 | 1.43 | 595 | 594.47 | 1.01 |
| | 50 | rnd | 551 | 499.77 | 19.62 | 569 | 524.93 | 23.8 | 579 | 532.03 | 25.34 | 586 | 562.3 | 21.47 |
| | | 2op | 595 | 592.03 | 1.61 | 595 | 593.97 | 1.25 | 595 | 594.37 | 0.61 | 595 | 594.67 | 0.48 |

Table A.455: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 767.53 | 6.92 | 774 | 768.87 | 3.2 | 776 | 770.97 | 2.48 | 775 | 772 | 2.49 |
| | | 2op | 775 | 766.73 | 3.78 | 774 | 768.43 | 2.62 | 774 | 770.93 | 2.42 | 777 | 771.5 | 2.7 |
| | 50 | rnd | 776 | 770.2 | 4.25 | 775 | 771.73 | 2.35 | 775 | 772.5 | 2.39 | 777 | 772.8 | 1.95 |
| | | 2op | 774 | 768.07 | 5.34 | 775 | 771.7 | 2.07 | 777 | 772.03 | 2.7 | 777 | 772.2 | 1.88 |
| 51 | 20 | rnd | 776 | 766.53 | 7.29 | 777 | 769.37 | 3.6 | 776 | 769 | 5.36 | 775 | 770.73 | 2.59 |
| | | 2op | 772 | 767.97 | 2.7 | 774 | 769.27 | 2.63 | 775 | 770.43 | 2.21 | 775 | 771.13 | 2.18 |
| | 50 | rnd | 775 | 769.2 | 3.63 | 777 | 772.03 | 2.53 | 777 | 773.2 | 2.31 | 777 | 773.8 | 1.9 |
| | | 2op | 775 | 769.5 | 2.87 | 777 | 772.47 | 2.65 | 777 | 772.23 | 2.49 | 777 | 773.2 | 2.22 |

Table A.456: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 766.67 | 6.9 | 777 | 768.57 | 4.83 | 775 | 769.57 | 4.9 | 775 | 771.53 | 2.37 |
| | | 2op | 772 | 765.9 | 3.22 | 775 | 769.77 | 3.01 | 774 | 770 | 2.83 | 775 | 770.67 | 2.28 |
| | 50 | rnd | 777 | 768.33 | 8.36 | 777 | 771.63 | 3.05 | 777 | 772.53 | 2.76 | 775 | 772.4 | 1.57 |
| | | 2op | 777 | 769.03 | 3.4 | 777 | 771.2 | 2.95 | 777 | 772.23 | 2.01 | 776 | 772.2 | 2.2 |
| 51 | 20 | rnd | 774 | 768.07 | 4.14 | 775 | 769.9 | 2.84 | 775 | 770.2 | 3.08 | 777 | 772.2 | 2.3 |
| | | 2op | 774 | 767.33 | 3.49 | 773 | 768.8 | 2.55 | 774 | 770.6 | 2.21 | 775 | 771.77 | 2.3 |
| | 50 | rnd | 776 | 769.6 | 4.3 | 777 | 772.73 | 2.6 | 777 | 773.07 | 2.63 | 777 | 773.83 | 1.64 |
| | | 2op | 777 | 770.1 | 3.25 | 777 | 771.33 | 2.15 | 777 | 773.3 | 1.9 | 777 | 773.93 | 1.48 |

Table A.457: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 767.23 | 4.13 | 775 | 770.77 | 2.21 | 777 | 772.5 | 1.66 | 777 | 773.17 | 1.82 |
| | | 2op | 773 | 768.2 | 2.59 | 776 | 770.8 | 2.41 | 774 | 771.3 | 1.56 | 777 | 772.6 | 1.69 |
| | 50 | rnd | 775 | 768.07 | 4.38 | 776 | 772.6 | 1.94 | 777 | 772.57 | 2.45 | 777 | 773.7 | 1.66 |
| | | 2op | 775 | 769.4 | 2.63 | 775 | 771.73 | 2.05 | 777 | 772.97 | 2.28 | 775 | 773.1 | 1.42 |
| 51 | 20 | rnd | 775 | 769.4 | 3.23 | 777 | 772.7 | 2.65 | 777 | 773.87 | 2.03 | 777 | 774.73 | 1.98 |
| | | 2op | 772 | 769.33 | 1.77 | 774 | 771.43 | 1.19 | 772 | 772 | 0 | 775 | 772.6 | 1.13 |
| | 50 | rnd | 776 | 770.13 | 2.91 | 777 | 772.67 | 2.8 | 777 | 773.93 | 1.78 | 777 | 775.8 | 1.27 |
| | | 2op | 775 | 770.07 | 2.08 | 775 | 772.4 | 1.07 | 777 | 773.27 | 1.72 | 776 | 773.37 | 1.43 |

Table A.458: $f25\_400$: basicRRGA+IM: 500 – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 769.17 | 3.88 | 777 | 771.8 | 2.89 | 777 | 772.3 | 2.53 | 777 | 773.8 | 1.79 |
| | | 2op | 775 | 769.3 | 2.14 | 775 | 771.63 | 1.85 | 776 | 771.87 | 2.13 | 777 | 772.93 | 1.93 |
| | 50 | rnd | 775 | 769.63 | 2.65 | 776 | 772.43 | 2.16 | 777 | 773.77 | 1.91 | 777 | 773.93 | 1.96 |
| | | 2op | 775 | 769.87 | 2.29 | 777 | 772.67 | 2.04 | 775 | 773.37 | 1.52 | 776 | 773.8 | 1.54 |
| 51 | 20 | rnd | 777 | 770.43 | 2.96 | 777 | 772.77 | 2.22 | 777 | 774.77 | 1.65 | 777 | 774.8 | 1.65 |
| | | 2op | 774 | 769.87 | 1.8 | 775 | 772.07 | 1.11 | 775 | 772.2 | 0.76 | 775 | 773.17 | 1.42 |
| | 50 | rnd | 776 | 771.8 | 3.09 | 777 | 774.77 | 1.38 | 777 | 774.93 | 1.08 | 777 | 774.63 | 1.22 |
| | | 2op | 775 | 771.13 | 1.93 | 775 | 772.8 | 1.37 | 777 | 774.2 | 1.56 | 777 | 774.83 | 0.95 |

Table A.459: $f25\_400$: basicRRGA+IM: 5000 – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 662 | 610 | 31.76 | 730 | 672.97 | 31.69 | 768 | 707 | 37.05 | 767 | 729.53 | 24.39 |
| | | 2op | 769 | 766.07 | 4.68 | 769 | 767.7 | 2.53 | 769 | 768.23 | 1.38 | 772 | 768.87 | 1.53 |
| | 50 | rnd | 665 | 606.53 | 38.9 | 763 | 692.13 | 38.49 | 752 | 704.4 | 30.16 | 767 | 727.27 | 29.07 |
| | | 2op | 769 | 767.27 | 2.26 | 769 | 767.43 | 3 | 772 | 768.7 | 1.02 | 772 | 768.9 | 0.84 |
| 51 | 20 | rnd | 678 | 617.7 | 37.29 | 765 | 681.23 | 36.37 | 764 | 709.07 | 30.98 | 767 | 732.53 | 25.54 |
| | | 2op | 769 | 766.5 | 4.34 | 769 | 768.87 | 0.51 | 769 | 768.03 | 1.79 | 771 | 768.8 | 1.13 |
| | 50 | rnd | 712 | 636.9 | 44.47 | 750 | 687.53 | 37.95 | 766 | 704.03 | 24.91 | 774 | 734.6 | 23.31 |
| | | 2op | 769 | 767.1 | 2.34 | 769 | 768.23 | 1.99 | 772 | 768.87 | 0.94 | 769 | 768.87 | 0.51 |

Table A.460: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 662 | 606.73 | 35.92 | 762 | 681.3 | 41.78 | 761 | 694.93 | 38.86 | 772 | 733.9 | 27.31 |
| | | 2op | 769 | 765.6 | 3.7 | 769 | 767.7 | 2.39 | 769 | 767.2 | 3.54 | 770 | 768.37 | 1.65 |
| | 50 | rnd | 691 | 606.53 | 41.83 | 764 | 686.93 | 40.26 | 766 | 709.2 | 36.18 | 772 | 736.7 | 20.48 |
| | | 2op | 769 | 766.17 | 2.48 | 769 | 767.83 | 2.26 | 769 | 767.93 | 2.42 | 772 | 768.5 | 1.66 |
| 51 | 20 | rnd | 704 | 621.5 | 39.54 | 739 | 682.6 | 30.57 | 746 | 707.37 | 27.28 | 767 | 733.03 | 24.82 |
| | | 2op | 769 | 765.83 | 3.4 | 769 | 767.6 | 2.8 | 769 | 768.47 | 1.28 | 770 | 768.73 | 1.23 |
| | 50 | rnd | 704 | 620.37 | 47.2 | 753 | 690.37 | 32.06 | 762 | 709.3 | 28.34 | 767 | 734.73 | 28.64 |
| | | 2op | 769 | 767.37 | 3.09 | 769 | 768.67 | 0.76 | 769 | 769 | 0 | 772 | 769.07 | 1.05 |

Table A.461: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 915 | 905.4 | 4.26 | 914 | 909.13 | 2.8 | 917 | 910.93 | 3.42 | 917 | 912.87 | 2.32 |
| | | 2op | 916 | 910.53 | 4.45 | 919 | 912.1 | 3.29 | 918 | 913.67 | 3.14 | 919 | 914.77 | 2.75 |
| | 50 | rnd | 919 | 908.37 | 5.28 | 916 | 911.33 | 2.84 | 919 | 913.03 | 3.13 | 918 | 914.03 | 1.97 |
| | | 2op | 917 | 912.73 | 3.13 | 919 | 914.6 | 2.82 | 919 | 914.17 | 2.32 | 919 | 914.7 | 2.64 |
| 51 | 20 | rnd | 915 | 907.5 | 4.13 | 917 | 909.17 | 3.7 | 917 | 910.63 | 3.37 | 919 | 912.63 | 3.44 |
| | | 2op | 917 | 911.03 | 3.36 | 917 | 913.13 | 3.16 | 917 | 913.9 | 2.5 | 921 | 915.27 | 2.78 |
| | 50 | rnd | 919 | 908.8 | 4.57 | 917 | 912.53 | 2.8 | 921 | 913.57 | 3.87 | 918 | 914.8 | 2.54 |
| | | 2op | 918 | 914.4 | 2.18 | 919 | 915.23 | 2.06 | 921 | 916.2 | 2.43 | 921 | 916.27 | 1.93 |

Table A.462: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 915 | 906.3 | 4.57 | 916 | 910.03 | 3.76 | 917 | 911.67 | 3.57 | 918 | 912.9 | 2.76 |
| | | 2op | 918 | 910.47 | 3.96 | 919 | 911.67 | 3.63 | 918 | 914.13 | 2.86 | 921 | 914.03 | 3.61 |
| | 50 | rnd | 916 | 909.07 | 3.78 | 918 | 911 | 3.52 | 918 | 913.23 | 1.94 | 919 | 913.7 | 2.63 |
| | | 2op | 918 | 911.67 | 4.16 | 921 | 913.1 | 3.43 | 919 | 913.53 | 2.71 | 919 | 914.87 | 2.76 |
| 51 | 20 | rnd | 917 | 907.7 | 6.02 | 915 | 910.57 | 3.05 | 916 | 909.97 | 3.19 | 921 | 912.8 | 3.45 |
| | | 2op | 917 | 910.7 | 3.69 | 919 | 913.6 | 3.54 | 919 | 914.57 | 2.62 | 918 | 915.37 | 1.81 |
| | 50 | rnd | 915 | 909.27 | 3.7 | 918 | 911.87 | 3.79 | 918 | 912.77 | 2.86 | 919 | 914.7 | 2.2 |
| | | 2op | 918 | 914.5 | 2.65 | 919 | 914.63 | 2.63 | 918 | 915.4 | 2.27 | 919 | 915.97 | 2.28 |

Table A.463: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 916 | 906.6 | 4.48 | 917 | 911.23 | 3.57 | 918 | 912.1 | 2.73 | 919 | 914.5 | 2.47 |
| | | 2op | 916 | 912.33 | 2.29 | 918 | 914.67 | 2.35 | 918 | 916.17 | 1.15 | 919 | 916.2 | 1.32 |
| | 50 | rnd | 919 | 909.93 | 4.08 | 918 | 913.13 | 3.05 | 918 | 913.97 | 2.93 | 918 | 914.9 | 2.4 |
| | | 2op | 918 | 913.8 | 2.44 | 919 | 916 | 2.32 | 921 | 916.47 | 1.8 | 921 | 916.93 | 1.6 |
| 51 | 20 | rnd | 917 | 910.27 | 3.25 | 921 | 912.77 | 3.24 | 919 | 914.53 | 2.45 | 919 | 916.07 | 2.03 |
| | | 2op | 916 | 915.53 | 1.36 | 918 | 916.17 | 0.46 | 918 | 916.7 | 0.79 | 921 | 918 | 1.55 |
| | 50 | rnd | 918 | 911.87 | 2.86 | 921 | 915.43 | 2.33 | 918 | 915.53 | 2.21 | 919 | 916.83 | 1.62 |
| | | 2op | 918 | 915.6 | 1.71 | 921 | 916.93 | 1.41 | 921 | 917.6 | 1.63 | 921 | 918.07 | 1.6 |

Table A.464: $f25\_500$: basicRRGA+IM: 500 – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 913 | 908.63 | 2.25 | 918 | 912.83 | 2.26 | 921 | 914.03 | 2.7 | 918 | 915.1 | 2.02 |
| | | 2op | 917 | 913.8 | 2.57 | 918 | 915.53 | 2.01 | 921 | 916.8 | 1.65 | 921 | 917.6 | 1.67 |
| | 50 | rnd | 919 | 910.57 | 3.57 | 919 | 915.03 | 2.28 | 919 | 915.3 | 2.59 | 921 | 917 | 1.93 |
| | | 2op | 918 | 914.4 | 2.06 | 921 | 917.2 | 1.49 | 921 | 917.4 | 1.71 | 921 | 917.93 | 1.31 |
| 51 | 20 | rnd | 919 | 911.23 | 3.27 | 919 | 914.17 | 2.53 | 919 | 915.23 | 2.31 | 921 | 916.63 | 2.08 |
| | | 2op | 916 | 915.83 | 0.91 | 921 | 916.37 | 1.03 | 921 | 917.8 | 1.79 | 921 | 917.5 | 1.04 |
| | 50 | rnd | 917 | 913.03 | 2.47 | 919 | 915.63 | 2.48 | 919 | 916.4 | 1.87 | 918 | 916.8 | 1.16 |
| | | 2op | 917 | 915.87 | 1.14 | 921 | 917.03 | 1.13 | 921 | 917.83 | 1.58 | 921 | 917.83 | 0.91 |

Table A.465: $f25\_500$: basicRRGA+IM: 5000 – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 795 | 725.1 | 44.97 | 857 | 794.07 | 35.18 | 878 | 819.07 | 28.69 | 896 | 849.4 | 27.18 |
| | | 2op | 916 | 912.57 | 3.71 | 916 | 915.83 | 0.91 | 918 | 915.57 | 1.55 | 917 | 915.73 | 1.34 |
| | 50 | rnd | 841 | 748 | 48.63 | 851 | 811.67 | 20.97 | 882 | 822.73 | 29.59 | 899 | 848.7 | 27.56 |
| | | 2op | 916 | 913.13 | 2.42 | 916 | 915.6 | 1.16 | 916 | 916 | 0 | 917 | 916.03 | 0.18 |
| 51 | 20 | rnd | 840 | 746.33 | 43.53 | 853 | 800.93 | 31.37 | 859 | 815.37 | 38.51 | 901 | 846.43 | 28.38 |
| | | 2op | 916 | 914.4 | 2.91 | 916 | 915.9 | 0.55 | 916 | 915.97 | 0.18 | 918 | 915.87 | 0.86 |
| | 50 | rnd | 848 | 775.1 | 35.03 | 861 | 804.1 | 36.19 | 890 | 828.43 | 30.65 | 905 | 850.67 | 26.64 |
| | | 2op | 916 | 914.4 | 2.59 | 916 | 915.9 | 0.55 | 916 | 915.73 | 1.05 | 916 | 916 | 0 |

Table A.466: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 800 | 724.1 | 52.92 | 853 | 799.63 | 33.93 | 864 | 817.9 | 28.19 | 872 | 837.37 | 26.55 |
| | | 2op | 916 | 912.9 | 4.85 | 916 | 915.43 | 1.76 | 916 | 915.67 | 1.27 | 917 | 915.83 | 0.7 |
| | 50 | rnd | 807 | 745.5 | 44.67 | 852 | 801.9 | 30.73 | 904 | 814.87 | 36.27 | 905 | 853.53 | 31.51 |
| | | 2op | 916 | 914.17 | 2.59 | 916 | 915.7 | 1.15 | 916 | 915.77 | 0.77 | 918 | 915.93 | 0.87 |
| 51 | 20 | rnd | 829 | 751.3 | 50.29 | 857 | 799.6 | 37.84 | 860 | 819.47 | 24.47 | 901 | 837.5 | 26.23 |
| | | 2op | 916 | 914.83 | 2.52 | 916 | 915.57 | 1.36 | 916 | 916 | 0 | 916 | 916 | 0 |
| | 50 | rnd | 815 | 750.93 | 37.93 | 866 | 813.7 | 30.4 | 866 | 819.07 | 33.52 | 867 | 839.73 | 22.6 |
| | | 2op | 916 | 914.07 | 2.42 | 916 | 916 | 0 | 916 | 916 | 0 | 918 | 916.13 | 0.43 |

Table A.467: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1541 | 1508.1 | 21.32 | 1541 | 1522.2 | 11.65 | 1542 | 1523.5 | 10.54 | 1536 | 1521.33 | 7.94 |
| | | 2op | 1556 | 1534.47 | 13.46 | 1562 | 1533.27 | 12.72 | 1545 | 1530.93 | 8.18 | 1548 | 1528.4 | 10.21 |
| | 50 | rnd | 1540 | 1522.2 | 13.84 | 1550 | 1535.27 | 9.17 | 1548 | 1533.1 | 8.21 | 1551 | 1534.77 | 7.94 |
| | | 2op | 1562 | 1537.63 | 12.72 | 1560 | 1541.9 | 8.31 | 1556 | 1542.27 | 9.78 | 1553 | 1539.37 | 8.23 |
| 51 | 20 | rnd | 1538 | 1518.4 | 12.73 | 1544 | 1525.23 | 12.34 | 1547 | 1527.3 | 11.91 | 1544 | 1525.5 | 11.74 |
| | | 2op | 1565 | 1547.67 | 13.66 | 1564 | 1551.97 | 5.78 | 1559 | 1546.3 | 6.17 | 1562 | 1546.6 | 8.64 |
| | 50 | rnd | 1545 | 1520.17 | 16.99 | 1559 | 1537.33 | 8.75 | 1550 | 1537.77 | 7.87 | 1561 | 1543.8 | 8.03 |
| | | 2op | 1558 | 1544.2 | 13.61 | 1569 | 1548.67 | 8.64 | 1568 | 1552.67 | 7.96 | 1565 | 1552.63 | 4.99 |

Table A.468: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1534 | 1507.03 | 17.21 | 1547 | 1525.57 | 10.75 | 1535 | 1520.57 | 8.22 | 1548 | 1519.97 | 10.63 |
| | | 2op | 1551 | 1531.23 | 11.85 | 1554 | 1537.13 | 9.64 | 1552 | 1534.53 | 9.85 | 1542 | 1528.83 | 6.97 |
| | 50 | rnd | 1542 | 1513.6 | 15.6 | 1553 | 1533.47 | 9.31 | 1557 | 1534 | 9.88 | 1555 | 1531.93 | 9.26 |
| | | 2op | 1560 | 1531.53 | 15.08 | 1559 | 1539.17 | 10.67 | 1561 | 1538.1 | 9.45 | 1553 | 1535.7 | 7.53 |
| 51 | 20 | rnd | 1544 | 1511.37 | 16.88 | 1558 | 1525.23 | 13.51 | 1547 | 1525.73 | 12.07 | 1553 | 1527.97 | 12 |
| | | 2op | 1564 | 1543.43 | 14.59 | 1565 | 1547.73 | 10.66 | 1561 | 1547.5 | 7.77 | 1564 | 1546.37 | 9.93 |
| | 50 | rnd | 1547 | 1517.1 | 16.51 | 1554 | 1536.07 | 10.57 | 1559 | 1539.67 | 10.78 | 1558 | 1539.8 | 8.23 |
| | | 2op | 1565 | 1546.43 | 9.87 | 1565 | 1549.87 | 8.07 | 1565 | 1551.4 | 8.15 | 1562 | 1551.9 | 7.11 |

Table A.469: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1550 | 1510.53 | 18.16 | 1558 | 1527.13 | 14.28 | 1554 | 1534.43 | 9.19 | 1550 | 1534.07 | 7.97 |
| | | 2op | 1564 | 1550.37 | 8.06 | 1565 | 1550.67 | 7.29 | 1566 | 1552.23 | 9.47 | 1565 | 1551.57 | 7.89 |
| | 50 | rnd | 1542 | 1519.5 | 10.85 | 1555 | 1538.53 | 10.11 | 1562 | 1542.23 | 10.62 | 1555 | 1540.87 | 7.84 |
| | | 2op | 1561 | 1542.9 | 11.27 | 1566 | 1551.6 | 8.11 | 1564 | 1553.07 | 5.66 | 1564 | 1550.77 | 6.06 |
| 51 | 20 | rnd | 1551 | 1523.2 | 12.77 | 1542 | 1533.43 | 7.53 | 1558 | 1540.13 | 10.24 | 1563 | 1543.63 | 10.27 |
| | | 2op | 1565 | 1555.97 | 2.39 | 1565 | 1559.17 | 4.01 | 1566 | 1561.87 | 3.71 | 1566 | 1562.5 | 3.63 |
| | 50 | rnd | 1552 | 1528.07 | 12.89 | 1562 | 1544.2 | 9.51 | 1561 | 1547.13 | 7.79 | 1564 | 1551.3 | 8.63 |
| | | 2op | 1564 | 1555.47 | 3.08 | 1566 | 1561.47 | 4.01 | 1571 | 1562.57 | 3.68 | 1566 | 1562.43 | 3.35 |

Table A.470: $f50\_315$: basicRRGA+IM: 500 – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1537 | 1518.6 | 16.04 | 1551 | 1534.03 | 8.58 | 1549 | 1536.6 | 7.09 | 1554 | 1538.1 | 10.03 |
| | | 2op | 1566 | 1546.93 | 9.37 | 1565 | 1554.73 | 5.18 | 1566 | 1552.77 | 8.76 | 1565 | 1552.17 | 7.42 |
| | 50 | rnd | 1548 | 1524.7 | 13.64 | 1560 | 1541.43 | 10.17 | 1562 | 1546.97 | 8.91 | 1553 | 1541.77 | 7.81 |
| | | 2op | 1559 | 1543.17 | 9.08 | 1562 | 1554.1 | 6.02 | 1564 | 1553.13 | 5.94 | 1562 | 1548.07 | 5.55 |
| 51 | 20 | rnd | 1551 | 1526.77 | 12.99 | 1562 | 1543.83 | 9.55 | 1560 | 1544.03 | 7.71 | 1559 | 1540.67 | 8.33 |
| | | 2op | 1565 | 1557.4 | 3.44 | 1566 | 1560.67 | 3.79 | 1567 | 1562.63 | 3.48 | 1565 | 1561.63 | 3.61 |
| | 50 | rnd | 1551 | 1531.9 | 11.11 | 1560 | 1545.7 | 7.16 | 1561 | 1545.17 | 7.73 | 1547 | 1534.7 | 5.27 |
| | | 2op | 1566 | 1558.83 | 4.63 | 1567 | 1561.83 | 4.14 | 1566 | 1560 | 3.81 | 1565 | 1555.07 | 4.81 |

Table A.471: $f50\_315$: basicRRGA+IM: 5000 – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1012 | 927.97 | 43.01 | 1084 | 1037.27 | 26.28 | 1140 | 1051.67 | 31.51 | 1148 | 1091.33 | 30.95 |
| | | 2op | 1555 | 1552.3 | 4.15 | 1564 | 1554.93 | 2.59 | 1565 | 1555.63 | 5.31 | 1565 | 1558.57 | 4.65 |
| | 50 | rnd | 1013 | 928.8 | 33.18 | 1085 | 1028.87 | 33.53 | 1157 | 1056.57 | 38.38 | 1166 | 1098.7 | 33.13 |
| | | 2op | 1555 | 1553.4 | 0.81 | 1565 | 1554 | 4.9 | 1564 | 1556 | 2.84 | 1565 | 1560.47 | 4.55 |
| 51 | 20 | rnd | 1029 | 923.9 | 36.42 | 1074 | 1034.17 | 26.67 | 1095 | 1052.07 | 31.45 | 1163 | 1101.6 | 31.67 |
| | | 2op | 1556 | 1553.73 | 1.48 | 1564 | 1553.77 | 2.99 | 1564 | 1555.93 | 3.14 | 1565 | 1559.07 | 4.44 |
| | 50 | rnd | 1006 | 920.4 | 39.03 | 1075 | 1028.17 | 34.69 | 1122 | 1059.47 | 28.85 | 1155 | 1087.1 | 41.45 |
| | | 2op | 1556 | 1553.87 | 1.07 | 1565 | 1554.87 | 2.18 | 1565 | 1556.7 | 3.72 | 1565 | 1557.7 | 3.93 |

Table A.472: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 981 | 911.37 | 36.65 | 1085 | 1027.17 | 28.76 | 1125 | 1059.77 | 34.66 | 1168 | 1096.73 | 35.86 |
| | | 2op | 1555 | 1552.93 | 2.2 | 1565 | 1554.5 | 3.41 | 1565 | 1555.53 | 4.07 | 1565 | 1557.3 | 3.79 |
| | 50 | rnd | 1044 | 937.4 | 48.06 | 1083 | 1033.9 | 24.51 | 1128 | 1057 | 34.42 | 1150 | 1090.67 | 29.52 |
| | | 2op | 1563 | 1553.4 | 3.57 | 1565 | 1554.03 | 3.16 | 1565 | 1558 | 4.18 | 1565 | 1558.67 | 4.67 |
| 51 | 20 | rnd | 998 | 934.57 | 35.02 | 1090 | 1038.47 | 26.13 | 1116 | 1053.87 | 36.35 | 1140 | 1087.97 | 25.25 |
| | | 2op | 1556 | 1553.3 | 1.74 | 1564 | 1553.4 | 6.89 | 1565 | 1555.8 | 4.12 | 1565 | 1558.67 | 5.34 |
| | 50 | rnd | 1034 | 926.37 | 45.97 | 1086 | 1034.3 | 34.22 | 1133 | 1060.9 | 24.93 | 1153 | 1083.77 | 26.82 |
| | | 2op | 1556 | 1553.6 | 1.22 | 1564 | 1554.67 | 1.97 | 1565 | 1555.57 | 2.57 | 1565 | 1560.03 | 4.06 |

Table A.473: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1530 | 1486.97 | 19.15 | 1534 | 1503.2 | 12.23 | 1526 | 1508.33 | 11.06 | 1534 | 1509.07 | 11.71 |
| | | 2op | 1545 | 1514.63 | 16.4 | 1551 | 1526.37 | 11.23 | 1545 | 1520.97 | 11.12 | 1550 | 1518.5 | 13.93 |
| | 50 | rnd | 1554 | 1502.2 | 19.98 | 1546 | 1518.27 | 12.87 | 1543 | 1523 | 12.19 | 1552 | 1520.43 | 11.04 |
| | | 2op | 1543 | 1519.1 | 16.98 | 1549 | 1528.77 | 14.05 | 1549 | 1530.3 | 11.1 | 1552 | 1528.83 | 12.5 |
| 51 | 20 | rnd | 1528 | 1495.53 | 21.06 | 1528 | 1507.9 | 17.16 | 1540 | 1513.63 | 17.46 | 1538 | 1510.17 | 14.72 |
| | | 2op | 1555 | 1523.5 | 15.46 | 1552 | 1533.77 | 8.79 | 1550 | 1535.63 | 9.8 | 1551 | 1530.53 | 7.5 |
| | 50 | rnd | 1540 | 1503.93 | 20.6 | 1551 | 1518.87 | 13.43 | 1543 | 1525.13 | 12.25 | 1555 | 1528.57 | 11.66 |
| | | 2op | 1552 | 1527.37 | 12.51 | 1561 | 1538.97 | 10.56 | 1564 | 1541 | 9.02 | 1557 | 1541.7 | 8.7 |

Table A.474: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1529 | 1494.8 | 23.05 | 1543 | 1510.8 | 15.38 | 1547 | 1511.23 | 14.95 | 1526 | 1506.03 | 11.05 |
| | | 2op | 1545 | 1516.97 | 16.88 | 1541 | 1520.63 | 11.67 | 1546 | 1524.23 | 10.81 | 1531 | 1512.83 | 10.45 |
| | 50 | rnd | 1536 | 1505.1 | 16.79 | 1544 | 1517.63 | 9.56 | 1549 | 1520.67 | 13.77 | 1543 | 1518.43 | 12.26 |
| | | 2op | 1548 | 1517.2 | 15.36 | 1549 | 1526.57 | 10.72 | 1547 | 1528.53 | 9.64 | 1551 | 1525.73 | 13.64 |
| 51 | 20 | rnd | 1528 | 1486.33 | 21.15 | 1530 | 1510.97 | 13.79 | 1535 | 1508.3 | 13.35 | 1547 | 1514.27 | 15.13 |
| | | 2op | 1550 | 1525.87 | 10.82 | 1554 | 1530.33 | 12.07 | 1550 | 1533.63 | 9.61 | 1545 | 1531.1 | 9.41 |
| | 50 | rnd | 1541 | 1505.97 | 21.19 | 1554 | 1522.17 | 13.82 | 1553 | 1525.63 | 13.86 | 1557 | 1527.47 | 13.92 |
| | | 2op | 1549 | 1526.5 | 14.28 | 1556 | 1538.2 | 9.43 | 1555 | 1538.73 | 10.56 | 1558 | 1541.77 | 8.7 |

Table A.475: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1524 | 1496.27 | 18.69 | 1555 | 1520.17 | 14.36 | 1552 | 1522.23 | 14 | 1553 | 1525.23 | 12.29 |
| | | 2op | 1546 | 1529.73 | 9.52 | 1559 | 1544.4 | 7.57 | 1555 | 1540.33 | 8.97 | 1555 | 1540.67 | 7.08 |
| | 50 | rnd | 1543 | 1501.07 | 20.81 | 1550 | 1525.67 | 11.77 | 1555 | 1530.17 | 11.83 | 1561 | 1534.13 | 10.34 |
| | | 2op | 1554 | 1529.07 | 14.76 | 1554 | 1537.73 | 10.36 | 1559 | 1543.77 | 8.11 | 1559 | 1545.3 | 7.39 |
| 51 | 20 | rnd | 1524 | 1501.7 | 13.84 | 1548 | 1517.03 | 14.81 | 1554 | 1526.57 | 11.93 | 1558 | 1528.57 | 15.63 |
| | | 2op | 1555 | 1538.07 | 7.56 | 1556 | 1545.83 | 6.97 | 1557 | 1546.93 | 6.15 | 1564 | 1551.93 | 6.46 |
| | 50 | rnd | 1542 | 1512.4 | 16.03 | 1556 | 1531.3 | 15.43 | 1557 | 1533.1 | 11.13 | 1557 | 1540.47 | 12.5 |
| | | 2op | 1555 | 1541.47 | 9.36 | 1558 | 1550.4 | 6.88 | 1561 | 1551.13 | 6.93 | 1561 | 1553 | 5.7 |

Table A.476: $f50\_412$: basicRRGA+IM: 500 – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1521 | 1498.13 | 14.83 | 1544 | 1522.13 | 12.51 | 1552 | 1530.83 | 11.95 | 1556 | 1532.47 | 13.38 |
| | | 2op | 1554 | 1535.63 | 11.08 | 1554 | 1540.77 | 8.08 | 1558 | 1545.03 | 6.61 | 1559 | 1544.97 | 8.31 |
| | 50 | rnd | 1540 | 1502.77 | 21.17 | 1552 | 1529.7 | 10.51 | 1557 | 1535 | 10.71 | 1555 | 1534.13 | 12.02 |
| | | 2op | 1549 | 1530 | 11.4 | 1560 | 1541.87 | 10.08 | 1557 | 1546.17 | 6.76 | 1556 | 1543.63 | 7.85 |
| 51 | 20 | rnd | 1540 | 1506.17 | 17.37 | 1557 | 1525.37 | 12.31 | 1555 | 1533.17 | 11.67 | 1553 | 1532.97 | 11.18 |
| | | 2op | 1555 | 1538.03 | 5.99 | 1556 | 1545.17 | 5.93 | 1556 | 1549.6 | 6.12 | 1559 | 1548.77 | 6.95 |
| | 50 | rnd | 1552 | 1521.47 | 14.9 | 1562 | 1538.5 | 8.28 | 1556 | 1538.37 | 11.29 | 1546 | 1532 | 8.35 |
| | | 2op | 1556 | 1542.1 | 6.02 | 1561 | 1551.33 | 6.54 | 1560 | 1550.13 | 7.3 | 1555 | 1545.23 | 5.87 |

Table A.477: $f50\_412$: basicRRGA+IM: 5000 – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 965 | 849.43 | 50.95 | 1042 | 962.6 | 37.51 | 1156 | 1019.97 | 46.19 | 1137 | 1062.77 | 39.25 |
| | | 2op | 1538 | 1529.53 | 4.09 | 1532 | 1530.23 | 3.2 | 1541 | 1530.57 | 5.37 | 1550 | 1534.8 | 6.96 |
| | 50 | rnd | 949 | 843.57 | 44.15 | 1088 | 969.43 | 48.27 | 1083 | 1007.27 | 34.96 | 1171 | 1067.47 | 53.98 |
| | | 2op | 1531 | 1530.03 | 2.51 | 1535 | 1529.97 | 4.31 | 1539 | 1531.27 | 2.35 | 1555 | 1534.03 | 6.59 |
| 51 | 20 | rnd | 972 | 865.27 | 44.07 | 1088 | 971 | 49.49 | 1122 | 1017.7 | 40.45 | 1170 | 1064.2 | 56.64 |
| | | 2op | 1538 | 1529.1 | 5.18 | 1539 | 1529.83 | 4.51 | 1555 | 1531.83 | 5.77 | 1555 | 1534.93 | 7.06 |
| | 50 | rnd | 933 | 855.73 | 49.15 | 1066 | 970 | 37.48 | 1095 | 999.2 | 48.19 | 1146 | 1067.33 | 46.19 |
| | | 2op | 1531 | 1529.9 | 2.98 | 1543 | 1531.2 | 2.48 | 1550 | 1531.77 | 4.11 | 1550 | 1537.57 | 7.77 |

Table A.478: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 899 | 830.97 | 45.06 | 1107 | 989.33 | 46.82 | 1130 | 1019.17 | 48.35 | 1142 | 1059.5 | 48.45 |
| | | 2op | 1531 | 1528.27 | 4.75 | 1539 | 1530.07 | 3.79 | 1549 | 1530.07 | 6.67 | 1555 | 1536.2 | 7.91 |
| | 50 | rnd | 963 | 840.4 | 52.73 | 1108 | 981.7 | 43.92 | 1100 | 1017.43 | 41.33 | 1179 | 1072.33 | 52.81 |
| | | 2op | 1531 | 1530.07 | 2.97 | 1531 | 1529.73 | 3.67 | 1542 | 1531.8 | 4.41 | 1552 | 1535.67 | 6.66 |
| 51 | 20 | rnd | 932 | 852.2 | 41.32 | 1085 | 957.23 | 54.4 | 1093 | 1009.1 | 46.33 | 1187 | 1073 | 49.54 |
| | | 2op | 1531 | 1530.5 | 1.91 | 1543 | 1528.6 | 6.87 | 1539 | 1530.53 | 4.01 | 1555 | 1535.17 | 8.12 |
| | 50 | rnd | 941 | 853.67 | 39.28 | 1141 | 977.63 | 58.15 | 1087 | 1004.97 | 43.96 | 1165 | 1060.07 | 58.02 |
| | | 2op | 1531 | 1531 | 0 | 1539 | 1531.03 | 2.13 | 1531 | 1530.77 | 0.77 | 1550 | 1534.53 | 5.37 |

Table A.479: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1522 | 1488.4 | 16 | 1531 | 1506.23 | 10.21 | 1523 | 1504.77 | 9.91 | 1517 | 1502.1 | 10.24 |
| | | 2op | 1548 | 1515.37 | 15.33 | 1537 | 1517.27 | 10.83 | 1540 | 1517.87 | 11.03 | 1538 | 1511.77 | 11.89 |
| | 50 | rnd | 1525 | 1494.13 | 13.44 | 1533 | 1513.9 | 9.31 | 1529 | 1514.43 | 7.96 | 1539 | 1517.57 | 8.29 |
| | | 2op | 1540 | 1514.33 | 13.55 | 1539 | 1521.7 | 10.15 | 1543 | 1523.63 | 9.33 | 1535 | 1519.6 | 7.26 |
| 51 | 20 | rnd | 1531 | 1488.87 | 16.64 | 1533 | 1507.63 | 10.77 | 1537 | 1509.13 | 11.62 | 1535 | 1508.97 | 10.69 |
| | | 2op | 1548 | 1533.07 | 11.75 | 1548 | 1536.17 | 9.75 | 1548 | 1531.07 | 10.6 | 1548 | 1531.4 | 7.99 |
| | 50 | rnd | 1515 | 1497.2 | 9.87 | 1534 | 1512.57 | 9.73 | 1540 | 1515.27 | 10.39 | 1540 | 1523 | 8.81 |
| | | 2op | 1548 | 1531.03 | 10.19 | 1548 | 1535.63 | 9.71 | 1548 | 1532.47 | 7.22 | 1548 | 1534.03 | 7.75 |

Table A.480: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1537 | 1493.7 | 17.78 | 1516 | 1501 | 8.76 | 1516 | 1501.07 | 7.29 | 1524 | 1502.5 | 9.69 |
| | | 2op | 1538 | 1516.13 | 11.95 | 1548 | 1515.8 | 12.78 | 1544 | 1514.53 | 12.46 | 1530 | 1511.67 | 9.11 |
| | 50 | rnd | 1534 | 1495.2 | 17.28 | 1540 | 1514.2 | 11.51 | 1531 | 1511.93 | 6.93 | 1530 | 1513.27 | 8.41 |
| | | 2op | 1537 | 1514.8 | 11.82 | 1545 | 1523.3 | 9.4 | 1537 | 1521.03 | 9.18 | 1536 | 1516.57 | 10.25 |
| 51 | 20 | rnd | 1518 | 1493.2 | 14.37 | 1526 | 1503.57 | 10.93 | 1527 | 1507.97 | 12.34 | 1526 | 1501.23 | 8.27 |
| | | 2op | 1549 | 1534.13 | 12.28 | 1548 | 1536.83 | 7.18 | 1549 | 1532.47 | 10.07 | 1548 | 1527.33 | 12.06 |
| | 50 | rnd | 1527 | 1502 | 13.97 | 1534 | 1513.23 | 10.41 | 1530 | 1515.2 | 8.35 | 1531 | 1518.8 | 7.02 |
| | | 2op | 1549 | 1534.57 | 9.53 | 1549 | 1533.43 | 8.08 | 1548 | 1536.07 | 7.74 | 1548 | 1533.1 | 10.01 |

Table A.481: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1523 | 1494.47 | 14.69 | 1545 | 1514.3 | 12.21 | 1545 | 1513.1 | 12.36 | 1533 | 1513.63 | 8.41 |
| | | 2op | 1549 | 1536.07 | 10.29 | 1549 | 1539.57 | 8.96 | 1550 | 1539.47 | 7.35 | 1548 | 1537.2 | 9.83 |
| | 50 | rnd | 1532 | 1503.27 | 12.56 | 1540 | 1519.2 | 9.75 | 1540 | 1521.43 | 8.87 | 1536 | 1521.2 | 8.67 |
| | | 2op | 1548 | 1530.7 | 10.99 | 1548 | 1534.87 | 9.36 | 1549 | 1537.83 | 7.37 | 1550 | 1535.83 | 7.72 |
| 51 | 20 | rnd | 1535 | 1499.7 | 18.65 | 1543 | 1513.4 | 11.6 | 1539 | 1521.67 | 7.74 | 1548 | 1530.17 | 11.17 |
| | | 2op | 1548 | 1548 | 0 | 1549 | 1548.1 | 0.31 | 1549 | 1548.33 | 0.48 | 1551 | 1548.8 | 0.76 |
| | 50 | rnd | 1524 | 1505.73 | 11.26 | 1539 | 1521.9 | 8.13 | 1547 | 1529.33 | 8.88 | 1552 | 1533.47 | 10.1 |
| | | 2op | 1549 | 1546.2 | 4.06 | 1549 | 1547.63 | 2.17 | 1549 | 1548 | 2.52 | 1551 | 1548.33 | 1.56 |

Table A.482: $f50\_498$: basicRRGA+IM: 500 – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1527 | 1497.43 | 15.62 | 1535 | 1515.53 | 9.97 | 1540 | 1518.8 | 12.35 | 1544 | 1520.1 | 10.03 |
| | | 2op | 1548 | 1533.93 | 12.57 | 1549 | 1542.37 | 5.89 | 1549 | 1541.5 | 6.94 | 1549 | 1539.2 | 7.71 |
| | 50 | rnd | 1524 | 1500.17 | 13.65 | 1531 | 1516.47 | 6.27 | 1540 | 1525.2 | 9.58 | 1540 | 1521.1 | 8.6 |
| | | 2op | 1548 | 1530 | 11.63 | 1548 | 1536.7 | 8.3 | 1548 | 1538.4 | 6.75 | 1549 | 1533.3 | 8.46 |
| 51 | 20 | rnd | 1533 | 1504.1 | 13.76 | 1540 | 1522.57 | 10.27 | 1544 | 1529.37 | 8.14 | 1540 | 1523.03 | 9.22 |
| | | 2op | 1549 | 1547.77 | 1.87 | 1549 | 1548.2 | 0.61 | 1551 | 1548.57 | 0.82 | 1549 | 1548.1 | 0.31 |
| | 50 | rnd | 1535 | 1508.23 | 12.72 | 1546 | 1528.53 | 8.23 | 1551 | 1529.77 | 10.35 | 1534 | 1521.3 | 7.19 |
| | | 2op | 1549 | 1546.63 | 3.37 | 1551 | 1548.33 | 0.76 | 1555 | 1546.97 | 3.88 | 1549 | 1542.57 | 6.04 |

Table A.483: $f50\_498$: basicRRGA+IM: 5000 – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1033 | 873.97 | 60.25 | 1121 | 1007.23 | 69.25 | 1128 | 1058.2 | 52.32 | 1175 | 1101.13 | 44.6 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1546.83 | 4.08 | 1548 | 1546.6 | 4.38 | 1548 | 1548 | 0 |
| | 50 | rnd | 966 | 882.47 | 48.34 | 1151 | 1024.4 | 54.5 | 1138 | 1064.33 | 44.26 | 1158 | 1099.67 | 39.57 |
| | | 2op | 1548 | 1547.67 | 1.83 | 1548 | 1547.5 | 2.11 | 1549 | 1547.33 | 2.68 | 1549 | 1547.43 | 2.65 |
| 51 | 20 | rnd | 1064 | 916.3 | 59.37 | 1097 | 1028.63 | 46.62 | 1138 | 1056.33 | 48.99 | 1189 | 1098.6 | 54.49 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1546.33 | 4.29 | 1549 | 1547.7 | 1.84 | 1548 | 1547.53 | 2.56 |
| | 50 | rnd | 983 | 886.77 | 48.29 | 1092 | 1013.3 | 46.67 | 1165 | 1051.4 | 56.15 | 1208 | 1104.9 | 48.88 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1546.97 | 3.93 | 1549 | 1548.03 | 0.18 |

Table A.484: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 984 | 889.57 | 55.3 | 1096 | 1006.23 | 56.22 | 1160 | 1049.8 | 51.57 | 1202 | 1101.17 | 52.37 |
| | | 2op | 1548 | 1547.17 | 4.56 | 1548 | 1548 | 0 | 1548 | 1545.83 | 5.78 | 1549 | 1546.23 | 4.21 |
| | 50 | rnd | 961 | 856.53 | 59.33 | 1121 | 1040.2 | 49.6 | 1159 | 1073.33 | 46.82 | 1205 | 1104.87 | 51.53 |
| | | 2op | 1548 | 1546.57 | 7.85 | 1548 | 1548 | 0 | 1549 | 1548.03 | 0.18 | 1548 | 1547.43 | 2.34 |
| 51 | 20 | rnd | 1072 | 879.17 | 55.46 | 1149 | 1019.83 | 55.83 | 1163 | 1072.37 | 49.83 | 1225 | 1115.87 | 40.29 |
| | | 2op | 1548 | 1546.93 | 4.07 | 1548 | 1546.37 | 6.7 | 1548 | 1547.17 | 4.56 | 1549 | 1548.07 | 0.25 |
| | 50 | rnd | 990 | 885.73 | 51.08 | 1152 | 1020.1 | 44.27 | 1135 | 1058.73 | 40.31 | 1206 | 1114.43 | 45.68 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1549 | 1548.1 | 0.31 |

Table A.485: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2610 | 2576.93 | 16.05 | 2609 | 2579.6 | 20.04 | 2608 | 2574.3 | 14.93 | 2614 | 2575.93 | 19.4 |
| | | 2op | 2695 | 2652.97 | 24.4 | 2681 | 2633.17 | 27.37 | 2688 | 2628.47 | 28.46 | 2702 | 2630.63 | 31.29 |
| | 50 | rnd | 2654 | 2611.87 | 20.66 | 2639 | 2601.3 | 16.76 | 2617 | 2595.17 | 12.78 | 2621 | 2595.47 | 14.07 |
| | | 2op | 2726 | 2666.4 | 32.17 | 2674 | 2643.5 | 15.89 | 2679 | 2634.13 | 24.57 | 2664 | 2626.3 | 20.15 |
| 51 | 20 | rnd | 2652 | 2581 | 30.35 | 2627 | 2589.27 | 17.63 | 2628 | 2591.33 | 20.91 | 2621 | 2586.9 | 16.97 |
| | | 2op | 2762 | 2712.07 | 25.17 | 2753 | 2712.77 | 23.99 | 2762 | 2704.63 | 34.21 | 2748 | 2700.67 | 28.02 |
| | 50 | rnd | 2671 | 2618.77 | 22.71 | 2664 | 2628.93 | 18.23 | 2640 | 2615.7 | 13.29 | 2648 | 2613.43 | 17.79 |
| | | 2op | 2762 | 2710.67 | 24.9 | 2753 | 2706.2 | 22.51 | 2745 | 2706.6 | 22.43 | 2745 | 2696.07 | 23.73 |

Table A.486: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2615 | 2577.73 | 21.49 | 2608 | 2574.47 | 17.79 | 2603 | 2575.97 | 17.5 | 2614 | 2576.53 | 14.09 |
| | | 2op | 2712 | 2656.1 | 25.05 | 2681 | 2627.47 | 24.47 | 2687 | 2627.83 | 26.84 | 2720 | 2624.1 | 35.03 |
| | 50 | rnd | 2639 | 2595.07 | 22.14 | 2630 | 2598.43 | 16.12 | 2632 | 2591.77 | 13.24 | 2643 | 2589.97 | 21.23 |
| | | 2op | 2715 | 2669.97 | 25.01 | 2686 | 2642.33 | 22.27 | 2684 | 2637.53 | 24.83 | 2664 | 2616.67 | 22.42 |
| 51 | 20 | rnd | 2620 | 2575.03 | 21.68 | 2621 | 2593.73 | 18.16 | 2618 | 2586.83 | 12.86 | 2612 | 2585.37 | 15.7 |
| | | 2op | 2762 | 2709.7 | 23.53 | 2747 | 2699.8 | 29.51 | 2749 | 2702.17 | 25.62 | 2734 | 2689.23 | 23.56 |
| | 50 | rnd | 2652 | 2621.07 | 20.63 | 2656 | 2621.47 | 13.99 | 2663 | 2620.1 | 14.52 | 2647 | 2607.13 | 16.75 |
| | | 2op | 2762 | 2714.8 | 22.4 | 2756 | 2697.97 | 24.98 | 2732 | 2699.33 | 24.74 | 2743 | 2681.47 | 24.45 |

Table A.487: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2629 | 2581.67 | 19.57 | 2647 | 2597.67 | 21.45 | 2650 | 2610.97 | 19.68 | 2642 | 2604.07 | 16.29 |
| | | 2op | 2762 | 2737.23 | 18.84 | 2762 | 2731.8 | 17.82 | 2757 | 2732.43 | 16.8 | 2762 | 2721.27 | 25.84 |
| | 50 | rnd | 2658 | 2617.33 | 20.43 | 2654 | 2622.2 | 16.55 | 2649 | 2620.17 | 16.03 | 2645 | 2614.43 | 15.56 |
| | | 2op | 2757 | 2703.8 | 28.44 | 2746 | 2695.8 | 24.1 | 2735 | 2692.33 | 23.78 | 2762 | 2695.7 | 26.57 |
| 51 | 20 | rnd | 2635 | 2593.1 | 26.43 | 2668 | 2627.3 | 17.72 | 2653 | 2626.6 | 15.8 | 2671 | 2645.07 | 15.97 |
| | | 2op | 2762 | 2761.7 | 1.64 | 2762 | 2761.97 | 0.18 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2673 | 2630.17 | 19.28 | 2694 | 2648.37 | 16.28 | 2698 | 2658.67 | 15.53 | 2707 | 2659.2 | 18.92 |
| | | 2op | 2762 | 2760.8 | 3.16 | 2762 | 2761.4 | 1.99 | 2762 | 2760.83 | 3.52 | 2762 | 2761.57 | 1.45 |

Table A.488: $f100\_307$: basicRRGA+IM: 500 – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2643 | 2593.73 | 23.96 | 2639 | 2604.97 | 16.73 | 2641 | 2614 | 16.26 | 2657 | 2614.37 | 18.27 |
| | | 2op | 2762 | 2722.17 | 22.77 | 2762 | 2709.13 | 28.28 | 2751 | 2716.73 | 25.41 | 2761 | 2712.2 | 22.94 |
| | 50 | rnd | 2654 | 2624.97 | 18.66 | 2649 | 2621.43 | 14.27 | 2648 | 2620.9 | 13.07 | 2638 | 2611.33 | 11.31 |
| | | 2op | 2748 | 2711.4 | 27.22 | 2734 | 2696.53 | 20.77 | 2735 | 2685.83 | 17.99 | 2720 | 2682.83 | 17.34 |
| 51 | 20 | rnd | 2636 | 2597.9 | 23.66 | 2672 | 2642.97 | 17.14 | 2671 | 2650.57 | 11.42 | 2663 | 2627.93 | 21.19 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2761.9 | 0.55 | 2762 | 2761.9 | 0.55 | 2762 | 2759.13 | 5.36 |
| | 50 | rnd | 2661 | 2624.37 | 17.96 | 2664 | 2637.3 | 16.34 | 2672 | 2629.2 | 15.39 | 2650 | 2611.37 | 14.43 |
| | | 2op | 2762 | 2760.47 | 3.14 | 2762 | 2760.77 | 3.06 | 2762 | 2753.13 | 8.08 | 2762 | 2739.13 | 13.01 |

Table A.489: $f100\_307$: basicRRGA+IM: 5000 – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1286 | 1204 | 45.08 | 1453 | 1382.07 | 44.42 | 1501 | 1416.63 | 42.9 | 1537 | 1471.67 | 42.62 |
| | | 2op | 2762 | 2761.57 | 2.37 | 2762 | 2760.07 | 6.03 | 2762 | 2759.87 | 9.14 | 2762 | 2762 | 0 |
| | 50 | rnd | 1327 | 1184.57 | 47.04 | 1509 | 1385.93 | 50.91 | 1491 | 1407.93 | 44.53 | 1586 | 1469.63 | 54.25 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2761.67 | 1.83 | 2762 | 2761.6 | 2.19 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 1314 | 1242.2 | 43.24 | 1493 | 1430.17 | 39.91 | 1531 | 1456.53 | 38.45 | 1561 | 1476.43 | 37.84 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2761.03 | 5.29 | 2762 | 2760 | 6.78 |
| | 50 | rnd | 1322 | 1238.27 | 39.64 | 1483 | 1411 | 42.42 | 1533 | 1457.93 | 41.36 | 1545 | 1487.4 | 34.47 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2761.1 | 3.55 |

Table A.490: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1284 | 1174.4 | 42.31 | 1442 | 1388.57 | 38.05 | 1515 | 1425.87 | 53.02 | 1536 | 1458.6 | 46.76 |
| | | 2op | 2762 | 2761.27 | 2.84 | 2762 | 2759.03 | 6.87 | 2762 | 2761.57 | 2.37 | 2762 | 2761.17 | 4.56 |
| | 50 | rnd | 1328 | 1187.97 | 56.18 | 1458 | 1394.57 | 42.6 | 1505 | 1408.77 | 52.06 | 1552 | 1450.3 | 47.78 |
| | | 2op | 2762 | 2761.77 | 1.28 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 1307 | 1234.97 | 37.68 | 1481 | 1415.43 | 39.18 | 1529 | 1453 | 44.26 | 1585 | 1490.6 | 44.73 |
| | | 2op | 2762 | 2761.37 | 3.47 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 1319 | 1242.33 | 33.26 | 1501 | 1418.73 | 49.34 | 1522 | 1438.2 | 49.65 | 1540 | 1490.57 | 32.51 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.491: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2678 | 2637.8 | 17.45 | 2666 | 2637.4 | 14.52 | 2678 | 2646.2 | 16.52 | 2681 | 2646.53 | 20.03 |
| | | 2op | 2752 | 2711.63 | 23.15 | 2726 | 2685.6 | 23.55 | 2755 | 2691.43 | 26.23 | 2750 | 2683.1 | 22.5 |
| | 50 | rnd | 2724 | 2679.1 | 22.92 | 2712 | 2670.37 | 20.04 | 2701 | 2667.53 | 15.07 | 2685 | 2664.17 | 12.31 |
| | | 2op | 2782 | 2718.33 | 26.26 | 2763 | 2699.2 | 22.99 | 2756 | 2691.3 | 22.08 | 2746 | 2688.23 | 22.81 |
| 51 | 20 | rnd | 2684 | 2644.1 | 26.8 | 2705 | 2658.6 | 16.81 | 2701 | 2657.3 | 20.88 | 2710 | 2656.13 | 21.79 |
| | | 2op | 2793 | 2753.17 | 28.3 | 2783 | 2750.33 | 19.25 | 2804 | 2743.37 | 25.35 | 2785 | 2740.87 | 23.98 |
| | 50 | rnd | 2733 | 2684.87 | 22.2 | 2718 | 2691.1 | 15.16 | 2710 | 2681.87 | 15.3 | 2711 | 2679.2 | 15.22 |
| | | 2op | 2804 | 2761.17 | 27.72 | 2791 | 2754.37 | 14.14 | 2797 | 2742.37 | 22.63 | 2773 | 2734.37 | 22.35 |

Table A.492: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2689 | 2638.57 | 22.58 | 2678 | 2641.87 | 19.95 | 2678 | 2645.03 | 20.09 | 2671 | 2647.07 | 13.24 |
| | | 2op | 2735 | 2707.73 | 19.1 | 2720 | 2684.3 | 18.49 | 2717 | 2678.5 | 22.74 | 2733 | 2678.77 | 21.79 |
| | 50 | rnd | 2699 | 2665.5 | 21.21 | 2708 | 2665.87 | 19.12 | 2698 | 2665.37 | 16.81 | 2683 | 2656.07 | 12.62 |
| | | 2op | 2781 | 2719.43 | 26.45 | 2754 | 2699.47 | 24.58 | 2747 | 2684.7 | 23.49 | 2747 | 2677.53 | 25.01 |
| 51 | 20 | rnd | 2683 | 2641.67 | 22.2 | 2681 | 2645.73 | 19.82 | 2704 | 2653.13 | 18.77 | 2688 | 2657.1 | 16.82 |
| | | 2op | 2804 | 2753.7 | 30.03 | 2786 | 2751.37 | 21.94 | 2784 | 2747.53 | 20.1 | 2804 | 2746.67 | 24.13 |
| | 50 | rnd | 2719 | 2685.13 | 22.14 | 2727 | 2685.63 | 17.07 | 2712 | 2686.9 | 15.39 | 2704 | 2678.73 | 12.7 |
| | | 2op | 2800 | 2760.03 | 23.39 | 2781 | 2748.8 | 20.66 | 2804 | 2745.2 | 22.89 | 2782 | 2733.97 | 23.3 |

Table A.493: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2673 | 2637.33 | 20.89 | 2697 | 2665.4 | 22.74 | 2705 | 2671.63 | 17.12 | 2711 | 2679.97 | 17.08 |
| | | 2op | 2804 | 2782.7 | 18.35 | 2804 | 2781.8 | 14.51 | 2804 | 2778.27 | 22.54 | 2804 | 2775.73 | 18.33 |
| | 50 | rnd | 2705 | 2672.57 | 16.94 | 2728 | 2689.67 | 21.95 | 2721 | 2685.8 | 15.35 | 2726 | 2680.7 | 14.63 |
| | | 2op | 2804 | 2756.37 | 21.1 | 2785 | 2746.33 | 20.07 | 2791 | 2739.87 | 22.87 | 2774 | 2739.4 | 20.25 |
| 51 | 20 | rnd | 2703 | 2654.07 | 24.72 | 2721 | 2679.67 | 20.72 | 2732 | 2691.3 | 17.6 | 2747 | 2713.9 | 15.8 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2803.7 | 1.64 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2744 | 2695.1 | 21.42 | 2745 | 2713.23 | 15.56 | 2767 | 2728.93 | 15.2 | 2752 | 2731.47 | 13.75 |
| | | 2op | 2804 | 2802.37 | 4.85 | 2804 | 2803.73 | 1.01 | 2804 | 2804 | 0 | 2804 | 2803.27 | 2.42 |

Table A.494: $f100\_415$: basicRRGA+IM: 500 – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2680 | 2650.13 | 20.21 | 2721 | 2676.23 | 19 | 2732 | 2689.43 | 17.64 | 2732 | 2686.77 | 17.91 |
| | | 2op | 2804 | 2759.37 | 24.08 | 2804 | 2760.13 | 24.53 | 2790 | 2758.77 | 21.52 | 2804 | 2755.4 | 22.59 |
| | 50 | rnd | 2711 | 2678.23 | 18.24 | 2729 | 2691.77 | 14.56 | 2719 | 2685.27 | 15.96 | 2719 | 2690.3 | 12.64 |
| | | 2op | 2795 | 2749.03 | 19.35 | 2804 | 2742.2 | 22.8 | 2804 | 2740.43 | 21.97 | 2799 | 2733.1 | 26.3 |
| 51 | 20 | rnd | 2695 | 2660.23 | 19.66 | 2754 | 2710.87 | 17.47 | 2760 | 2716.47 | 16.72 | 2749 | 2701 | 19.79 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2801.9 | 4.91 |
| | 50 | rnd | 2735 | 2693.13 | 18.15 | 2746 | 2707.4 | 17.34 | 2732 | 2700.4 | 15.39 | 2719 | 2687.67 | 13.12 |
| | | 2op | 2804 | 2801.2 | 5.94 | 2804 | 2803.73 | 1.01 | 2804 | 2799.03 | 9.38 | 2804 | 2775.33 | 13.93 |

Table A.495: $f100\_415$: basicRRGA+IM: 5000 – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1178 | 1135.33 | 22.56 | 1391 | 1306.03 | 37.38 | 1393 | 1343.53 | 31.74 | 1441 | 1381.63 | 31.72 |
| | | 2op | 2804 | 2803.53 | 2.56 | 2804 | 2800.97 | 7.14 | 2804 | 2801.73 | 9.84 | 2804 | 2802.33 | 4.11 |
| | 50 | rnd | 1200 | 1134.73 | 35.3 | 1362 | 1306.8 | 31.13 | 1458 | 1341.6 | 36.74 | 1455 | 1386.9 | 38.19 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2803.07 | 3.55 | 2804 | 2802.8 | 3.67 | 2804 | 2803.63 | 2.01 |
| 51 | 20 | rnd | 1215 | 1165.23 | 27.75 | 1397 | 1332.37 | 30.85 | 1451 | 1356.4 | 33.59 | 1449 | 1396.57 | 32.77 |
| | | 2op | 2804 | 2802.43 | 5.09 | 2804 | 2804 | 0 | 2804 | 2802.77 | 5.32 | 2804 | 2804 | 0 |
| | 50 | rnd | 1248 | 1159.33 | 33.23 | 1368 | 1319.97 | 28.86 | 1402 | 1350.8 | 27.5 | 1457 | 1391.17 | 36.22 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2802.83 | 4.76 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.496: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1283 | 1140.3 | 44.89 | 1375 | 1297.4 | 36.5 | 1413 | 1348.13 | 30 | 1467 | 1384.3 | 38.36 |
| | | 2op | 2804 | 2801.9 | 6.43 | 2804 | 2801.23 | 6.8 | 2804 | 2802.03 | 6.37 | 2804 | 2802.9 | 3.6 |
| | 50 | rnd | 1193 | 1137.13 | 35.17 | 1345 | 1299.17 | 28.24 | 1436 | 1337.03 | 36.43 | 1501 | 1388.03 | 35.25 |
| | | 2op | 2804 | 2803.53 | 2.56 | 2804 | 2801.87 | 6.12 | 2804 | 2803.03 | 4.17 | 2804 | 2802.7 | 3.99 |
| 51 | 20 | rnd | 1243 | 1180.8 | 28.98 | 1392 | 1336.47 | 29.86 | 1454 | 1369.67 | 36.32 | 1513 | 1409.07 | 40.21 |
| | | 2op | 2804 | 2803 | 3.81 | 2804 | 2803.73 | 1.46 | 2804 | 2802.87 | 4.31 | 2804 | 2802.1 | 5.8 |
| | 50 | rnd | 1246 | 1168.23 | 34.67 | 1397 | 1324.8 | 35.66 | 1462 | 1356.87 | 36.4 | 1431 | 1389.1 | 29.96 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2803.53 | 2.56 | 2804 | 2804 | 0 |

Table A.497: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2567 | 2515.3 | 25.77 | 2545 | 2517 | 19.18 | 2550 | 2518.4 | 19.1 | 2543 | 2518.8 | 13.11 |
| | | 2op | 2660 | 2602.87 | 31.36 | 2630 | 2578.37 | 20.91 | 2612 | 2571.93 | 23.93 | 2610 | 2561.4 | 22.19 |
| | 50 | rnd | 2578 | 2547.77 | 22.05 | 2573 | 2543.1 | 13.65 | 2574 | 2535.23 | 14.43 | 2572 | 2532.53 | 16.69 |
| | | 2op | 2646 | 2609.13 | 23.68 | 2628 | 2587.77 | 20.6 | 2614 | 2569.63 | 21.14 | 2606 | 2577.6 | 18.63 |
| 51 | 20 | rnd | 2568 | 2517.73 | 23.75 | 2549 | 2518.37 | 20.36 | 2566 | 2526.63 | 16.53 | 2558 | 2528.9 | 18 |
| | | 2op | 2695 | 2652.7 | 17.68 | 2678 | 2633.8 | 23.09 | 2681 | 2630.57 | 20.71 | 2674 | 2631.3 | 18.82 |
| | 50 | rnd | 2592 | 2553.6 | 25.84 | 2586 | 2559.03 | 19.45 | 2598 | 2556.93 | 17.17 | 2590 | 2555.67 | 17.11 |
| | | 2op | 2682 | 2649.53 | 19.37 | 2672 | 2638.37 | 19.07 | 2678 | 2642.17 | 17.13 | 2676 | 2621.97 | 23.85 |

Table A.498: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2568 | 2516.2 | 24.85 | 2534 | 2509.8 | 13 | 2552 | 2517 | 17.01 | 2543 | 2517.73 | 11.98 |
| | | 2op | 2640 | 2597.87 | 23.26 | 2623 | 2572.63 | 24.11 | 2650 | 2575.87 | 29.74 | 2615 | 2566.63 | 24.49 |
| | 50 | rnd | 2578 | 2545.9 | 18.78 | 2598 | 2537.73 | 19.6 | 2575 | 2532.83 | 18.17 | 2563 | 2533.13 | 15.47 |
| | | 2op | 2647 | 2606.5 | 22.44 | 2623 | 2577.27 | 19.11 | 2644 | 2578.3 | 28.77 | 2611 | 2566.6 | 26.86 |
| 51 | 20 | rnd | 2561 | 2515.5 | 24.9 | 2560 | 2528.73 | 18.53 | 2565 | 2528.4 | 20.23 | 2567 | 2523.93 | 15.62 |
| | | 2op | 2695 | 2649.67 | 26.9 | 2699 | 2633.6 | 24.5 | 2672 | 2637.3 | 20.56 | 2676 | 2633.87 | 22.87 |
| | 50 | rnd | 2601 | 2561.1 | 20.3 | 2586 | 2560.67 | 15.16 | 2596 | 2558.9 | 18.68 | 2601 | 2553.23 | 18.93 |
| | | 2op | 2685 | 2655.67 | 18.98 | 2679 | 2639.2 | 18.21 | 2671 | 2632.9 | 18.85 | 2667 | 2619.27 | 23.9 |

Table A.499: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2557 | 2515.87 | 20.25 | 2568 | 2532.03 | 16.29 | 2583 | 2540.67 | 18.29 | 2592 | 2549.17 | 20.92 |
| | | 2op | 2695 | 2665.2 | 20.58 | 2692 | 2660.7 | 18.35 | 2688 | 2664.6 | 15.8 | 2693 | 2660.93 | 23.65 |
| | 50 | rnd | 2625 | 2550.47 | 24.88 | 2604 | 2558.1 | 19.5 | 2603 | 2555.03 | 14.4 | 2584 | 2553.77 | 15.83 |
| | | 2op | 2692 | 2655.07 | 19.74 | 2695 | 2643.93 | 22.86 | 2673 | 2635.07 | 22.54 | 2665 | 2635.93 | 18.9 |
| 51 | 20 | rnd | 2563 | 2526.27 | 23.02 | 2591 | 2561.27 | 18.19 | 2591 | 2561.8 | 16.74 | 2607 | 2582.8 | 18.74 |
| | | 2op | 2696 | 2694.27 | 2.9 | 2699 | 2695.33 | 0.8 | 2700 | 2695.5 | 1.17 | 2700 | 2695.7 | 1.15 |
| | 50 | rnd | 2600 | 2563.43 | 21.5 | 2622 | 2578.67 | 17.01 | 2625 | 2597.13 | 15.85 | 2646 | 2599.8 | 18.93 |
| | | 2op | 2696 | 2691.9 | 5.71 | 2699 | 2694 | 3.15 | 2700 | 2693.97 | 3.63 | 2700 | 2694.7 | 2.64 |

Table A.500: $f100\_512$: basicRRGA+IM: 500 – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2562 | 2531.47 | 19.98 | 2585 | 2548.23 | 18.92 | 2593 | 2552.67 | 16.32 | 2606 | 2559.37 | 17.37 |
| | | 2op | 2695 | 2656.57 | 23.52 | 2682 | 2650.17 | 16.36 | 2685 | 2653 | 23.44 | 2682 | 2652.23 | 16.78 |
| | 50 | rnd | 2582 | 2558.23 | 17.82 | 2593 | 2562.33 | 17.62 | 2596 | 2562.33 | 16.48 | 2601 | 2563.63 | 16.08 |
| | | 2op | 2692 | 2644.07 | 19.75 | 2672 | 2635.4 | 19.45 | 2688 | 2625.67 | 21.23 | 2675 | 2631.07 | 20.15 |
| 51 | 20 | rnd | 2573 | 2535.77 | 16.35 | 2620 | 2580.2 | 18.87 | 2637 | 2595.27 | 17.15 | 2598 | 2567.2 | 17.33 |
| | | 2op | 2699 | 2694.63 | 2.82 | 2700 | 2696 | 1.29 | 2700 | 2696.97 | 1.99 | 2696 | 2686.2 | 7.82 |
| | 50 | rnd | 2605 | 2569.13 | 17.93 | 2630 | 2581.77 | 17.77 | 2613 | 2575.17 | 18.95 | 2610 | 2563.37 | 17 |
| | | 2op | 2700 | 2690.4 | 8.59 | 2700 | 2692.63 | 6.3 | 2696 | 2682.43 | 10.69 | 2688 | 2664.87 | 14.17 |

Table A.501: $f100\_512$: basicRRGA+IM: 5000 – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1232 | 1172.5 | 28.75 | 1441 | 1345.7 | 38.03 | 1474 | 1384.37 | 41.3 | 1529 | 1437.43 | 50.4 |
| | | 2op | 2696 | 2691.4 | 5.54 | 2696 | 2691.93 | 6.88 | 2696 | 2693.3 | 4.6 | 2696 | 2694.93 | 0.74 |
| | 50 | rnd | 1212 | 1165.6 | 29.23 | 1429 | 1348.5 | 35.06 | 1457 | 1386.6 | 36.1 | 1525 | 1432.13 | 44.2 |
| | | 2op | 2695 | 2692 | 3.95 | 2695 | 2694.47 | 2.03 | 2695 | 2695 | 0 | 2696 | 2692.63 | 8.23 |
| 51 | 20 | rnd | 1282 | 1211.2 | 33.97 | 1451 | 1371.77 | 32.97 | 1515 | 1422.8 | 37.46 | 1551 | 1456.03 | 35.52 |
| | | 2op | 2695 | 2691.67 | 5.2 | 2695 | 2694.53 | 1.61 | 2695 | 2694.17 | 3.06 | 2696 | 2695.07 | 0.52 |
| | 50 | rnd | 1269 | 1192.77 | 31.64 | 1455 | 1360.8 | 32.89 | 1542 | 1412.13 | 43.49 | 1539 | 1442 | 44.23 |
| | | 2op | 2695 | 2691.17 | 3.87 | 2695 | 2694.93 | 0.37 | 2695 | 2695 | 0 | 2696 | 2695.1 | 0.31 |

Table A.502: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1249 | 1173.2 | 31.16 | 1432 | 1342.07 | 36.51 | 1448 | 1394.33 | 35.27 | 1533 | 1453.33 | 44.08 |
| | | 2op | 2695 | 2690.7 | 6.08 | 2696 | 2694.23 | 2.19 | 2695 | 2692.8 | 5.73 | 2696 | 2695.03 | 0.18 |
| | 50 | rnd | 1255 | 1179.63 | 36.2 | 1458 | 1352.23 | 50.54 | 1462 | 1395.93 | 40.71 | 1506 | 1447.2 | 37.05 |
| | | 2op | 2695 | 2692.07 | 3.92 | 2696 | 2693.57 | 3.9 | 2695 | 2694.73 | 1.46 | 2697 | 2694.73 | 1.93 |
| 51 | 20 | rnd | 1263 | 1204.7 | 33.68 | 1437 | 1365.77 | 26.98 | 1448 | 1407.33 | 24.14 | 1542 | 1447.7 | 44.25 |
| | | 2op | 2695 | 2691.5 | 4.13 | 2696 | 2693.8 | 3.82 | 2696 | 2694.2 | 4.05 | 2696 | 2694.5 | 2.35 |
| | 50 | rnd | 1251 | 1187.27 | 26.89 | 1410 | 1360.3 | 27.12 | 1489 | 1406 | 34.14 | 1561 | 1459.7 | 46.53 |
| | | 2op | 2695 | 2692.23 | 3.8 | 2695 | 2695 | 0 | 2696 | 2695.07 | 0.25 | 2696 | 2694.7 | 2.42 |

Table A.503: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15540 | 15336.33 | 107.35 | 15913 | 15677.1 | 114.5 | 15964 | 15798.53 | 82.71 | 15991 | 15679.07 | 125.23 |
| | | 2op | 17606 | 17470.17 | 86.15 | 17631 | 17469 | 81.19 | 17557 | 17394.47 | 97.56 | 17461 | 17232.5 | 144.59 |
| | 50 | rnd | 15664 | 15357.2 | 132.77 | 15944 | 15736.7 | 118.94 | 16015 | 15893.63 | 83.63 | 16131 | 15913.43 | 99.13 |
| | | 2op | 17579 | 17466.8 | 74.11 | 17602 | 17468.57 | 80.06 | 17674 | 17437.77 | 91.87 | 17528 | 17382.13 | 73.54 |
| 51 | 20 | rnd | 15637 | 15368.1 | 131.01 | 15805 | 15590.93 | 89.68 | 15942 | 15665.33 | 118.97 | 15947 | 15721.97 | 100.03 |
| | | 2op | 17746 | 17668.6 | 44.07 | 17766 | 17659.9 | 48.28 | 17736 | 17623.67 | 62.96 | 17612 | 17536.87 | 65.17 |
| | 50 | rnd | 15599 | 15383.93 | 117.13 | 15899 | 15667.03 | 127.72 | 16038 | 15827.47 | 106.24 | 16140 | 15842.4 | 117 |
| | | 2op | 17690 | 17602.43 | 59.53 | 17734 | 17620.43 | 51.03 | 17738 | 17627.07 | 64.99 | 17691 | 17571.13 | 82.11 |

Table A.504: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15549 | 15325.97 | 131.13 | 15901 | 15719.2 | 90.42 | 16045 | 15780.6 | 140.7 | 15891 | 15687.87 | 106.41 |
| | | 2op | 17600 | 17448.97 | 60.18 | 17604 | 17456.97 | 74.64 | 17576 | 17358.37 | 96.26 | 17518 | 17218 | 108.23 |
| | 50 | rnd | 15606 | 15366.17 | 130.13 | 16071 | 15775.53 | 132.94 | 16131 | 15850.77 | 118.55 | 16155 | 15920.5 | 118.19 |
| | | 2op | 17606 | 17444.43 | 92.09 | 17616 | 17439.53 | 88.7 | 17584 | 17421.17 | 94.36 | 17553 | 17375.37 | 94.98 |
| 51 | 20 | rnd | 15557 | 15325.57 | 137.57 | 15946 | 15637.4 | 133.56 | 15892 | 15712.67 | 91.52 | 15976 | 15679.93 | 138.57 |
| | | 2op | 17739 | 17650.63 | 49.76 | 17743 | 17653.7 | 61.92 | 17721 | 17622 | 58.68 | 17653 | 17518.17 | 72.73 |
| | 50 | rnd | 15615 | 15365.4 | 98.75 | 15833 | 15648.8 | 78.06 | 16039 | 15820.2 | 108.77 | 16117 | 15852.6 | 132.86 |
| | | 2op | 17735 | 17633.43 | 61.03 | 17722 | 17626.83 | 65.99 | 17739 | 17628.1 | 66.21 | 17748 | 17590.73 | 70.45 |

Table A.505: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15573 | 15336.7 | 128.12 | 15777 | 15495.47 | 132.04 | 15723 | 15590.5 | 86.75 | 15769 | 15597.2 | 89.81 |
| | | 2op | 17766 | 17728.67 | 34.89 | 17766 | 17726.77 | 30.7 | 17766 | 17719.87 | 30.47 | 17765 | 17665.27 | 56.26 |
| | 50 | rnd | 15676 | 15407.4 | 135.51 | 15935 | 15640.9 | 126.04 | 16024 | 15716 | 155.12 | 15905 | 15738 | 102.48 |
| | | 2op | 17766 | 17724.47 | 34.01 | 17766 | 17732.87 | 30.26 | 17766 | 17716.47 | 37.78 | 17756 | 17686.9 | 43.07 |
| 51 | 20 | rnd | 15537 | 15355.93 | 131.46 | 15796 | 15393.87 | 142.27 | 15798 | 15479.67 | 135.37 | 15680 | 15432.83 | 117.51 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17765.37 | 3.47 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 15752 | 15441.4 | 130.14 | 15753 | 15564.4 | 83.61 | 15974 | 15586.33 | 138.79 | 15881 | 15618.57 | 123.67 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17765.83 | 0.91 |

Table A.506: $f508\_354$: basicRRGA+IM: 500 – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15666 | 15343.97 | 121.14 | 15813 | 15648.4 | 93.78 | 15786 | 15627.33 | 100.15 | 15921 | 15595.13 | 202.94 |
| | | 2op | 17766 | 17729.03 | 28.26 | 17766 | 17735.13 | 29.17 | 17749 | 17698.87 | 41.24 | 17665 | 17467.57 | 99.25 |
| | 50 | rnd | 15771 | 15502.57 | 124.7 | 15999 | 15735.27 | 105.6 | 15846 | 15667.63 | 124.07 | 15943 | 15432.7 | 325.87 |
| | | 2op | 17766 | 17701.87 | 53.61 | 17766 | 17710.93 | 38.36 | 17714 | 17611.73 | 68.58 | 17582 | 17375.57 | 96.4 |
| 51 | 20 | rnd | 15686 | 15482.2 | 84.33 | 15825 | 15592.6 | 127.67 | 15790 | 15580.97 | 117.62 | 15768 | 15443.97 | 145.23 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17760.63 | 8.66 | 17650 | 17547.73 | 45.9 |
| | 50 | rnd | 15790 | 15620.07 | 93.99 | 15863 | 15666.3 | 109.81 | 15804 | 15621.23 | 100.6 | 15759 | 15458.33 | 157.39 |
| | | 2op | 17766 | 17765.37 | 3.47 | 17768 | 17766.1 | 0.4 | 17754 | 17709.57 | 25.48 | 17577 | 17428 | 67.71 |

Table A.507: $f508\_354$: basicRRGA+IM: 5000 – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 4320 | 4253 | 26.98 | 4764 | 4688.07 | 32.36 | 4914 | 4851.47 | 38.7 | 5079 | 4960.8 | 61.74 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 4318 | 4255.37 | 31.14 | 4761 | 4673.17 | 38.61 | 4889 | 4835.2 | 32.63 | 5043 | 4942.17 | 38.83 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| 51 | 20 | rnd | 4382 | 4338.13 | 22.97 | 4878 | 4814.37 | 32.62 | 5033 | 4972.17 | 36.84 | 5184 | 5110.9 | 38.86 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17765.83 | 0.91 |
| | 50 | rnd | 4369 | 4317.27 | 23.69 | 4847 | 4783.97 | 30.6 | 5052 | 4961.17 | 37.07 | 5138 | 5060.5 | 39.88 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |

Table A.508: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 4304 | 4255.27 | 25.75 | 4719 | 4664.23 | 28.72 | 4924 | 4838.37 | 36.92 | 5017 | 4961.53 | 32.33 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 4290 | 4247.17 | 25.48 | 4735 | 4659.73 | 35.62 | 4891 | 4821.5 | 36.34 | 5059 | 4946.9 | 54.33 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| 51 | 20 | rnd | 4388 | 4334.9 | 26.86 | 4855 | 4808.63 | 26.25 | 5049 | 4979.17 | 32.81 | 5202 | 5086.13 | 42.93 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 4377 | 4312.8 | 25.13 | 4854 | 4785.77 | 31.75 | 4995 | 4940.03 | 33.89 | 5140 | 5084.1 | 36.48 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |

Table A.509: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19408 | 19059.1 | 143.5 | 19711 | 19408.57 | 117.86 | 19608 | 19381.7 | 91.93 | 19533 | 19124.07 | 163.23 |
| | | 2op | 21887 | 21716.77 | 102.23 | 21854 | 21663.77 | 100.45 | 21756 | 21553.87 | 102.43 | 21460 | 21311.2 | 79.78 |
| | 50 | rnd | 19371 | 19073.37 | 136.47 | 19680 | 19440.73 | 116.45 | 19710 | 19548.37 | 107.45 | 19685 | 19483.67 | 99.03 |
| | | 2op | 21856 | 21721.07 | 81.32 | 21849 | 21685.4 | 94.73 | 21877 | 21688.43 | 81.47 | 21719 | 21536.83 | 100.29 |
| 51 | 20 | rnd | 19471 | 19059.13 | 149.4 | 19617 | 19323.93 | 143.86 | 19574 | 19390.47 | 129.09 | 19537 | 19259.07 | 157.5 |
| | | 2op | 21991 | 21909.47 | 60.75 | 21993 | 21911.33 | 48.39 | 21950 | 21792.17 | 84.7 | 21820 | 21661.3 | 77.29 |
| | 50 | rnd | 19324 | 19055.73 | 135.38 | 19654 | 19405.9 | 112.65 | 19732 | 19502.93 | 117 | 19683 | 19531.6 | 106.95 |
| | | 2op | 21974 | 21865.2 | 65.25 | 22013 | 21877.1 | 61.21 | 21953 | 21849.33 | 62.04 | 21957 | 21776.67 | 81.4 |

Table A.510: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19317 | 19070.07 | 125.86 | 19698 | 19409.73 | 91.1 | 19652 | 19401.97 | 120.54 | 19515 | 19089.5 | 190.33 |
| | | 2op | 21958 | 21721 | 95.93 | 21941 | 21650.2 | 107.41 | 21759 | 21526.47 | 106.81 | 21567 | 21306.87 | 138.97 |
| | 50 | rnd | 19386 | 19078.7 | 116.44 | 19683 | 19498.43 | 113.18 | 19725 | 19556.63 | 93.03 | 19745 | 19450.83 | 128.75 |
| | | 2op | 21812 | 21685.33 | 82.68 | 21834 | 21648.9 | 105.8 | 21840 | 21645.4 | 106.05 | 21653 | 21507.57 | 81.43 |
| 51 | 20 | rnd | 19288 | 19064.73 | 128.39 | 19597 | 19337.2 | 125.92 | 19528 | 19325.6 | 117.61 | 19551 | 19255.4 | 174.53 |
| | | 2op | 21995 | 21917.87 | 57.12 | 21956 | 21878.3 | 51.11 | 21904 | 21786.73 | 80.03 | 21813 | 21641.23 | 90.45 |
| | 50 | rnd | 19301 | 19071.33 | 120.69 | 19608 | 19353.03 | 111.5 | 19683 | 19525.57 | 90.49 | 19743 | 19529.87 | 110.84 |
| | | 2op | 22012 | 21864.33 | 80.96 | 22012 | 21880.6 | 81.15 | 22012 | 21827.83 | 95.48 | 21948 | 21771.2 | 100.57 |

Table A.511: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19304 | 19042.17 | 149.11 | 19421 | 19159.87 | 121.86 | 19433 | 19251.7 | 129.91 | 19492 | 19217.87 | 139.58 |
| | | 2op | 22021 | 21992.53 | 27.17 | 22021 | 21979.13 | 34.43 | 22017 | 21939.17 | 38.17 | 21957 | 21855.7 | 54.57 |
| | 50 | rnd | 19413 | 19075.47 | 138.76 | 19488 | 19312.73 | 114.79 | 19687 | 19405.83 | 124.69 | 19580 | 19332.63 | 145.69 |
| | | 2op | 22021 | 21955.23 | 39.13 | 22021 | 21982.4 | 30.65 | 22021 | 21964.27 | 34.13 | 21970 | 21885.47 | 52.93 |
| 51 | 20 | rnd | 19432 | 19039.33 | 155.28 | 19276 | 19090.47 | 112.95 | 19270 | 19063.97 | 129.16 | 19444 | 19096.4 | 149.88 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22020.07 | 3.56 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 19414 | 19113.27 | 135.7 | 19358 | 19136.1 | 113.96 | 19446 | 19210.83 | 129.54 | 19546 | 19201.67 | 119.68 |
| | | 2op | 22021 | 22019.47 | 5.93 | 22021 | 22019.27 | 5.34 | 22021 | 22021 | 0 | 22021 | 22020.23 | 2.4 |

Table A.512: $f635\_350$: basicRRGA+IM: 500 – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19341 | 19067.2 | 143.6 | 19344 | 19176.27 | 102.42 | 19404 | 19125.33 | 128.96 | 19507 | 19194.73 | 129.38 |
| | | 2op | 22021 | 21992.13 | 27.31 | 22021 | 21975.3 | 34.9 | 21959 | 21878.93 | 49.39 | 21821 | 21687.3 | 97.68 |
| | 50 | rnd | 19355 | 19096.73 | 138.44 | 19604 | 19303.47 | 106.26 | 19354 | 19109.77 | 151.16 | 19480 | 19188.87 | 269.1 |
| | | 2op | 22021 | 21983.17 | 37.61 | 22021 | 21960.97 | 44.45 | 21959 | 21824.37 | 76.06 | 21710 | 21492.53 | 120.89 |
| 51 | 20 | rnd | 19303 | 19114.13 | 125.84 | 19318 | 19115.47 | 108.61 | 19186 | 18993.23 | 108.19 | 19155 | 18954.23 | 93.99 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22020.57 | 2.37 | 22021 | 22008.83 | 10.14 | 21922 | 21751.83 | 59.32 |
| | 50 | rnd | 19493 | 19200.83 | 125.42 | 19332 | 19179.4 | 90.46 | 19345 | 19084.13 | 141.03 | 19284 | 18960.37 | 192.34 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22020.53 | 1.53 | 22011 | 21919.13 | 40.1 | 21802 | 21588.33 | 84.74 |

Table A.513: $f635\_350$: basicRRGA+IM: 5000 – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5305 | 5260.33 | 23.25 | 5782 | 5714.3 | 32.23 | 6005 | 5923.6 | 40.8 | 6172 | 6075.73 | 47.85 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 5300 | 5246.13 | 25.83 | 5787 | 5710.2 | 39.89 | 5972 | 5900.73 | 29.12 | 6161 | 6074.6 | 42.92 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| 51 | 20 | rnd | 5408 | 5345.87 | 25.01 | 5946 | 5878.9 | 33.03 | 6201 | 6090 | 43.2 | 6331 | 6246.43 | 47.67 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 5381 | 5324.3 | 26.07 | 5915 | 5864.97 | 30.97 | 6145 | 6063.27 | 48.47 | 6326 | 6228.77 | 51.48 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |

Table A.514: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5303 | 5253.8 | 22.76 | 5752 | 5700.17 | 35.83 | 5983 | 5904.9 | 36.71 | 6149 | 6070.37 | 43.55 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 5310 | 5248.83 | 23.19 | 5750 | 5700.47 | 30.07 | 5951 | 5892.87 | 34.97 | 6120 | 6043.37 | 39.92 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| 51 | 20 | rnd | 5392 | 5326.83 | 31.41 | 5941 | 5868.97 | 37.38 | 6163 | 6081.77 | 35.68 | 6355 | 6250.33 | 46.23 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 5384 | 5322.13 | 26.84 | 5959 | 5853.23 | 45.42 | 6160 | 6057 | 43.01 | 6297 | 6220.17 | 43 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |

Table A.515: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21593 | 21258.67 | 166 | 21901 | 21611.03 | 141.67 | 21868 | 21578.03 | 128.71 | 21534 | 21169.87 | 199.76 |
| | | 2op | 24265 | 24100.2 | 76.96 | 24177 | 24012.93 | 87.01 | 23998 | 23818.6 | 115.47 | 23731 | 23495.3 | 139.83 |
| | 50 | rnd | 21578 | 21310.07 | 155.98 | 21994 | 21745.07 | 114.24 | 22134 | 21798.87 | 134.08 | 21983 | 21650.67 | 128.34 |
| | | 2op | 24227 | 24087.5 | 68.99 | 24190 | 24072.3 | 85.81 | 24231 | 23979.83 | 107.58 | 24054 | 23816.07 | 115.62 |
| 51 | 20 | rnd | 21586 | 21305.17 | 124.25 | 21773 | 21595.7 | 102.87 | 21827 | 21592.27 | 119.86 | 21829 | 21427.97 | 182.81 |
| | | 2op | 24417 | 24291.47 | 68.49 | 24392 | 24250.23 | 82.94 | 24282 | 24135.13 | 84.97 | 24126 | 23961.83 | 89.99 |
| | 50 | rnd | 21713 | 21305.73 | 158.68 | 21962 | 21649.3 | 123.74 | 21925 | 21766.7 | 106.95 | 22034 | 21804.97 | 125.63 |
| | | 2op | 24369 | 24269.07 | 55.8 | 24431 | 24266.07 | 70.88 | 24313 | 24198.8 | 78.38 | 24257 | 24086.57 | 76.85 |

Table A.516: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21484 | 21303.4 | 116.67 | 21836 | 21619.77 | 124.28 | 21876 | 21536.2 | 130.63 | 21410 | 21102.57 | 196.33 |
| | | 2op | 24211 | 24091.53 | 73.71 | 24284 | 24036.4 | 93.19 | 24016 | 23787.33 | 108.49 | 23740 | 23484.43 | 158.9 |
| | 50 | rnd | 21525 | 21286.4 | 136.2 | 22107 | 21734.8 | 136.74 | 22044 | 21817.1 | 117.49 | 21893 | 21548.87 | 154.3 |
| | | 2op | 24213 | 24064.17 | 91.59 | 24260 | 24051.47 | 88.72 | 24170 | 23960.77 | 95.22 | 23960 | 23757.27 | 110.68 |
| 51 | 20 | rnd | 21574 | 21325.87 | 131.12 | 21861 | 21604.93 | 144.48 | 21900 | 21601.8 | 119 | 21847 | 21427.73 | 194.33 |
| | | 2op | 24396 | 24299.23 | 54.59 | 24363 | 24251.93 | 59.02 | 24325 | 24141.63 | 89.45 | 24137 | 23963.53 | 94.15 |
| | 50 | rnd | 21633 | 21296.63 | 156.76 | 21950 | 21698.07 | 118.86 | 21960 | 21780.7 | 95.76 | 22066 | 21681.53 | 181.81 |
| | | 2op | 24379 | 24249.37 | 63.23 | 24379 | 24268.77 | 62.53 | 24325 | 24204.87 | 70.54 | 24238 | 24070.37 | 106.44 |

Table A.517: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21518 | 21269.97 | 128.46 | 21774 | 21465.97 | 151.31 | 21717 | 21477.33 | 108.45 | 21791 | 21466.57 | 150.72 |
| | | 2op | 24429 | 24386.03 | 28.06 | 24425 | 24358.9 | 36.26 | 24384 | 24311.2 | 49.2 | 24318 | 24175.83 | 68.34 |
| | 50 | rnd | 21580 | 21272.97 | 137.95 | 21808 | 21546 | 152.43 | 21938 | 21651.1 | 117.35 | 21918 | 21593.67 | 139.39 |
| | | 2op | 24429 | 24371.3 | 38.02 | 24422 | 24363.53 | 39.32 | 24400 | 24323.67 | 44.91 | 24347 | 24244.3 | 64.52 |
| 51 | 20 | rnd | 21584 | 21265.53 | 132 | 21606 | 21307.33 | 166.3 | 21598 | 21357.93 | 110.02 | 21573 | 21327.17 | 144.08 |
| | | 2op | 24429 | 24429 | 0 | 24429 | 24429 | 0 | 24429 | 24429 | 0 | 24431 | 24427.63 | 5.58 |
| | 50 | rnd | 21593 | 21336.37 | 129.58 | 21654 | 21382.27 | 156.61 | 21712 | 21449.9 | 150.57 | 21806 | 21438.03 | 149.68 |
| | | 2op | 24429 | 24429 | 0 | 24431 | 24427.2 | 5.42 | 24431 | 24428.6 | 4.15 | 24429 | 24428.5 | 1.5 |

Table A.518: $f737\_355$: basicRRGA+IM: 500 – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21600 | 21232.57 | 165.23 | 21729 | 21287.43 | 155.83 | 21299 | 21119.87 | 117.77 | 21368 | 21222.83 | 111.46 |
| | | 2op | 24429 | 24393 | 27.32 | 24429 | 24362.47 | 38.61 | 24326 | 24249.57 | 53.04 | 24225 | 24024.07 | 87.62 |
| | 50 | rnd | 21758 | 21323.83 | 166.97 | 21692 | 21413.93 | 126.4 | 21505 | 21189.33 | 131.86 | 21511 | 21249.13 | 231.73 |
| | | 2op | 24429 | 24376.17 | 36.81 | 24418 | 24349.37 | 46.66 | 24332 | 24159.67 | 95.55 | 24094 | 23837.47 | 101.07 |
| 51 | 20 | rnd | 21493 | 21235.1 | 137.62 | 21410 | 21111.67 | 141.64 | 21290 | 20932.53 | 129.65 | 21144 | 20909.27 | 111.68 |
| | | 2op | 24429 | 24429 | 0 | 24431 | 24429.33 | 0.76 | 24429 | 24411.47 | 10.93 | 24221 | 24128.33 | 59.52 |
| | 50 | rnd | 21581 | 21346.43 | 104.62 | 21427 | 21233.3 | 114.19 | 21264 | 21099.7 | 105.86 | 21414 | 21145.93 | 167.34 |
| | | 2op | 24431 | 24429.17 | 0.65 | 24431 | 24427.8 | 5.05 | 24351 | 24268.07 | 47.45 | 24086 | 23936.83 | 61.68 |

Table A.519: $f737\_355$: basicRRGA+IM: 5000 – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6232 | 6162.6 | 32.63 | 6742 | 6680.13 | 31.9 | 7007 | 6903.63 | 52.63 | 7210 | 7111.4 | 48.31 |
| | | 2op | 24429 | 24425.27 | 1.01 | 24431 | 24426.53 | 2.08 | 24429 | 24427.2 | 1.99 | 24429 | 24428.8 | 0.81 |
| | 50 | rnd | 6209 | 6160.03 | 23.41 | 6706 | 6643.57 | 35.6 | 6971 | 6889.6 | 38.81 | 7198 | 7077.47 | 48.89 |
| | | 2op | 24429 | 24425.67 | 1.52 | 24429 | 24426.07 | 1.8 | 24429 | 24428.27 | 1.53 | 24431 | 24428.93 | 0.83 |
| 51 | 20 | rnd | 6322 | 6265.43 | 29.48 | 6914 | 6854.67 | 26.65 | 7185 | 7108.5 | 35.7 | 7404 | 7308.47 | 49.35 |
| | | 2op | 24429 | 24425.13 | 0.73 | 24429 | 24426.73 | 2.02 | 24429 | 24428.73 | 1.01 | 24431 | 24429.07 | 0.64 |
| | 50 | rnd | 6322 | 6252.13 | 25.79 | 6938 | 6839.67 | 36.09 | 7155 | 7077.57 | 33.66 | 7330 | 7262.27 | 35.44 |
| | | 2op | 24429 | 24425.93 | 1.72 | 24429 | 24427.2 | 1.99 | 24429 | 24428.47 | 1.38 | 24431 | 24429 | 0.91 |

Table A.520: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6243 | 6156.63 | 35.86 | 6733 | 6650.7 | 36.46 | 6959 | 6898.03 | 35.85 | 7157 | 7085.9 | 38.63 |
| | | 2op | 24429 | 24425.27 | 1.01 | 24429 | 24426.47 | 1.96 | 24429 | 24427.8 | 1.86 | 24431 | 24428.87 | 1.17 |
| | 50 | rnd | 6208 | 6162.83 | 21.77 | 6720 | 6635.5 | 41.31 | 6954 | 6879.13 | 37.9 | 7150 | 7068.27 | 52.7 |
| | | 2op | 24429 | 24425.27 | 1.01 | 24429 | 24426.13 | 1.8 | 24429 | 24427.53 | 1.96 | 24431 | 24429.13 | 0.51 |
| 51 | 20 | rnd | 6306 | 6252.8 | 24.05 | 6933 | 6849.2 | 38.58 | 7172 | 7103.33 | 37.52 | 7408 | 7287.83 | 39.08 |
| | | 2op | 24429 | 24425.67 | 1.52 | 24429 | 24426.87 | 2.03 | 24429 | 24427.93 | 1.8 | 24431 | 24429.07 | 0.37 |
| | 50 | rnd | 6301 | 6237.33 | 25.77 | 6893 | 6825.47 | 29.47 | 7183 | 7075.8 | 37.49 | 7359 | 7265.77 | 42.7 |
| | | 2op | 24429 | 24425.93 | 1.72 | 24429 | 24427 | 2.03 | 24429 | 24427.93 | 1.8 | 24431 | 24429 | 0.91 |

Table A.521: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 41022 | 40557.83 | 189.04 | 40712 | 40371.87 | 212.05 | 40573 | 40007.77 | 301.73 | 40716 | 39823.17 | 631.83 |
| | | 2op | 47130 | 46994.3 | 102.75 | 46746 | 46390.37 | 188.11 | 46352 | 46035.23 | 166.8 | 45943 | 45617.97 | 183.63 |
| | 50 | rnd | 41116 | 40788.93 | 202.53 | 41506 | 41100.1 | 187.16 | 41328 | 40933.27 | 195.69 | 41458 | 40513.43 | 546.76 |
| | | 2op | 47166 | 46985.83 | 110.81 | 46917 | 46726.9 | 103.58 | 46605 | 46400.97 | 130.66 | 46457 | 46007.63 | 240.77 |
| 51 | 20 | rnd | 41131 | 40598.87 | 210.43 | 40880 | 40497.53 | 147.16 | 40916 | 40418.03 | 206.95 | 41321 | 40573.37 | 238.91 |
| | | 2op | 47337 | 47212.27 | 67.59 | 47100 | 46895.73 | 131.43 | 46930 | 46629.03 | 153.31 | 46901 | 46486.7 | 207.16 |
| | 50 | rnd | 41256 | 40795.43 | 220.54 | 41393 | 41074.23 | 220.07 | 41497 | 41111.77 | 182.92 | 41667 | 41148.57 | 310.93 |
| | | 2op | 47318 | 47183.17 | 88.29 | 47247 | 47068.5 | 85.19 | 47020 | 46856.4 | 91.29 | 46848 | 46540.93 | 142.93 |

Table A.522: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 40877 | 40530.63 | 210.35 | 40643 | 40358.33 | 188.08 | 40380 | 39908.13 | 219.88 | 40595 | 39412.93 | 805.13 |
| | | 2op | 47146 | 46967.03 | 74.72 | 46657 | 46407.93 | 135.03 | 46251 | 45961 | 160.94 | 45782 | 45552.27 | 165.69 |
| | 50 | rnd | 41097 | 40788.23 | 167.98 | 41508 | 41014.77 | 179.3 | 41205 | 40823.07 | 185.67 | 41275 | 40240.17 | 610.04 |
| | | 2op | 47204 | 46994.2 | 95.01 | 46949 | 46715.07 | 137.19 | 46634 | 46294.43 | 150.49 | 46308 | 45896.63 | 162.39 |
| 51 | 20 | rnd | 40956 | 40545.4 | 222 | 40984 | 40553.87 | 188.37 | 40883 | 40457.63 | 175.38 | 40998 | 40617.93 | 208.7 |
| | | 2op | 47315 | 47165.47 | 73.56 | 47083 | 46861.07 | 106.58 | 46833 | 46609.37 | 155.7 | 46715 | 46421.3 | 167.06 |
| | 50 | rnd | 41418 | 40808.1 | 189.99 | 41282 | 41027.33 | 145.95 | 41463 | 41045.83 | 235.09 | 41636 | 41022.47 | 380.56 |
| | | 2op | 47293 | 47176.5 | 66.9 | 47215 | 47009.77 | 96.82 | 47011 | 46811.67 | 104.55 | 46810 | 46475.87 | 127.94 |

Table A.523: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 40777 | 40327.3 | 187.49 | 40717 | 40307.07 | 226.12 | 40698 | 40374.03 | 157.72 | 40718 | 40376.73 | 195.58 |
| | | 2op | 47348 | 47291.53 | 42.37 | 47281 | 47143.1 | 65.81 | 47196 | 46997.13 | 106.05 | 47178 | 46878.77 | 108.32 |
| | 50 | rnd | 41235 | 40650.07 | 195.69 | 41070 | 40733.3 | 161.14 | 41125 | 40699 | 173.72 | 41120 | 40796.23 | 173.65 |
| | | 2op | 47332 | 47281.97 | 37.39 | 47281 | 47174.57 | 57.9 | 47210 | 47027.23 | 98.64 | 47107 | 46845.53 | 130.63 |
| 51 | 20 | rnd | 40825 | 40413.9 | 178 | 40724 | 40367.23 | 200.64 | 40714 | 40386.77 | 217.54 | 40625 | 40372 | 139.38 |
| | | 2op | 47359 | 47344.57 | 2.74 | 47359 | 47345.93 | 5.54 | 47359 | 47345.93 | 6.2 | 47359 | 47341.8 | 8.45 |
| | 50 | rnd | 41027 | 40614.67 | 199.83 | 40831 | 40565.63 | 214.67 | 41049 | 40631.67 | 196.51 | 40928 | 40615.43 | 195.06 |
| | | 2op | 47359 | 47344.5 | 2.74 | 47363 | 47346.37 | 7.49 | 47363 | 47342.33 | 8.7 | 47358 | 47335.73 | 10.18 |

Table A.524: $f1343\_354$: basicRRGA+IM: 500 – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 39542 | 39157.5 | 197.42 | 38808 | 38524.9 | 194.8 | 38707 | 38210.23 | 244.16 | 38522 | 38123.97 | 176.19 |
| | | 2op | 47344 | 47294.87 | 43.88 | 47230 | 47090.67 | 90.96 | 47138 | 46906.77 | 126.1 | 46956 | 46769.13 | 121.8 |
| | 50 | rnd | 40158 | 39782.43 | 151.23 | 39534 | 39076 | 187.32 | 38891 | 38532.13 | 199.13 | 39191 | 38755.73 | 180.84 |
| | | 2op | 47345 | 47283.97 | 43.88 | 47204 | 47088.37 | 76.29 | 47056 | 46826.43 | 100.25 | 46813 | 46520.43 | 166.25 |
| 51 | 20 | rnd | 38553 | 38103.97 | 181.26 | 38012 | 37638.63 | 161.94 | 37663 | 37247.33 | 206.48 | 37320 | 36873.7 | 182.91 |
| | | 2op | 47359 | 47346.3 | 6.22 | 47363 | 47345.13 | 6.26 | 47342 | 47293.93 | 21.26 | 47102 | 46938 | 86 |
| | 50 | rnd | 39513 | 39074.77 | 178.41 | 39124 | 38611.2 | 216.77 | 38652 | 38317.07 | 169.6 | 38681 | 38356.37 | 174.33 |
| | | 2op | 47359 | 47346.13 | 5.18 | 47359 | 47323.9 | 13.94 | 47208 | 47092.57 | 69.1 | 46807 | 46674.03 | 97.29 |

Table A.525: $f1343\_354$: basicRRGA+IM: 5000 – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11085 | 11011.73 | 31.32 | 11755 | 11678.5 | 49.9 | 12161 | 12067.13 | 49.56 | 12532 | 12427.1 | 55.69 |
| | | 2op | 47348 | 47336.67 | 2.59 | 47344 | 47338.97 | 3.9 | 47359 | 47341.57 | 6.13 | 47363 | 47346.1 | 6.99 |
| | 50 | rnd | 11081 | 11015.03 | 28.13 | 11720 | 11650.77 | 38.31 | 12131 | 12026.23 | 38.65 | 12490 | 12396.53 | 53.21 |
| | | 2op | 47336 | 47336 | 0 | 47344 | 47336.8 | 2.44 | 47359 | 47341.1 | 5.22 | 47359 | 47343.77 | 4.34 |
| 51 | 20 | rnd | 11203 | 11127.47 | 35.4 | 12068 | 11983.6 | 43.28 | 12495 | 12418.93 | 37.34 | 12930 | 12813.73 | 49.52 |
| | | 2op | 47344 | 47337.23 | 2.8 | 47351 | 47340.73 | 4.82 | 47363 | 47343.83 | 7.55 | 47363 | 47347.77 | 6.63 |
| | 50 | rnd | 11160 | 11107.47 | 29.94 | 12026 | 11944.6 | 35.48 | 12478 | 12375.3 | 44.7 | 12913 | 12775.77 | 65.39 |
| | | 2op | 47351 | 47336.77 | 3.06 | 47351 | 47340.77 | 4.42 | 47351 | 47341.1 | 4.36 | 47363 | 47345.83 | 7.04 |

Table A.526: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11086 | 11012.57 | 27.82 | 11741 | 11663.77 | 42.87 | 12183 | 12033.73 | 52.89 | 12532 | 12398.27 | 59 |
| | | 2op | 47344 | 47336.7 | 2.12 | 47351 | 47338.37 | 4.04 | 47351 | 47341.93 | 4.53 | 47360 | 47347.6 | 5.06 |
| | 50 | rnd | 11063 | 11013.73 | 25.07 | 11673 | 11630.53 | 29.38 | 12105 | 11995.93 | 53.55 | 12461 | 12366.5 | 50.45 |
| | | 2op | 47351 | 47336.77 | 3.06 | 47344 | 47338 | 3.44 | 47359 | 47340.77 | 5.59 | 47363 | 47347.27 | 7.03 |
| 51 | 20 | rnd | 11172 | 11124.1 | 28.73 | 12029 | 11964.13 | 36.77 | 12527 | 12403.3 | 51.63 | 12913 | 12793.27 | 55.11 |
| | | 2op | 47344 | 47337.33 | 3.03 | 47359 | 47339.3 | 5.23 | 47359 | 47343.33 | 4.35 | 47363 | 47350.1 | 7.37 |
| | 50 | rnd | 11179 | 11103.93 | 38.35 | 12016 | 11924.53 | 39.41 | 12465 | 12380.83 | 40.62 | 12850 | 12759 | 45.84 |
| | | 2op | 47344 | 47337.07 | 2.77 | 47345 | 47339 | 3.81 | 47359 | 47341.73 | 5.54 | 47359 | 47349.47 | 7.97 |

Table A.527: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47363 | 47072.03 | 179.76 | 47111 | 46701.77 | 203.65 | 46606 | 46275.23 | 228.53 | 47197 | 46358.97 | 531.55 |
| | | 2op | 55402 | 55209.13 | 111.2 | 54792 | 54447 | 118.98 | 54423 | 54041.73 | 155.14 | 53981 | 53637.93 | 195.63 |
| | 50 | rnd | 48151 | 47674.77 | 213.46 | 48168 | 47801.47 | 156.93 | 47898 | 47565 | 201.18 | 48155 | 47238.03 | 655.87 |
| | | 2op | 55420 | 55229.03 | 94.51 | 55063 | 54847.1 | 132.2 | 54695 | 54398.03 | 152.24 | 54378 | 53983.57 | 162.1 |
| 51 | 20 | rnd | 47535 | 47137.67 | 183.75 | 47446 | 47068.63 | 175.61 | 47679 | 46989.73 | 235.67 | 47494 | 47186.7 | 182.49 |
| | | 2op | 55570 | 55422.53 | 81.34 | 55191 | 55017.6 | 115.14 | 55029 | 54755.03 | 145.26 | 54931 | 54618.53 | 172.48 |
| | 50 | rnd | 48125 | 47677.07 | 190.7 | 48405 | 47840.27 | 232.75 | 48120 | 47747.33 | 209.43 | 48598 | 47919.73 | 309.86 |
| | | 2op | 55560 | 55400.83 | 78.21 | 55345 | 55196.4 | 96.03 | 55155 | 54975.03 | 96.45 | 54867 | 54651.37 | 130.59 |

Table A.528: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47614 | 47124.8 | 214.97 | 47146 | 46649.97 | 241.16 | 46594 | 46209.53 | 175.32 | 46905 | 46268.63 | 666.8 |
| | | 2op | 55342 | 55164.7 | 126.04 | 54881 | 54460.47 | 147.69 | 54403 | 53961.1 | 198.88 | 54100 | 53585.03 | 241.12 |
| | 50 | rnd | 47967 | 47628.23 | 191.47 | 48189 | 47686.1 | 200.83 | 47812 | 47362.17 | 221.64 | 48119 | 47183.23 | 565.12 |
| | | 2op | 55382 | 55209.2 | 92.14 | 55057 | 54755.77 | 138.73 | 54514 | 54305.33 | 119.06 | 54305 | 53894.77 | 199.98 |
| 51 | 20 | rnd | 47605 | 47147.4 | 227.18 | 47456 | 47052.77 | 214.14 | 47347 | 46921.93 | 163.13 | 47482 | 47151.13 | 176.74 |
| | | 2op | 55516 | 55407.5 | 52.65 | 55218 | 55018.47 | 126.06 | 55008 | 54695.73 | 164.15 | 54948 | 54533.43 | 195.7 |
| | 50 | rnd | 47973 | 47595.87 | 217.89 | 48188 | 47766.9 | 217.11 | 48062 | 47664.77 | 235.58 | 48249 | 47866.83 | 283.2 |
| | | 2op | 55539 | 55420.03 | 83.32 | 55359 | 55184.93 | 92.39 | 55198 | 54929.27 | 120.7 | 54864 | 54619.7 | 108.03 |

Table A.529: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47189 | 46861.73 | 230.36 | 47212 | 46796.63 | 241.69 | 47158 | 46720.83 | 214.33 | 47090 | 46692.53 | 239.03 |
| | | 2op | 55582 | 55521.53 | 55.97 | 55475 | 55284.77 | 97.37 | 55398 | 55192.23 | 126.4 | 55299 | 55046.03 | 155.06 |
| | 50 | rnd | 47770 | 47339.93 | 198.06 | 47998 | 47401.23 | 247.28 | 47596 | 47302.13 | 165.72 | 47762 | 47369.67 | 205.96 |
| | | 2op | 55582 | 55536.1 | 35.66 | 55529 | 55388 | 81.82 | 55346 | 55163.9 | 112.13 | 55246 | 55014.2 | 133.71 |
| 51 | 20 | rnd | 47447 | 46916.53 | 217.04 | 47242 | 46876.33 | 194.14 | 47180 | 46766.67 | 197.42 | 47242 | 46844.57 | 203.72 |
| | | 2op | 55582 | 55581.63 | 1.67 | 55582 | 55580.57 | 2.51 | 55582 | 55579.47 | 4.24 | 55582 | 55576.73 | 4.46 |
| | 50 | rnd | 47719 | 47257.27 | 186.16 | 47603 | 47224.2 | 190.94 | 47708 | 47235.67 | 184.06 | 47600 | 47147.07 | 174.56 |
| | | 2op | 55582 | 55581.4 | 2.77 | 55582 | 55579.17 | 6.35 | 55582 | 55575.23 | 10.59 | 55582 | 55562.77 | 14.82 |

Table A.530: $f1577\_354$: basicRRGA+IM: 500 – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 45153 | 44780.5 | 190.61 | 44578 | 44099.6 | 221.32 | 44112 | 43687.87 | 225.81 | 43880 | 43496.03 | 217.54 |
| | | 2op | 55576 | 55522.63 | 38.23 | 55403 | 55250.9 | 96.05 | 55324 | 55122.93 | 97.65 | 55203 | 54981.87 | 121.57 |
| | 50 | rnd | 45977 | 45651.73 | 187.58 | 45583 | 44851.2 | 227.66 | 44446 | 44186.53 | 183.98 | 44787 | 44396.3 | 221.11 |
| | | 2op | 55582 | 55527.4 | 41.51 | 55384 | 55241.33 | 100.06 | 55154 | 54998.87 | 127.09 | 54988 | 54706.63 | 114.5 |
| 51 | 20 | rnd | 43775 | 43385.17 | 210.91 | 43170 | 42806.83 | 192.6 | 42620 | 42312.63 | 228.2 | 42442 | 41887.2 | 206.49 |
| | | 2op | 55582 | 55580.43 | 3.37 | 55582 | 55577.13 | 7.28 | 55566 | 55513.93 | 30.64 | 55408 | 55164.43 | 84.47 |
| | 50 | rnd | 45228 | 44832.3 | 202.2 | 44810 | 44259.07 | 208.63 | 44281 | 43852.9 | 208.14 | 44424 | 43941.23 | 199.71 |
| | | 2op | 55582 | 55581.9 | 0.55 | 55573 | 55551.1 | 13.34 | 55403 | 55291.9 | 74.19 | 55084 | 54854.77 | 102.48 |

Table A.531: $f1577\_354$: basicRRGA+IM: 5000 – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13003 | 12939.93 | 29.88 | 13651 | 13574.37 | 48.98 | 14132 | 14021.1 | 47.98 | 14550 | 14452.47 | 53.86 |
| | | 2op | 55571 | 55561.57 | 2.19 | 55578 | 55565.07 | 4.94 | 55580 | 55569.23 | 5.85 | 55582 | 55575.53 | 4.92 |
| | 50 | rnd | 12976 | 12924.53 | 26.47 | 13641 | 13574.4 | 41.76 | 14135 | 13994.83 | 52.44 | 14591 | 14447.33 | 60.24 |
| | | 2op | 55561 | 55561 | 0 | 55578 | 55564.53 | 4.57 | 55580 | 55568.93 | 6.58 | 55582 | 55575.67 | 5.29 |
| 51 | 20 | rnd | 13096 | 13040.63 | 35.28 | 14012 | 13935 | 47.28 | 14546 | 14461.5 | 60.4 | 15064 | 14961.63 | 54.14 |
| | | 2op | 55573 | 55562.43 | 3.42 | 55579 | 55567.5 | 5.05 | 55582 | 55571.7 | 5.73 | 55582 | 55578.9 | 3.41 |
| | 50 | rnd | 13103 | 13026.03 | 37.62 | 13966 | 13879.57 | 42.6 | 14546 | 14415.63 | 63.86 | 15038 | 14907 | 54.42 |
| | | 2op | 55571 | 55562.43 | 3.21 | 55580 | 55566.27 | 5.61 | 55580 | 55570.47 | 6.92 | 55582 | 55578.9 | 3.02 |

Table A.532: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12988 | 12933.83 | 25.65 | 13648 | 13561.97 | 44.53 | 14086 | 13986.4 | 45.37 | 14533 | 14428.93 | 48.92 |
| | | 2op | 55571 | 55561.8 | 2.55 | 55573 | 55564.83 | 4.28 | 55580 | 55568.4 | 5.46 | 55582 | 55575.53 | 5.19 |
| | 50 | rnd | 12985 | 12919.17 | 28.26 | 13650 | 13574.87 | 49.4 | 14097 | 13985.57 | 56.59 | 14541 | 14402.23 | 54.91 |
| | | 2op | 55563 | 55561.07 | 0.37 | 55578 | 55564.33 | 4.99 | 55582 | 55570.03 | 6.49 | 55582 | 55576.2 | 4.4 |
| 51 | 20 | rnd | 13098 | 13029.8 | 26.65 | 14008 | 13916.63 | 47.19 | 14552 | 14465.23 | 47.66 | 15061 | 14934.4 | 73.03 |
| | | 2op | 55571 | 55561.57 | 2.19 | 55580 | 55567.43 | 7.3 | 55580 | 55572.4 | 6.28 | 55582 | 55578.9 | 3.08 |
| | 50 | rnd | 13124 | 13028.6 | 34.93 | 13954 | 13855.3 | 46.71 | 14518 | 14407.67 | 61.3 | 14984 | 14892.57 | 38.23 |
| | | 2op | 55571 | 55562.27 | 2.92 | 55578 | 55566.83 | 5.69 | 55582 | 55571.7 | 5.67 | 55580 | 55577.8 | 3.46 |

Table A.533: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

**Results With Post Optimization**

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47298 | 47145.7 | 80.53 | 47290 | 47160.4 | 68.19 | 47399 | 47204.8 | 92.26 | 47332 | 47196.97 | 79.92 |
| | | 2op | 47375 | 47264.57 | 57.26 | 47396 | 47266.17 | 63.23 | 47376 | 47250.47 | 67.24 | 47352 | 47217.53 | 92.06 |
| | 50 | rnd | 47314 | 47167 | 80.03 | 47338 | 47162.87 | 96.87 | 47294 | 47184.07 | 57.81 | 47404 | 47192.63 | 88.88 |
| | | 2op | 47328 | 47261.77 | 44.74 | 47324 | 47248.27 | 54.53 | 47436 | 47259.93 | 72.85 | 47410 | 47233.87 | 92.74 |
| 51 | 20 | rnd | 47287 | 47180.5 | 80.9 | 47293 | 47153.23 | 89.38 | 47365 | 47183 | 73.22 | 47333 | 47215.67 | 80.84 |
| | | 2op | 47340 | 47277.97 | 37.21 | 47345 | 47269.47 | 36.1 | 47372 | 47284.77 | 46.46 | 47391 | 47274.4 | 62.77 |
| | 50 | rnd | 47295 | 47170.23 | 75.43 | 47412 | 47198 | 105.09 | 47420 | 47203.3 | 87.23 | 47326 | 47201.63 | 78.62 |
| | | 2op | 47334 | 47271.23 | 36.66 | 47387 | 47267.77 | 56.57 | 47389 | 47281.63 | 49.92 | 47395 | 47267.77 | 74.53 |

Table A.534: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47330 | 47132.37 | 90.89 | 47287 | 47144.43 | 89.02 | 47339 | 47176.33 | 87.42 | 47354 | 47184.03 | 81.06 |
| | | 2op | 47329 | 47243.07 | 47.15 | 47358 | 47266.5 | 60.96 | 47364 | 47239.9 | 76.15 | 47344 | 47224.63 | 61.76 |
| | 50 | rnd | 47277 | 47127.53 | 74.9 | 47341 | 47185.13 | 96.97 | 47315 | 47160.17 | 100.12 | 47388 | 47193.23 | 91.82 |
| | | 2op | 47356 | 47244.33 | 52.64 | 47371 | 47259.53 | 59.97 | 47450 | 47257.3 | 65.07 | 47368 | 47255.3 | 73.02 |
| 51 | 20 | rnd | 47309 | 47168.47 | 75.17 | 47354 | 47186.83 | 76.24 | 47350 | 47212.97 | 81.28 | 47431 | 47214.13 | 79.04 |
| | | 2op | 47314 | 47271.2 | 36.71 | 47337 | 47278.67 | 37.23 | 47354 | 47287.7 | 37.08 | 47367 | 47269.93 | 57.52 |
| | 50 | rnd | 47360 | 47190.9 | 87.88 | 47352 | 47187.73 | 84.56 | 47342 | 47204.53 | 89.03 | 47329 | 47196.57 | 77.74 |
| | | 2op | 47330 | 47260.37 | 33.03 | 47344 | 47269.4 | 52.06 | 47397 | 47276.47 | 60.05 | 47392 | 47270.9 | 71.03 |

Table A.535: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47334 | 47209.53 | 62.7 | 47351 | 47218.33 | 58.65 | 47322 | 47198.47 | 80.62 | 47332 | 47229.5 | 75.6 |
| | | 2op | 47369 | 47287.47 | 27.71 | 47349 | 47292.7 | 32.17 | 47337 | 47295.73 | 27.05 | 47399 | 47305.4 | 38.15 |
| | 50 | rnd | 47313 | 47193.87 | 74.53 | 47369 | 47225.3 | 54.26 | 47334 | 47210.37 | 58.81 | 47394 | 47239.33 | 65.35 |
| | | 2op | 47346 | 47283.7 | 25.05 | 47334 | 47296.57 | 24.32 | 47356 | 47315 | 31.07 | 47407 | 47309.37 | 47.82 |
| 51 | 20 | rnd | 47352 | 47260.5 | 43.11 | 47296 | 47224.8 | 43.57 | 47316 | 47243.97 | 42.8 | 47296 | 47240.3 | 35.64 |
| | | 2op | 47331 | 47291.17 | 17.3 | 47364 | 47315.23 | 20.78 | 47371 | 47326.97 | 24.81 | 47381 | 47355.77 | 17.19 |
| | 50 | rnd | 47351 | 47243.17 | 57.73 | 47339 | 47237.6 | 45.72 | 47302 | 47227.73 | 42.12 | 47330 | 47263.87 | 41.13 |
| | | 2op | 47358 | 47299.4 | 22.29 | 47376 | 47333.3 | 20.07 | 47380 | 47349.9 | 18.12 | 47406 | 47373.77 | 10.52 |

Table A.536: *acin*1: basicRRGA+IM: 500 – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47351 | 47231.47 | 65.18 | 47363 | 47226.53 | 51.54 | 47326 | 47216.73 | 79.71 | 47433 | 47245.4 | 60.7 |
| | | 2op | 47342 | 47292.17 | 24.76 | 47367 | 47314.1 | 28.7 | 47368 | 47317 | 34.59 | 47369 | 47297.97 | 46.03 |
| | 50 | rnd | 47324 | 47192.37 | 59.38 | 47408 | 47243.73 | 61.01 | 47388 | 47270.03 | 71.03 | 47370 | 47259.87 | 49.25 |
| | | 2op | 47352 | 47303.03 | 21 | 47400 | 47338.3 | 30.53 | 47410 | 47359.9 | 31.59 | 47382 | 47308.4 | 56.3 |
| 51 | 20 | rnd | 47314 | 47254.6 | 39.68 | 47348 | 47263.8 | 50.17 | 47371 | 47256 | 57.31 | 47360 | 47262.63 | 46.61 |
| | | 2op | 47351 | 47306.77 | 23.2 | 47392 | 47351.17 | 19.15 | 47394 | 47363.6 | 13.16 | 47403 | 47280.6 | 54.39 |
| | 50 | rnd | 47366 | 47280.37 | 40.1 | 47437 | 47320.83 | 43.06 | 47391 | 47314.93 | 48.19 | 47370 | 47249.03 | 59.4 |
| | | 2op | 47384 | 47335.7 | 23.29 | 47413 | 47388.1 | 18.38 | 47431 | 47365.77 | 23.55 | 47369 | 47302.77 | 36.16 |

Table A.537: *acin*1: basicRRGA+IM: 5000 – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47359 | 47274.2 | 43.52 | 47355 | 47270.87 | 49.73 | 47338 | 47237.07 | 54.43 | 47335 | 47198.5 | 81.24 |
| | | 2op | 47298 | 47281.13 | 10.59 | 47342 | 47290.63 | 16.31 | 47332 | 47301.37 | 16.05 | 47364 | 47323.4 | 20.18 |
| | 50 | rnd | 47349 | 47293.83 | 40.21 | 47346 | 47251.17 | 69.61 | 47341 | 47212.03 | 76.32 | 47318 | 47210.1 | 65.33 |
| | | 2op | 47322 | 47285.47 | 17.15 | 47334 | 47286.4 | 15.78 | 47346 | 47301.03 | 20.11 | 47379 | 47322.73 | 21.77 |
| 51 | 20 | rnd | 47366 | 47285.57 | 39.52 | 47320 | 47241.3 | 50.21 | 47356 | 47230.57 | 71.7 | 47346 | 47228.9 | 58.53 |
| | | 2op | 47300 | 47280.73 | 9.91 | 47335 | 47295.37 | 17.35 | 47351 | 47307.33 | 22.37 | 47362 | 47324.7 | 21.36 |
| | 50 | rnd | 47400 | 47276.1 | 51.03 | 47349 | 47247.37 | 58.11 | 47348 | 47220.93 | 61.93 | 47313 | 47223.97 | 48.31 |
| | | 2op | 47306 | 47279.7 | 10.54 | 47324 | 47290.47 | 15.08 | 47350 | 47297.93 | 19.62 | 47369 | 47329.83 | 19.63 |

Table A.538: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47361 | 47262.83 | 48.74 | 47341 | 47257 | 64.94 | 47349 | 47209.17 | 79.66 | 47320 | 47208.33 | 69.74 |
| | | 2op | 47300 | 47279.6 | 10.52 | 47322 | 47288.2 | 14.41 | 47340 | 47303.7 | 19.1 | 47382 | 47325.83 | 24.47 |
| | 50 | rnd | 47365 | 47288.17 | 36.24 | 47408 | 47264.37 | 64.04 | 47355 | 47254.33 | 55.71 | 47361 | 47217.73 | 55.38 |
| | | 2op | 47322 | 47278.87 | 11.6 | 47329 | 47289.53 | 16.62 | 47324 | 47290.93 | 15.59 | 47369 | 47327.8 | 21.2 |
| 51 | 20 | rnd | 47392 | 47293.8 | 62.59 | 47368 | 47250.37 | 55.72 | 47343 | 47216.73 | 74.29 | 47324 | 47227.43 | 70.42 |
| | | 2op | 47298 | 47281.37 | 10.73 | 47332 | 47303.97 | 16.39 | 47343 | 47301.27 | 19.78 | 47354 | 47326.6 | 20.33 |
| | 50 | rnd | 47368 | 47297.2 | 39.22 | 47339 | 47267.9 | 52.13 | 47325 | 47250.27 | 48.23 | 47330 | 47209.87 | 75.6 |
| | | 2op | 47308 | 47280.27 | 10.4 | 47324 | 47292.13 | 16.71 | 47331 | 47302.7 | 18.29 | 47363 | 47328.3 | 18.8 |

Table A.539: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151213 | 151000.57 | 113.82 | 151238 | 151016.8 | 147.72 | 151195 | 150997.4 | 128.55 | 151175 | 150945.13 | 189.42 |
| | | 2op | 151210 | 151011.27 | 164.32 | 151185 | 150881.67 | 350.95 | 151222 | 150964.9 | 222.37 | 151235 | 150809.7 | 402.22 |
| | 50 | rnd | 151234 | 151004.2 | 183.95 | 151172 | 150854.67 | 336.64 | 151169 | 150945.17 | 244.74 | 151183 | 150936.17 | 222.71 |
| | | 2op | 151240 | 151009.2 | 197.05 | 151161 | 151061.67 | 89.54 | 151285 | 150973.07 | 292.57 | 151226 | 150921.4 | 261.98 |
| 51 | 20 | rnd | 151141 | 151022.93 | 80.89 | 151228 | 151040.5 | 96.62 | 151135 | 151016.1 | 111.77 | 151196 | 151020.23 | 178.05 |
| | | 2op | 151214 | 151046.07 | 116.35 | 151245 | 151086 | 91.54 | 151215 | 151088.67 | 87.3 | 151238 | 151032.33 | 187.61 |
| | 50 | rnd | 151230 | 151041.97 | 103.32 | 151159 | 151035.63 | 77.09 | 151195 | 150945.87 | 265.03 | 151145 | 151018.57 | 80.81 |
| | | 2op | 151234 | 151065 | 110.68 | 151246 | 151053.47 | 140.64 | 151228 | 151077.77 | 102.88 | 151218 | 150984.53 | 185.85 |

Table A.540: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151185 | 151022.4 | 157.82 | 151193 | 151049.47 | 102.6 | 151152 | 150953.5 | 215.35 | 151186 | 150857.8 | 275.48 |
| | | 2op | 151215 | 151062.43 | 115.6 | 151228 | 150976.83 | 252.17 | 151253 | 151020.53 | 224.85 | 151203 | 150983.4 | 241.12 |
| | 50 | rnd | 151166 | 150983 | 198.92 | 151210 | 150972.2 | 307.05 | 151176 | 150924.57 | 200.5 | 151177 | 150856.47 | 490.18 |
| | | 2op | 151238 | 151063.77 | 148.51 | 151182 | 150941.6 | 221.78 | 151217 | 150929.8 | 287.94 | 151234 | 150970.9 | 247.64 |
| 51 | 20 | rnd | 151178 | 151017.6 | 96.28 | 151195 | 151024.83 | 142.55 | 151158 | 151021.57 | 134.84 | 151172 | 151012.53 | 132.42 |
| | | 2op | 151204 | 151086.07 | 128.38 | 151241 | 150979.17 | 191.15 | 151246 | 151064.17 | 146.59 | 151224 | 150981.33 | 248.39 |
| | 50 | rnd | 151177 | 151014.33 | 77.41 | 151171 | 150954.47 | 246.96 | 151182 | 150970.03 | 244 | 151141 | 150948 | 192.47 |
| | | 2op | 151208 | 151048.43 | 122.65 | 151211 | 151072.83 | 126.78 | 151228 | 151055.9 | 172.76 | 151218 | 150999.67 | 195.75 |

Table A.541: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151150 | 151002.23 | 93.59 | 151208 | 151032.77 | 79.07 | 151156 | 151050.93 | 83.23 | 151205 | 151045.47 | 81.78 |
| | | 2op | 151203 | 151065.7 | 93.31 | 151196 | 151075.63 | 120.08 | 151227 | 151075.67 | 139.84 | 151207 | 151080.43 | 142.39 |
| | 50 | rnd | 151241 | 151050.67 | 92.34 | 151175 | 151012.07 | 163.64 | 151199 | 151045.57 | 86.09 | 151209 | 150985 | 201.61 |
| | | 2op | 151209 | 151061.97 | 111.6 | 151207 | 151106.27 | 77.36 | 151212 | 151056.67 | 157.31 | 151180 | 150982.57 | 193.4 |
| 51 | 20 | rnd | 151210 | 151011.6 | 91.24 | 151212 | 151037.9 | 97.9 | 151198 | 151056.23 | 74 | 151132 | 151034.57 | 83.82 |
| | | 2op | 151193 | 151083.97 | 71.37 | 151189 | 151093.07 | 62.55 | 151215 | 151086.6 | 68.24 | 151194 | 151067.93 | 72.28 |
| | 50 | rnd | 151181 | 151035.7 | 79.37 | 151177 | 151064.33 | 81.96 | 151183 | 151056.4 | 70.49 | 151197 | 151052.73 | 95.32 |
| | | 2op | 151189 | 151076.63 | 66.87 | 151197 | 151086.3 | 73.29 | 151214 | 151072.87 | 87.73 | 151177 | 151054.23 | 99.73 |

Table A.542: *acin*2: basicRRGA+IM: 500 – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151176 | 151028.87 | 86.12 | 151176 | 151025.03 | 104.61 | 151180 | 150950.7 | 199.96 | 151154 | 150975.7 | 355.45 |
| | | 2op | 151204 | 151076.83 | 75.47 | 151190 | 151061.03 | 89.92 | 151167 | 151067 | 82.18 | 151172 | 150967.4 | 192.71 |
| | 50 | rnd | 151157 | 151057.67 | 46.62 | 151217 | 151026.87 | 99.47 | 151202 | 151042.1 | 80.33 | 151182 | 150858.73 | 327.07 |
| | | 2op | 151215 | 151068.33 | 110.84 | 151243 | 151078.47 | 95.95 | 151210 | 151015.83 | 180.44 | 151158 | 150922.53 | 195.24 |
| 51 | 20 | rnd | 151236 | 151064.67 | 80.42 | 151173 | 151062.23 | 71.29 | 151259 | 151031 | 99.68 | 151150 | 150956.13 | 259.57 |
| | | 2op | 151222 | 151095.33 | 67.14 | 151200 | 151080.73 | 75.14 | 151168 | 151058.43 | 125.89 | 151189 | 151038.03 | 150.07 |
| | 50 | rnd | 151155 | 151024.53 | 72.26 | 151181 | 151041 | 84.88 | 151219 | 151026.17 | 83.87 | 151150 | 150978 | 193.41 |
| | | 2op | 151200 | 151070.47 | 61.84 | 151216 | 151088.67 | 83.54 | 151242 | 151071.1 | 114.96 | 151197 | 151012.3 | 193.3 |

Table A.543: *acin*2: basicRRGA+IM: 5000 – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151157 | 151039.9 | 68.91 | 151175 | 151066.7 | 74.37 | 151158 | 151032.67 | 82.4 | 151194 | 151044.67 | 107.56 |
| | | 2op | 151163 | 151086.77 | 47.86 | 151189 | 151092.3 | 66.35 | 151175 | 151076.67 | 58.46 | 151191 | 151080.33 | 73.29 |
| | 50 | rnd | 151154 | 151068.4 | 75.83 | 151164 | 151027.13 | 76.72 | 151173 | 151041.23 | 64.26 | 151182 | 151042.63 | 89.79 |
| | | 2op | 151189 | 151089.43 | 50.9 | 151186 | 151060.57 | 66.09 | 151186 | 151079.63 | 56.34 | 151186 | 151094.2 | 64.6 |
| 51 | 20 | rnd | 151189 | 151055 | 58.23 | 151170 | 151047.7 | 73.63 | 151149 | 151052.7 | 72.55 | 151193 | 151055.77 | 76.55 |
| | | 2op | 151163 | 151071.37 | 31.2 | 151186 | 151073.63 | 63.44 | 151189 | 151095.63 | 72.97 | 151189 | 151074.2 | 67.81 |
| | 50 | rnd | 151130 | 151036 | 71.79 | 151170 | 151020.33 | 106.59 | 151169 | 151069.6 | 65.8 | 151163 | 151059.97 | 80.39 |
| | | 2op | 151176 | 151079.97 | 51.6 | 151170 | 151101.43 | 54.62 | 151163 | 151071.6 | 52.95 | 151189 | 151078.43 | 69.64 |

Table A.544: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151151 | 151038.6 | 73.36 | 151167 | 151049.7 | 69.81 | 151205 | 151052.23 | 78.91 | 151190 | 151050.33 | 88.98 |
| | | 2op | 151177 | 151074.83 | 53.14 | 151186 | 151079.67 | 61.56 | 151222 | 151088.97 | 62.31 | 151189 | 151085.1 | 62.04 |
| | 50 | rnd | 151150 | 151021.87 | 95.67 | 151177 | 151052.07 | 85.11 | 151172 | 151048.2 | 99.88 | 151223 | 151052 | 100.63 |
| | | 2op | 151186 | 151065.03 | 45.06 | 151189 | 151093.37 | 60.65 | 151209 | 151084.47 | 77.58 | 151186 | 151074.97 | 70.36 |
| 51 | 20 | rnd | 151175 | 151030.03 | 88.18 | 151175 | 151035.17 | 91.64 | 151217 | 151037.97 | 92.23 | 151197 | 151060.7 | 74.81 |
| | | 2op | 151186 | 151076.13 | 47.59 | 151186 | 151085.5 | 58.37 | 151186 | 151081.7 | 67.58 | 151186 | 151073.27 | 67.7 |
| | 50 | rnd | 151158 | 151010.4 | 116.65 | 151140 | 151028.4 | 76.36 | 151189 | 151057.6 | 90.28 | 151172 | 151026.47 | 105.23 |
| | | 2op | 151163 | 151085 | 49.43 | 151189 | 151082.93 | 63.4 | 151175 | 151099.5 | 54.86 | 151186 | 151090.97 | 52.11 |

Table A.545: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166675 | 166270.97 | 271.6 | 166754 | 166304.97 | 266.03 | 166915 | 166345.43 | 275.41 | 166833 | 166345.3 | 273.78 |
| | | 2op | 166567 | 166392.87 | 142.51 | 166673 | 166364.33 | 196.58 | 166722 | 166321 | 239.8 | 166715 | 166250.1 | 311.29 |
| | 50 | rnd | 166690 | 166304.2 | 223.74 | 166885 | 166412.07 | 196.14 | 166703 | 166357.03 | 185.48 | 166739 | 166332.4 | 216.9 |
| | | 2op | 166710 | 166373.43 | 187.12 | 166884 | 166388.97 | 184.62 | 166725 | 166366.43 | 207.92 | 166676 | 166270.93 | 268.58 |
| 51 | 20 | rnd | 166733 | 166381.73 | 205.62 | 166723 | 166359 | 181.42 | 166769 | 166370.43 | 197.96 | 166631 | 166205.27 | 385.79 |
| | | 2op | 166579 | 166336.57 | 150 | 166705 | 166422.13 | 179.91 | 166570 | 166370 | 187.53 | 166654 | 166370.9 | 206.1 |
| | 50 | rnd | 166768 | 166407.23 | 175.5 | 166725 | 166438.9 | 156.29 | 166679 | 166423.07 | 144.46 | 166729 | 166396.97 | 184.86 |
| | | 2op | 166555 | 166359.63 | 136.27 | 166748 | 166428.2 | 146.12 | 166779 | 166455.4 | 143.49 | 167035 | 166403.33 | 278.59 |

Table A.546: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166775 | 166382.23 | 254.74 | 166569 | 166301.4 | 212.4 | 166813 | 166243.9 | 335.71 | 166645 | 166133.97 | 433.41 |
| | | 2op | 166613 | 166326.23 | 179.27 | 166697 | 166307.97 | 257.04 | 166662 | 166304.97 | 219.52 | 166589 | 166250.4 | 373.28 |
| | 50 | rnd | 166641 | 166339.23 | 235.52 | 166707 | 166346.1 | 283.36 | 166657 | 166318.17 | 229.62 | 166732 | 166226.13 | 384.37 |
| | | 2op | 166585 | 166346.7 | 183.2 | 166702 | 166292.23 | 249.68 | 166830 | 166370.63 | 186.51 | 166869 | 166235.17 | 260.3 |
| 51 | 20 | rnd | 166699 | 166372.57 | 188 | 166848 | 166325.9 | 246.71 | 166833 | 166356.37 | 224.99 | 166878 | 166395.2 | 220.18 |
| | | 2op | 166646 | 166393.2 | 131.22 | 166668 | 166370.13 | 184.05 | 166684 | 166402.93 | 189.93 | 166668 | 166303.23 | 260.28 |
| | 50 | rnd | 166882 | 166381.97 | 261.76 | 166818 | 166441.93 | 197.04 | 166763 | 166466.9 | 195.44 | 166754 | 166361.87 | 244.35 |
| | | 2op | 166593 | 166413.17 | 144.39 | 166703 | 166349.47 | 195.69 | 166645 | 166326.13 | 213.74 | 166751 | 166294.13 | 350.77 |

Table A.547: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166765 | 166427.8 | 175.88 | 166973 | 166473.4 | 191.25 | 166813 | 166436.57 | 154.84 | 166856 | 166417.9 | 240.71 |
| | | 2op | 166573 | 166353.87 | 129.99 | 166683 | 166430.97 | 122.23 | 166604 | 166400.8 | 152.61 | 166967 | 166461.7 | 178.81 |
| | 50 | rnd | 166677 | 166353 | 190.81 | 166769 | 166462.23 | 165.2 | 167157 | 166444.07 | 244.18 | 166838 | 166384 | 182.39 |
| | | 2op | 166568 | 166385.67 | 101.52 | 166711 | 166430.97 | 154.64 | 166565 | 166379.17 | 139.32 | 166696 | 166421.73 | 225.02 |
| 51 | 20 | rnd | 167022 | 166544.6 | 190.38 | 167214 | 166582.33 | 218.39 | 167100 | 166500.07 | 182.94 | 166942 | 166506.9 | 243.51 |
| | | 2op | 166470 | 166402.47 | 63.49 | 166517 | 166373.77 | 65.76 | 166581 | 166367.53 | 92.73 | 166754 | 166407.33 | 153.88 |
| | 50 | rnd | 166908 | 166547.13 | 201.75 | 166996 | 166490.67 | 235.17 | 166800 | 166537.6 | 189.2 | 166812 | 166563.73 | 181.58 |
| | | 2op | 166477 | 166402.2 | 57.07 | 166733 | 166410 | 84.4 | 166689 | 166428.8 | 108.6 | 166711 | 166421.03 | 145.68 |

Table A.548: *acin*3: basicRRGA+IM: 500 – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166979 | 166500.53 | 202.57 | 166705 | 166351.57 | 181.38 | 166822 | 166417.53 | 159.31 | 166687 | 166389.57 | 220.32 |
| | | 2op | 166697 | 166396.73 | 98.65 | 166786 | 166421.97 | 125.77 | 166851 | 166422.4 | 144.37 | 166709 | 166445.53 | 140.1 |
| | 50 | rnd | 166773 | 166360.2 | 288.35 | 166643 | 166377.83 | 151.3 | 166753 | 166392.3 | 196.4 | 166673 | 166308.4 | 311.63 |
| | | 2op | 166628 | 166389.37 | 146.34 | 166686 | 166375.1 | 140.86 | 166546 | 166292.3 | 244.88 | 166756 | 166292 | 216.7 |
| 51 | 20 | rnd | 166889 | 166503.03 | 230.73 | 166803 | 166445.3 | 245.9 | 166838 | 166506 | 196.14 | 166699 | 166371.23 | 219.74 |
| | | 2op | 166477 | 166416.97 | 59.65 | 166695 | 166437.43 | 118 | 166573 | 166412.27 | 103.48 | 166564 | 166367.23 | 112.29 |
| | 50 | rnd | 166940 | 166579.33 | 211.85 | 166988 | 166520.33 | 202.43 | 166884 | 166434.8 | 231.95 | 166915 | 166430.87 | 274.37 |
| | | 2op | 166621 | 166425.33 | 75.08 | 166794 | 166467.97 | 133.64 | 166681 | 166414.57 | 155.47 | 166777 | 166429.53 | 162.45 |

Table A.549: *acin*3: basicRRGA+IM: 5000 – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166910 | 166398.43 | 334.22 | 167192 | 166507.27 | 215.56 | 167011 | 166562.33 | 192.01 | 166897 | 166561.3 | 173.45 |
| | | 2op | 166470 | 166451.4 | 30.31 | 166477 | 166416.3 | 47.05 | 166513 | 166428.1 | 51.43 | 166557 | 166401 | 85.49 |
| | 50 | rnd | 166831 | 166439.17 | 209.81 | 166800 | 166472.97 | 161.27 | 166770 | 166504.57 | 144.34 | 167144 | 166608.2 | 273.79 |
| | | 2op | 166477 | 166447.9 | 32.84 | 166477 | 166435.67 | 38.23 | 166477 | 166423.2 | 40.8 | 166477 | 166408.17 | 55.39 |
| 51 | 20 | rnd | 166927 | 166451.37 | 178.34 | 167048 | 166615.33 | 215.39 | 166959 | 166615.97 | 214.57 | 167202 | 166694.67 | 258.08 |
| | | 2op | 166513 | 166444.57 | 38.79 | 166470 | 166421.57 | 34.55 | 166470 | 166408.93 | 56.37 | 166545 | 166390 | 68.18 |
| | 50 | rnd | 166783 | 166443.93 | 150.48 | 166969 | 166512.73 | 230.21 | 167025 | 166637.4 | 206.83 | 167108 | 166689.13 | 247.49 |
| | | 2op | 166477 | 166426.07 | 48.92 | 166513 | 166428.8 | 42.19 | 166470 | 166403.83 | 50.6 | 166477 | 166402.23 | 50.95 |

Table A.550: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166791 | 166431.57 | 173.69 | 166771 | 166492.47 | 183.79 | 167095 | 166568.47 | 217.54 | 167081 | 166647.3 | 201.31 |
| | | 2op | 166477 | 166458 | 30.67 | 166477 | 166431.13 | 47.83 | 166477 | 166430.33 | 41.09 | 166537 | 166406 | 62.09 |
| | 50 | rnd | 166776 | 166474.1 | 156.8 | 166957 | 166522.37 | 200.02 | 166904 | 166541.47 | 219.54 | 166964 | 166641.93 | 183.52 |
| | | 2op | 166513 | 166449.13 | 36.97 | 166477 | 166429.57 | 50.19 | 166477 | 166422.6 | 47.12 | 166537 | 166418.97 | 56.79 |
| 51 | 20 | rnd | 166855 | 166457.9 | 150.21 | 167115 | 166567.23 | 211.88 | 167004 | 166618.47 | 245.14 | 167049 | 166692.47 | 224.87 |
| | | 2op | 166470 | 166440.7 | 41.78 | 166482 | 166435.6 | 47.22 | 166497 | 166428.07 | 47.68 | 166493 | 166407.9 | 60.82 |
| | 50 | rnd | 166766 | 166476.27 | 187.44 | 166799 | 166531.73 | 202.39 | 166878 | 166501.67 | 223.29 | 167144 | 166779.17 | 163.67 |
| | | 2op | 166470 | 166438.67 | 40.61 | 166513 | 166425.87 | 45.75 | 166470 | 166407 | 39.97 | 166571 | 166406.13 | 56.08 |

Table A.551: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162894 | 162635.43 | 162.25 | 162959 | 162635.67 | 183.93 | 162916 | 162548.6 | 310.58 | 162879 | 162607.23 | 209.33 |
| | | 2op | 163035 | 162686.93 | 258.85 | 162991 | 162666.7 | 262.71 | 163044 | 162590.1 | 310.86 | 162933 | 162558.77 | 303.12 |
| | 50 | rnd | 162898 | 162639.13 | 138.32 | 163000 | 162620.3 | 260.39 | 162891 | 162465.1 | 346.19 | 162937 | 162606.93 | 165.65 |
| | | 2op | 162992 | 162645.6 | 215.23 | 162980 | 162570.1 | 284.94 | 162960 | 162683.27 | 184.03 | 162969 | 162587.17 | 284.3 |
| 51 | 20 | rnd | 162968 | 162630.9 | 184.38 | 162937 | 162642.23 | 157.38 | 162906 | 162559.43 | 260.72 | 162873 | 162588.4 | 197.92 |
| | | 2op | 163061 | 162701.77 | 191.71 | 163019 | 162682.3 | 220.98 | 162993 | 162674.2 | 277.09 | 162978 | 162548.8 | 328.67 |
| | 50 | rnd | 162953 | 162558.8 | 254.79 | 162917 | 162629.13 | 151.3 | 162848 | 162597.5 | 137.31 | 162892 | 162554.17 | 209.27 |
| | | 2op | 163040 | 162730.13 | 215.8 | 163006 | 162668.17 | 254.58 | 162968 | 162712.9 | 267.4 | 162944 | 162629.37 | 270.29 |

Table A.552: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162883 | 162593.1 | 233.55 | 162924 | 162536.23 | 260.37 | 162966 | 162636.2 | 175.2 | 162863 | 162590.17 | 214.3 |
| | | 2op | 162975 | 162657.57 | 218.8 | 162993 | 162658.67 | 308.23 | 162995 | 162707.8 | 183.93 | 162895 | 162512.97 | 237.86 |
| | 50 | rnd | 162935 | 162598.33 | 187.6 | 162892 | 162638.1 | 238.52 | 162908 | 162667.97 | 152.17 | 162832 | 162527.77 | 237.28 |
| | | 2op | 162968 | 162706.07 | 208.95 | 163004 | 162664.4 | 259.92 | 163010 | 162564.03 | 217.22 | 162921 | 162627.77 | 238.14 |
| 51 | 20 | rnd | 162841 | 162564.5 | 236.58 | 162962 | 162518.3 | 287.33 | 162893 | 162556.9 | 302.6 | 162974 | 162586.63 | 272.33 |
| | | 2op | 162957 | 162709.1 | 212.45 | 163006 | 162671.57 | 198.9 | 163024 | 162762.03 | 220.19 | 162945 | 162633.3 | 260.82 |
| | 50 | rnd | 162960 | 162583.13 | 233.96 | 162841 | 162616.3 | 194.1 | 162975 | 162705 | 156.79 | 162933 | 162606.8 | 272.98 |
| | | 2op | 162963 | 162714.9 | 159.23 | 163066 | 162713.83 | 237.86 | 163022 | 162702.5 | 203.57 | 162990 | 162672.57 | 232.72 |

Table A.553: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162910 | 162605.1 | 165.2 | 162940 | 162599.57 | 268.04 | 162888 | 162643.5 | 211.86 | 162773 | 162613.13 | 120.87 |
| | | 2op | 162972 | 162709.93 | 173.38 | 163049 | 162691.27 | 223.22 | 162944 | 162684.47 | 218.55 | 163027 | 162720.77 | 189.04 |
| | 50 | rnd | 162888 | 162601.43 | 223.35 | 162969 | 162629.1 | 253.2 | 162992 | 162627.73 | 245.07 | 162979 | 162655.63 | 175.97 |
| | | 2op | 162991 | 162671.83 | 161.57 | 163003 | 162618.23 | 222.79 | 163069 | 162620.5 | 271.48 | 163026 | 162680.5 | 183.25 |
| 51 | 20 | rnd | 162942 | 162629.2 | 213.67 | 162915 | 162573.93 | 244.89 | 162941 | 162613 | 237.79 | 162944 | 162665.6 | 232.3 |
| | | 2op | 162846 | 162729.67 | 55.5 | 162990 | 162701.77 | 146.14 | 163038 | 162692.17 | 187.54 | 162995 | 162750.03 | 188.17 |
| | 50 | rnd | 162897 | 162629.67 | 174.71 | 162955 | 162626.27 | 207.49 | 162882 | 162599.97 | 215.42 | 162918 | 162607.53 | 213.73 |
| | | 2op | 162949 | 162706.87 | 105.71 | 162949 | 162741 | 153.71 | 162992 | 162646.5 | 196.34 | 162999 | 162715.07 | 214.07 |

Table A.554: *acin*5: basicRRGA+IM: 500 – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163018 | 162534.27 | 289.59 | 162965 | 162553.03 | 276.56 | 162942 | 162564.83 | 285.25 | 162885 | 162524.47 | 235.74 |
| | | 2op | 162988 | 162696.27 | 180.7 | 163022 | 162648.2 | 222.53 | 162965 | 162666.93 | 237.15 | 162997 | 162637.27 | 225.98 |
| | 50 | rnd | 162961 | 162677.83 | 159.87 | 162915 | 162671.2 | 187.69 | 162831 | 162568.8 | 278.52 | 162854 | 162568.03 | 224.31 |
| | | 2op | 162998 | 162671.67 | 191.34 | 163008 | 162584.9 | 324.43 | 163043 | 162621.3 | 253.46 | 162862 | 162520.73 | 289.58 |
| 51 | 20 | rnd | 162969 | 162616.5 | 180.24 | 162940 | 162604.4 | 259.75 | 162926 | 162606.07 | 169.04 | 162848 | 162596.67 | 292.4 |
| | | 2op | 162882 | 162752.9 | 66.31 | 162945 | 162756.77 | 127.46 | 162983 | 162694.7 | 212.24 | 163065 | 162667.7 | 262.13 |
| | 50 | rnd | 162937 | 162684.07 | 164.98 | 162967 | 162603.17 | 195.48 | 162989 | 162623.3 | 155.74 | 163023 | 162627.63 | 196.83 |
| | | 2op | 162940 | 162747.03 | 100.62 | 163014 | 162729.17 | 193.17 | 162925 | 162693.63 | 206.16 | 162986 | 162665.47 | 184.81 |

Table A.555: *acin*5: basicRRGA+IM: 5000 – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163130 | 162670.03 | 215.75 | 162928 | 162656.6 | 174.26 | 162995 | 162593.47 | 281.6 | 162941 | 162640.77 | 201.35 |
| | | 2op | 162751 | 162740.37 | 25.65 | 162867 | 162728.73 | 51.37 | 162923 | 162753.67 | 65.3 | 162882 | 162728.57 | 86.17 |
| | 50 | rnd | 162978 | 162689.57 | 167.22 | 163023 | 162654.23 | 182.55 | 162871 | 162619.87 | 208.26 | 162927 | 162607.7 | 186.99 |
| | | 2op | 162846 | 162748.43 | 37.88 | 162851 | 162750.63 | 54.8 | 162851 | 162759.43 | 46.12 | 162857 | 162729.83 | 59.96 |
| 51 | 20 | rnd | 162938 | 162630.57 | 221.02 | 162872 | 162627.23 | 202.26 | 162968 | 162652.67 | 176.76 | 162950 | 162670.27 | 180.17 |
| | | 2op | 162751 | 162740.37 | 25.65 | 162846 | 162752.93 | 40.68 | 162911 | 162749.47 | 61.44 | 162925 | 162767.53 | 57.95 |
| | 50 | rnd | 162950 | 162611.83 | 270.5 | 162915 | 162720.13 | 139.6 | 162982 | 162694.5 | 255.25 | 162961 | 162709.07 | 187.21 |
| | | 2op | 162846 | 162751.67 | 20.35 | 162911 | 162734.67 | 76.38 | 162856 | 162771.03 | 48.26 | 162851 | 162752.23 | 56.93 |

Table A.556: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162952 | 162697.2 | 184.15 | 162938 | 162651.97 | 250.06 | 163038 | 162688.83 | 189.09 | 162896 | 162661.7 | 201.01 |
| | | 2op | 162848 | 162751.47 | 34.38 | 162751 | 162729.07 | 34.43 | 162868 | 162725.87 | 62.76 | 162882 | 162748.3 | 61.89 |
| | 50 | rnd | 163007 | 162658.17 | 226.48 | 162975 | 162623.87 | 239.57 | 162920 | 162603.57 | 316.51 | 162981 | 162571.3 | 244.17 |
| | | 2op | 162846 | 162746.8 | 30.05 | 162882 | 162746.07 | 73.19 | 162846 | 162749.73 | 43.23 | 162929 | 162766.37 | 57.38 |
| 51 | 20 | rnd | 162916 | 162631.17 | 201.31 | 162988 | 162585.57 | 256.84 | 162997 | 162648.93 | 212.53 | 162981 | 162660.5 | 204.66 |
| | | 2op | 162851 | 162757.6 | 32.98 | 162888 | 162761.27 | 45.41 | 162882 | 162765.67 | 59.31 | 162879 | 162758.7 | 59.2 |
| | 50 | rnd | 162915 | 162573.53 | 254.9 | 162964 | 162664.3 | 210.3 | 163028 | 162683.73 | 146.12 | 162996 | 162661.87 | 216.62 |
| | | 2op | 162846 | 162747.77 | 26.53 | 162851 | 162738.73 | 60.22 | 162882 | 162736.7 | 70.33 | 162911 | 162757.43 | 60.94 |

Table A.557: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179562 | 179123.43 | 346.01 | 179519 | 179215.77 | 285.64 | 179690 | 179274.87 | 334.86 | 179546 | 179196.63 | 321.26 |
| | | 2op | 179823 | 179498.4 | 173.97 | 179799 | 179408.3 | 233.56 | 179685 | 179389.9 | 211.94 | 179647 | 179240.03 | 308.89 |
| | 50 | rnd | 179555 | 179217.8 | 176.92 | 179671 | 179295.63 | 212.58 | 179601 | 179275.8 | 218.69 | 179639 | 179247.73 | 305.18 |
| | | 2op | 179724 | 179446.87 | 187.92 | 179723 | 179367.7 | 246.13 | 179824 | 179373.37 | 246.37 | 179630 | 179310.93 | 229.68 |
| 51 | 20 | rnd | 179620 | 179244.57 | 311.54 | 179787 | 179144.83 | 352.72 | 179586 | 179241.7 | 269.56 | 179578 | 179189.13 | 233.96 |
| | | 2op | 179777 | 179531.3 | 143.21 | 179768 | 179513.67 | 186.39 | 179804 | 179424.77 | 239.34 | 179733 | 179396.67 | 297.68 |
| | 50 | rnd | 179643 | 179182.7 | 263.06 | 179637 | 179213.63 | 303.99 | 179604 | 179276.57 | 266.45 | 179589 | 179196.13 | 293.71 |
| | | 2op | 179757 | 179578.17 | 117.84 | 179835 | 179434.3 | 191.01 | 179799 | 179413.83 | 250.37 | 179760 | 179344.27 | 300.86 |

Table A.558: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179663 | 179291.37 | 311.29 | 179605 | 179171.4 | 317.64 | 179627 | 179283.73 | 220.06 | 179528 | 179164.37 | 241.95 |
| | | 2op | 179836 | 179469.07 | 170.67 | 179740 | 179445.23 | 206.8 | 179729 | 179351.63 | 274.78 | 179671 | 179378.83 | 217.35 |
| | 50 | rnd | 179727 | 179158.63 | 344.04 | 179682 | 179237.13 | 276.57 | 179553 | 179186.4 | 293.77 | 179638 | 179168.27 | 227.63 |
| | | 2op | 179932 | 179485.67 | 207.69 | 179721 | 179388.57 | 199.82 | 179736 | 179315.57 | 321.04 | 179584 | 179255.1 | 276.25 |
| 51 | 20 | rnd | 179634 | 179253.53 | 341.25 | 179614 | 179218.5 | 239.68 | 179559 | 179246.6 | 243.98 | 179639 | 179181.53 | 352.46 |
| | | 2op | 179759 | 179543.03 | 128.95 | 179701 | 179427 | 181.08 | 179883 | 179367.87 | 276.81 | 179881 | 179421.93 | 236.11 |
| | 50 | rnd | 179546 | 179125.73 | 344.1 | 179732 | 179265.33 | 233.06 | 179768 | 179283.27 | 283.59 | 179563 | 179182.5 | 291.69 |
| | | 2op | 179794 | 179504.87 | 151.31 | 179762 | 179433.9 | 214.79 | 179794 | 179450.33 | 186.17 | 179788 | 179370.27 | 279.1 |

Table A.559: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179572 | 179232.27 | 338.64 | 179576 | 179193.87 | 251.44 | 179554 | 179125.87 | 313.58 | 179750 | 179182.17 | 286.33 |
| | | 2op | 179782 | 179499.97 | 87.39 | 179886 | 179540.8 | 180.55 | 179736 | 179492.67 | 183.24 | 179757 | 179388.2 | 232.95 |
| | 50 | rnd | 179767 | 179237.7 | 370.04 | 179576 | 179217.27 | 237.21 | 179707 | 179326.6 | 204.09 | 179446 | 179113.8 | 326.49 |
| | | 2op | 179800 | 179510.13 | 102.99 | 179749 | 179499 | 131.1 | 179669 | 179367.2 | 194.85 | 179831 | 179378.67 | 299.25 |
| 51 | 20 | rnd | 179621 | 179254.27 | 328.74 | 179567 | 179180.17 | 266.59 | 179595 | 179169.17 | 243.96 | 179656 | 179222.47 | 282.58 |
| | | 2op | 179655 | 179516.57 | 36.94 | 179729 | 179523.27 | 62.43 | 179767 | 179542.93 | 91.43 | 179774 | 179492.27 | 141.9 |
| | 50 | rnd | 179563 | 179130.4 | 257.18 | 179746 | 179258.5 | 305.03 | 179642 | 179179.03 | 350.88 | 179554 | 179032.37 | 320.61 |
| | | 2op | 179621 | 179513.43 | 42.5 | 179738 | 179522.33 | 73.63 | 179701 | 179533.17 | 76.86 | 179734 | 179461.87 | 181.95 |

Table A.560: *acin*7: basicRRGA+IM: 500 – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179558 | 179206.83 | 210.58 | 179673 | 179172.93 | 305.25 | 179546 | 179203.97 | 195.43 | 179578 | 179247.17 | 253.69 |
| | | 2op | 179761 | 179529.87 | 94.49 | 179734 | 179451.53 | 155.34 | 179850 | 179361.37 | 277.39 | 179740 | 179411.93 | 215.19 |
| | 50 | rnd | 179534 | 179247.43 | 200.23 | 179608 | 179257.57 | 196.76 | 179620 | 179098.3 | 278.33 | 179442 | 179112.97 | 268.23 |
| | | 2op | 179716 | 179498.7 | 113.35 | 179774 | 179463.37 | 213.86 | 179660 | 179351.37 | 249.5 | 179699 | 179326.43 | 220.56 |
| 51 | 20 | rnd | 179531 | 179165.3 | 204 | 179622 | 179195.37 | 286.94 | 179707 | 179237.73 | 243.79 | 179693 | 179108.63 | 348.24 |
| | | 2op | 179621 | 179513.27 | 25.36 | 179714 | 179551.93 | 71.32 | 179835 | 179521.23 | 169.82 | 179777 | 179307.3 | 280.89 |
| | 50 | rnd | 179594 | 179330.17 | 162.71 | 179677 | 179203.83 | 319.81 | 179757 | 179209.77 | 236.5 | 179587 | 179118.7 | 300.38 |
| | | 2op | 179595 | 179506.87 | 33.39 | 179915 | 179507.43 | 167.47 | 179778 | 179395.9 | 288.7 | 179710 | 179425.87 | 225.88 |

Table A.561: *acin*7: basicRRGA+IM: 5000 – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179783 | 179305.67 | 354.73 | 179636 | 179250.03 | 317.15 | 179612 | 179216.73 | 319.29 | 179616 | 179355.17 | 176.48 |
| | | 2op | 179558 | 179508.8 | 14.81 | 179655 | 179518.1 | 34.64 | 179558 | 179514.13 | 20.97 | 179558 | 179515.3 | 22.75 |
| | 50 | rnd | 179605 | 179273 | 220.07 | 179623 | 179367.07 | 171.87 | 179604 | 179269.93 | 195.58 | 179648 | 179250.1 | 239.54 |
| | | 2op | 179558 | 179506.93 | 14.23 | 179558 | 179511.07 | 18.92 | 179649 | 179514.73 | 32.13 | 179558 | 179507 | 19.31 |
| 51 | 20 | rnd | 179646 | 179322.53 | 226.18 | 179596 | 179304.33 | 182.73 | 179785 | 179301.77 | 322 | 179601 | 179245.27 | 250.55 |
| | | 2op | 179524 | 179503.77 | 3.83 | 179556 | 179508.4 | 16.19 | 179655 | 179518.97 | 39.51 | 179693 | 179521.33 | 46.35 |
| | 50 | rnd | 179677 | 179322.13 | 247.78 | 179601 | 179311.5 | 221.22 | 179695 | 179224.87 | 317.95 | 179657 | 179229.1 | 240.82 |
| | | 2op | 179655 | 179508.13 | 27.74 | 179655 | 179514.27 | 30.54 | 179558 | 179514.4 | 21.55 | 179888 | 179541.43 | 79.22 |

Table A.562: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179624 | 179345.8 | 212.03 | 179635 | 179270.13 | 244.88 | 179656 | 179339.2 | 176.81 | 179601 | 179271.63 | 218.4 |
| | | 2op | 179558 | 179509.2 | 16.98 | 179558 | 179503.77 | 11.56 | 179697 | 179513.33 | 36.87 | 179649 | 179516.5 | 31.08 |
| | 50 | rnd | 179651 | 179298.77 | 216.38 | 179643 | 179279.37 | 230.33 | 179694 | 179256.4 | 212.93 | 179592 | 179296.5 | 240.38 |
| | | 2op | 179558 | 179504.63 | 10.19 | 179697 | 179516.13 | 37.47 | 179558 | 179510.77 | 16.1 | 179820 | 179519.17 | 62 |
| 51 | 20 | rnd | 179646 | 179336.43 | 211.2 | 179789 | 179346.37 | 323.22 | 179641 | 179249.13 | 249 | 179643 | 179299.17 | 322.66 |
| | | 2op | 179558 | 179505.27 | 10.79 | 179558 | 179509.5 | 15.57 | 179697 | 179519.77 | 45.4 | 179655 | 179536.23 | 57.95 |
| | 50 | rnd | 179570 | 179302.13 | 158.75 | 179688 | 179273.4 | 246.19 | 179598 | 179235.83 | 266.51 | 179592 | 179293.9 | 284.11 |
| | | 2op | 179558 | 179509.37 | 17.49 | 179558 | 179503.97 | 11.5 | 179625 | 179507.33 | 24.93 | 179524 | 179502.73 | 10.38 |

Table A.563: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342722 | 342174.63 | 483.24 | 342820 | 342225.7 | 408.4 | 342826 | 342193.7 | 495.69 | 342776 | 342065.77 | 577.58 |
| | | 2op | 342806 | 342405.93 | 294.81 | 342936 | 342374.87 | 441.83 | 342764 | 342263.83 | 419.81 | 342896 | 341905.9 | 629.3 |
| | 50 | rnd | 342774 | 342232.47 | 474.25 | 342764 | 342233.8 | 414.5 | 342906 | 342158.47 | 671.15 | 342714 | 342008.53 | 479.35 |
| | | 2op | 342807 | 342419.3 | 293.44 | 342776 | 342397.77 | 328.46 | 342848 | 342287.47 | 544.68 | 342895 | 342319.7 | 463.1 |
| 51 | 20 | rnd | 342644 | 342090.2 | 446.57 | 342895 | 342357.9 | 343.47 | 342820 | 342288.63 | 395.33 | 342859 | 342100.87 | 818.21 |
| | | 2op | 342747 | 342478.1 | 169.41 | 342860 | 342465.53 | 273.81 | 342799 | 342288.27 | 436.11 | 342903 | 342298.03 | 431.86 |
| | 50 | rnd | 342687 | 342203.87 | 442.27 | 342779 | 342196.57 | 378.4 | 342747 | 342368.93 | 185.44 | 342680 | 342049.5 | 676.43 |
| | | 2op | 342813 | 342522.9 | 179.03 | 342834 | 342450.17 | 294.21 | 342757 | 342308.27 | 346.59 | 342882 | 342329.8 | 528.59 |

Table A.564: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342834 | 342318.13 | 406.57 | 342742 | 342184.97 | 519.94 | 342712 | 342115.53 | 563.18 | 342807 | 342241.43 | 408.91 |
| | | 2op | 342772 | 342272.43 | 382.9 | 342805 | 342185.63 | 421.76 | 342949 | 342211.63 | 566.24 | 342835 | 342072.13 | 684.42 |
| | 50 | rnd | 342857 | 342099.67 | 548.95 | 342790 | 342225.7 | 420.93 | 342753 | 342030.8 | 636.92 | 342921 | 342146.37 | 597.52 |
| | | 2op | 342856 | 342457.87 | 296.45 | 342782 | 342279.8 | 432.32 | 342765 | 342153.1 | 729.92 | 342903 | 342101.17 | 711.63 |
| 51 | 20 | rnd | 342700 | 342251.77 | 270.28 | 342665 | 342307.03 | 332.3 | 342895 | 342249.97 | 449.85 | 342742 | 342097.17 | 501.29 |
| | | 2op | 342752 | 342443.17 | 225.81 | 342766 | 342474.73 | 189.66 | 342847 | 342433.87 | 401.74 | 342854 | 342240.6 | 528.84 |
| | 50 | rnd | 342769 | 342253.77 | 341.28 | 342850 | 342336.23 | 365.39 | 342655 | 342233.47 | 443.02 | 342617 | 341988.37 | 575.09 |
| | | 2op | 342710 | 342447.47 | 157.73 | 342851 | 342344.9 | 258.35 | 342877 | 342407.33 | 409.14 | 342819 | 342312.97 | 525.27 |

Table A.565: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342728 | 342304.17 | 297.25 | 342846 | 342286.73 | 258.76 | 342777 | 342343.97 | 294.03 | 342888 | 342359.43 | 325.37 |
| | | 2op | 342846 | 342564.13 | 146.91 | 342900 | 342466.9 | 202.65 | 342939 | 342423.7 | 346.25 | 342865 | 342271.6 | 558.15 |
| | 50 | rnd | 342653 | 342140.93 | 393.36 | 342669 | 342291.67 | 345.19 | 342762 | 342308.27 | 293.15 | 342751 | 342468.4 | 171.77 |
| | | 2op | 342670 | 342475.4 | 128.64 | 342965 | 342486.07 | 210.92 | 342840 | 342362.57 | 307.3 | 342744 | 342348.33 | 348.45 |
| 51 | 20 | rnd | 342763 | 342118.1 | 393.07 | 342825 | 342292.43 | 326.5 | 342893 | 342288.17 | 347.19 | 342926 | 342301.07 | 354.83 |
| | | 2op | 342742 | 342533.33 | 92.65 | 342746 | 342561.33 | 85.39 | 342750 | 342548.03 | 101.24 | 342839 | 342452.03 | 259.96 |
| | 50 | rnd | 342691 | 342218.3 | 401.42 | 342711 | 342299.2 | 333.78 | 342839 | 342265.73 | 323.65 | 342784 | 342242.2 | 373.98 |
| | | 2op | 342689 | 342536.17 | 90.28 | 342826 | 342537.47 | 123.98 | 342874 | 342509.63 | 134.83 | 342807 | 342498.57 | 232.56 |

Table A.566: *acin*9: basicRRGA+IM: 500 – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342704 | 342212.17 | 362.14 | 342789 | 342351.73 | 317.71 | 342812 | 342346 | 242.79 | 342636 | 342104.23 | 421.93 |
| | | 2op | 342865 | 342535.23 | 155.06 | 342887 | 342441.3 | 238.23 | 342872 | 342297.97 | 493.07 | 342799 | 342244.47 | 479.4 |
| | 50 | rnd | 342672 | 342182.47 | 433.65 | 342712 | 342259.37 | 403.43 | 342735 | 342095.03 | 677.6 | 342754 | 342121.57 | 512.81 |
| | | 2op | 342718 | 342487.77 | 138.03 | 342890 | 342402.1 | 322.63 | 342814 | 342426.97 | 309.51 | 342846 | 342182.27 | 743.77 |
| 51 | 20 | rnd | 342784 | 342391 | 238.23 | 342777 | 342347.13 | 259.57 | 342841 | 342393.73 | 273.25 | 343040 | 342286.17 | 402.71 |
| | | 2op | 342704 | 342496.73 | 75.47 | 342800 | 342539.9 | 110.83 | 342843 | 342436.7 | 270.55 | 342761 | 342455.8 | 234.9 |
| | 50 | rnd | 342786 | 342318.73 | 343.3 | 342708 | 342191.6 | 374.54 | 342776 | 342261.33 | 493.78 | 342738 | 342093.2 | 500.89 |
| | | 2op | 342643 | 342505.67 | 74.24 | 342893 | 342524.83 | 187.53 | 342800 | 342464.83 | 276.3 | 342750 | 342198.63 | 531.5 |

Table A.567: *acin*9: basicRRGA+IM: 5000 – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342646 | 342305.77 | 161.35 | 342701 | 342313.2 | 214.27 | 342690 | 342395.2 | 182.35 | 342995 | 342341.43 | 400.67 |
| | | 2op | 342571 | 342414.6 | 42.09 | 342682 | 342466.83 | 82.57 | 342682 | 342494.2 | 79.18 | 342741 | 342522.73 | 86.66 |
| | 50 | rnd | 342739 | 342338.73 | 199.11 | 342694 | 342320.6 | 217.33 | 342702 | 342276.47 | 235.71 | 342818 | 342348.73 | 266.85 |
| | | 2op | 342610 | 342418.53 | 59.76 | 342698 | 342466.03 | 81.76 | 342820 | 342513.83 | 110.84 | 342682 | 342498.33 | 77.59 |
| 51 | 20 | rnd | 342672 | 342355.47 | 192.22 | 342702 | 342308.27 | 319.25 | 342595 | 342228.8 | 265.46 | 342621 | 342203.67 | 356.51 |
| | | 2op | 342591 | 342427.37 | 63.05 | 342700 | 342485.77 | 99 | 342682 | 342499.3 | 82.65 | 342835 | 342506.17 | 101.49 |
| | 50 | rnd | 342563 | 342218.53 | 246.54 | 342697 | 342246.77 | 294.62 | 342756 | 342254.83 | 366.37 | 342685 | 342269.63 | 354.61 |
| | | 2op | 342610 | 342413.77 | 49.47 | 342675 | 342465.23 | 82.62 | 342682 | 342491.23 | 99.36 | 342749 | 342548.17 | 100.95 |

Table A.568: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342684 | 342345.67 | 158.42 | 342667 | 342249.47 | 217.07 | 342682 | 342244.8 | 359.22 | 342777 | 342362.13 | 209.85 |
| | | 2op | 342610 | 342428.47 | 61.64 | 342591 | 342449.7 | 69.24 | 342811 | 342479.6 | 96.14 | 342698 | 342531.07 | 78.16 |
| | 50 | rnd | 342792 | 342321.13 | 269.12 | 342835 | 342264.2 | 300.96 | 342771 | 342289.43 | 224.02 | 342625 | 342281.87 | 286.55 |
| | | 2op | 342571 | 342406.7 | 32.75 | 342660 | 342457.03 | 74.99 | 342682 | 342513.63 | 90.41 | 342680 | 342526.9 | 90.16 |
| 51 | 20 | rnd | 342733 | 342391.07 | 202.97 | 342729 | 342335.7 | 185.73 | 342762 | 342273.57 | 235.39 | 342816 | 342350 | 231.78 |
| | | 2op | 342610 | 342436.53 | 71.02 | 342748 | 342471.2 | 84.85 | 342661 | 342495.8 | 98.86 | 342838 | 342516.13 | 107.12 |
| | 50 | rnd | 342692 | 342295.67 | 209.91 | 342713 | 342347.47 | 211.33 | 342631 | 342330.6 | 213.23 | 342719 | 342351.9 | 192.1 |
| | | 2op | 342643 | 342418.27 | 57.31 | 342683 | 342465.77 | 91.17 | 342670 | 342482.2 | 85 | 342860 | 342516.87 | 107.39 |

Table A.569: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226299 | 224797.23 | 844.55 | 226495 | 224979.17 | 922.52 | 226427 | 224807.93 | 872.02 | 226444 | 225156.6 | 760.61 |
| | | 2op | 226652 | 225310.23 | 731.18 | 226637 | 225855.93 | 493.47 | 226778 | 225680.27 | 591.81 | 227038 | 225900 | 540.09 |
| | 50 | rnd | 227151 | 225118.57 | 995.74 | 226393 | 224949.8 | 826.83 | 226240 | 224873.7 | 898.85 | 226676 | 224965.57 | 946.71 |
| | | 2op | 226377 | 225507.57 | 465.08 | 226983 | 225744.87 | 688.74 | 226849 | 225880.33 | 731.06 | 226809 | 225742.9 | 817.48 |
| 51 | 20 | rnd | 226560 | 224854.83 | 1001.34 | 226451 | 224853.3 | 1035.26 | 226414 | 224631.97 | 900.9 | 226681 | 224712.83 | 1017.86 |
| | | 2op | 226507 | 225252.2 | 461.26 | 226545 | 225737.57 | 443.41 | 226708 | 225895 | 504.41 | 226774 | 225878.57 | 512.04 |
| | 50 | rnd | 226482 | 224721.1 | 887 | 226326 | 224835.1 | 829.44 | 226022 | 224817.1 | 825.3 | 226738 | 225074.73 | 901.47 |
| | | 2op | 226342 | 225268.8 | 420.04 | 226362 | 225561.1 | 402.2 | 227007 | 225741.87 | 531.16 | 226815 | 225856.93 | 695.18 |

Table A.570: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226253 | 225131.47 | 883.02 | 227090 | 224734.73 | 1057.4 | 226424 | 224746.23 | 1038.53 | 226242 | 224862.67 | 872.49 |
| | | 2op | 226597 | 225450.77 | 663.16 | 226783 | 225291.1 | 934.5 | 226884 | 226011.7 | 494.77 | 226884 | 225715.17 | 648.62 |
| | 50 | rnd | 226428 | 225140 | 760.4 | 226373 | 225020.67 | 755.45 | 226459 | 224690.7 | 957.82 | 226486 | 225045.63 | 891.92 |
| | | 2op | 226202 | 225356.8 | 460.96 | 226734 | 225569.63 | 916.9 | 227026 | 225850.3 | 751.8 | 226693 | 225718.13 | 629.92 |
| 51 | 20 | rnd | 226318 | 224963.77 | 933.5 | 226525 | 224919.1 | 708.1 | 226481 | 224665.57 | 1044.63 | 226555 | 224804.5 | 848.45 |
| | | 2op | 226276 | 225255.97 | 551.64 | 226699 | 225547.3 | 464.4 | 226844 | 225785.93 | 606.56 | 226990 | 225869.63 | 675.9 |
| | 50 | rnd | 226111 | 224883 | 842.76 | 226277 | 225297.47 | 745.36 | 226502 | 224988.9 | 900.56 | 226865 | 224731.27 | 1085.16 |
| | | 2op | 226045 | 225197.03 | 433.1 | 226493 | 225692.47 | 450.17 | 226740 | 225866.27 | 550.3 | 226778 | 225838.8 | 537.09 |

Table A.571: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226244 | 224665.33 | 1040.11 | 226094 | 225127 | 757.17 | 226422 | 225090.17 | 902.89 | 226547 | 225099.33 | 844.39 |
| | | 2op | 226031 | 225175.87 | 319.64 | 226670 | 225567.23 | 514.12 | 226845 | 225743.9 | 526.56 | 226716 | 225912.37 | 381.75 |
| | 50 | rnd | 226458 | 225083.47 | 740.06 | 226305 | 224950.03 | 818.21 | 226790 | 224802.37 | 1242.35 | 226590 | 224868.8 | 852.33 |
| | | 2op | 226240 | 225231.63 | 432.71 | 226684 | 225564.73 | 496.23 | 226672 | 225802.33 | 459.93 | 226922 | 226076.13 | 448.22 |
| 51 | 20 | rnd | 226358 | 224752.53 | 1058.72 | 226922 | 224810.23 | 1099.47 | 226464 | 225111.1 | 839.92 | 226200 | 224829.37 | 1000.59 |
| | | 2op | 225359 | 224966.4 | 184.47 | 225969 | 225332.03 | 386.26 | 226040 | 225692.43 | 370.22 | 226238 | 225960 | 134.85 |
| | 50 | rnd | 227099 | 224893.6 | 890.41 | 226313 | 224567.87 | 993.6 | 226661 | 224838.43 | 950 | 226579 | 225049.43 | 1191.78 |
| | | 2op | 225969 | 225056.27 | 292.54 | 226040 | 225464.63 | 426.45 | 226345 | 225901.1 | 271.77 | 226536 | 226019.87 | 117.55 |

Table A.572: *bx*842596_4: basicRRGA+IM: 500 – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226020 | 224870.9 | 713.02 | 226016 | 224889.93 | 839.77 | 226335 | 224773.73 | 813.12 | 227171 | 225101.33 | 912.98 |
| | | 2op | 226316 | 225304.83 | 423.96 | 226367 | 225592.27 | 406.82 | 226782 | 225935.57 | 472.55 | 227066 | 226056.63 | 473.23 |
| | 50 | rnd | 226720 | 225187.43 | 889.17 | 226530 | 224814.9 | 884.78 | 226445 | 225040.97 | 1017.55 | 226943 | 224847.63 | 840.2 |
| | | 2op | 225991 | 225292.73 | 363.82 | 226676 | 225704.17 | 407.6 | 227121 | 225978.67 | 436.22 | 227042 | 226009.07 | 476.93 |
| 51 | 20 | rnd | 226368 | 225123.6 | 1027.39 | 226887 | 225077.27 | 853.23 | 226353 | 225077.77 | 803.97 | 226546 | 224850.6 | 804.05 |
| | | 2op | 225969 | 225146.17 | 380.2 | 226005 | 225780.6 | 347.62 | 226609 | 225901.53 | 294.35 | 226720 | 225993.07 | 479.29 |
| | 50 | rnd | 226625 | 224790.67 | 951.48 | 226309 | 224575.17 | 1033.11 | 226136 | 224776.57 | 853.47 | 226134 | 224945.5 | 856.24 |
| | | 2op | 226004 | 225401.4 | 369.43 | 226022 | 225998.73 | 16.24 | 226785 | 226235.93 | 342.55 | 226961 | 225909.9 | 480.62 |

Table A.573: *bx*842596_4: basicRRGA+IM: 5000 – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226464 | 224994.57 | 745.42 | 226639 | 224835.13 | 963.33 | 225877 | 224509.83 | 973.15 | 226265 | 224647.73 | 1039.55 |
| | | 2op | 224897 | 224862.2 | 6.57 | 225301 | 224913.53 | 137.95 | 225658 | 224986.97 | 207.68 | 225991 | 225302.93 | 337.89 |
| | 50 | rnd | 226460 | 224551.93 | 1020.72 | 225600 | 224620.63 | 777.4 | 225984 | 224414.87 | 898.88 | 226357 | 224693.27 | 994.49 |
| | | 2op | 225301 | 224875.67 | 80.33 | 225301 | 224961.33 | 184.96 | 225742 | 225025.37 | 254.55 | 225976 | 225310.7 | 386.69 |
| 51 | 20 | rnd | 226253 | 224759.1 | 958.41 | 226189 | 224794.37 | 818.05 | 226171 | 224832.77 | 1054.23 | 226011 | 224596.8 | 886.24 |
| | | 2op | 225301 | 224890.33 | 111.64 | 226004 | 225016.93 | 271.02 | 225998 | 225004.8 | 265.24 | 226040 | 225343.93 | 381.05 |
| | 50 | rnd | 226244 | 224762.6 | 941.94 | 226237 | 224607.93 | 943.4 | 226302 | 224756.83 | 904.42 | 226516 | 224599.93 | 1148.48 |
| | | 2op | 225301 | 224888 | 102.43 | 225514 | 224974.8 | 205.72 | 225946 | 225117.27 | 294.57 | 226004 | 225262.97 | 352.73 |

Table A.574: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226523 | 224842.33 | 942.7 | 226428 | 224700.1 | 929.92 | 226313 | 224903.8 | 997.73 | 226075 | 224908.17 | 785.22 |
| | | 2op | 225301 | 224875.87 | 80.3 | 225326 | 224959.43 | 185.01 | 225630 | 225021.87 | 235.35 | 226004 | 225200.37 | 393.53 |
| | 50 | rnd | 227068 | 224832.97 | 795.43 | 226425 | 224722.4 | 848.48 | 226172 | 224805.63 | 947.37 | 226363 | 224560 | 1011.54 |
| | | 2op | 224867 | 224861.2 | 1.1 | 225511 | 224966.33 | 196 | 225341 | 224977.87 | 173.04 | 225969 | 225234 | 341.44 |
| 51 | 20 | rnd | 226090 | 224817 | 810.54 | 225875 | 224676 | 814.34 | 226283 | 224565.73 | 1106.47 | 226665 | 224667.1 | 1204.5 |
| | | 2op | 225359 | 224904.8 | 133.47 | 225998 | 224990.27 | 264.12 | 225940 | 225134.67 | 293.47 | 226004 | 225410.87 | 370.55 |
| | 50 | rnd | 225942 | 224515.47 | 867.61 | 226530 | 224693.17 | 830.28 | 226176 | 224881.03 | 753.63 | 226031 | 224776.07 | 718.16 |
| | | 2op | 224861 | 224860.8 | 1.1 | 225652 | 225030.9 | 258.88 | 225652 | 225025.87 | 237.55 | 226004 | 225256.63 | 350.29 |

Table A.575: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440023 | 438003.77 | 1120.78 | 440967 | 437981.7 | 1594.97 | 440033 | 437784.03 | 1111.18 | 441307 | 438593.8 | 1285.51 |
| | | 2op | 438131 | 437647.43 | 258.36 | 439490 | 438195.1 | 493.08 | 439994 | 438460.17 | 658.28 | 440131 | 438941.1 | 736.31 |
| | 50 | rnd | 439969 | 437880.2 | 1246.81 | 441457 | 438294.83 | 1491.92 | 441036 | 437949.67 | 1472.85 | 440190 | 437739 | 1169.54 |
| | | 2op | 437969 | 437599.13 | 245.02 | 439520 | 438089.83 | 550.45 | 439604 | 438475.87 | 559.11 | 439981 | 438700.83 | 563.75 |
| 51 | 20 | rnd | 441164 | 438009.43 | 1585.11 | 440631 | 437785.9 | 1314.63 | 440542 | 437932.27 | 1125.77 | 439760 | 437867.2 | 1419.78 |
| | | 2op | 437925 | 437516.9 | 154.13 | 439430 | 438004.53 | 400.46 | 439733 | 438227.27 | 579.66 | 439270 | 438222.53 | 409.13 |
| | 50 | rnd | 441893 | 438084.6 | 1347.49 | 440214 | 438006.27 | 1631.42 | 440506 | 438101.57 | 1228.2 | 441312 | 438120.8 | 1375.81 |
| | | 2op | 437955 | 437584.73 | 143.57 | 438658 | 437924.8 | 293.77 | 438912 | 438061.2 | 357.87 | 439683 | 438632.57 | 590.77 |

Table A.576: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440558 | 438187 | 1579.08 | 440628 | 437867.07 | 1240.08 | 440594 | 437995.9 | 1293.41 | 440248 | 437998.63 | 1326.1 |
| | | 2op | 438113 | 437659 | 233.16 | 439504 | 438262.73 | 568.8 | 439488 | 438380.37 | 516.91 | 440117 | 438697.57 | 719.35 |
| | 50 | rnd | 440309 | 438006.37 | 1508.91 | 440202 | 437896.43 | 1335.84 | 440048 | 437651.67 | 1679.27 | 441867 | 437941.53 | 1484.43 |
| | | 2op | 438652 | 437705.43 | 363.7 | 439310 | 438013.03 | 407.56 | 440104 | 438547.07 | 597 | 439767 | 438420.5 | 646.46 |
| 51 | 20 | rnd | 439969 | 437842.3 | 1516.53 | 440242 | 437992.57 | 1704.14 | 440491 | 438014.4 | 1377.43 | 439965 | 437355.73 | 1565.51 |
| | | 2op | 438498 | 437593.67 | 246.65 | 438536 | 437869.23 | 335.62 | 440121 | 438360.67 | 630.29 | 439628 | 438390.57 | 529.87 |
| | 50 | rnd | 440191 | 437812.4 | 1182.59 | 441619 | 438202.83 | 1996.08 | 440938 | 437623.87 | 1675.67 | 440086 | 438065.03 | 1255.42 |
| | | 2op | 437988 | 437572.17 | 164.3 | 438816 | 438022.57 | 368.64 | 438875 | 438210.2 | 403.91 | 439575 | 438470.2 | 568.18 |

Table A.577: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441710 | 438013.17 | 1409.2 | 440091 | 438154.37 | 1010.64 | 439986 | 437645.17 | 1491.63 | 440741 | 438027.67 | 1483.75 |
| | | 2op | 437786 | 437520.47 | 102.88 | 437922 | 437706.87 | 121.62 | 438185 | 437763.63 | 218.69 | 440062 | 438196.83 | 529.44 |
| | 50 | rnd | 441895 | 438050.73 | 1701.22 | 440193 | 438259.5 | 1040.47 | 440434 | 438159.93 | 1392.4 | 440427 | 438118.4 | 1413.77 |
| | | 2op | 437877 | 437495.9 | 125.03 | 438347 | 437804.1 | 208.81 | 438646 | 437885.8 | 321.98 | 439687 | 438228.27 | 590.01 |
| 51 | 20 | rnd | 439889 | 437699.93 | 1416.24 | 440521 | 438380.97 | 1221.9 | 440522 | 438311.1 | 1161.32 | 441816 | 438078.8 | 1621.61 |
| | | 2op | 437713 | 437484.57 | 104.66 | 437816 | 437624.57 | 102.56 | 437852 | 437697.4 | 75.16 | 438091 | 437778.23 | 107 |
| | 50 | rnd | 440724 | 438025.2 | 1717.91 | 441629 | 438027.43 | 1899.97 | 442100 | 438276.1 | 1486.8 | 440708 | 438590.63 | 1610.65 |
| | | 2op | 437757 | 437483.07 | 115.91 | 437834 | 437676.57 | 103.52 | 438318 | 437800 | 143.71 | 438254 | 437820.67 | 184.29 |

Table A.578: *bx*842596_7: basicRRGA+IM: 500 – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440518 | 438237.9 | 1555.79 | 441010 | 438093.6 | 1445.16 | 439667 | 438062.7 | 1052.53 | 440648 | 437602.77 | 1565.82 |
| | | 2op | 437694 | 437532.5 | 101.43 | 438251 | 437671.37 | 235.28 | 438906 | 437869.97 | 367.59 | 439687 | 438273.93 | 596.99 |
| | 50 | rnd | 440886 | 438383.23 | 1224.18 | 440442 | 438127.4 | 1283.52 | 441499 | 437809.2 | 1440.45 | 440735 | 438124.83 | 1173.87 |
| | | 2op | 437918 | 437558.13 | 162.41 | 438641 | 437948 | 243.02 | 438807 | 438049.67 | 325.38 | 440093 | 438558.03 | 573.43 |
| 51 | 20 | rnd | 439900 | 437966.47 | 1217.93 | 440457 | 438017.4 | 1385.06 | 441559 | 438038.43 | 1160.48 | 440849 | 437935.9 | 1404.44 |
| | | 2op | 437846 | 437548.63 | 118.23 | 437816 | 437719.9 | 80.46 | 438790 | 437769.83 | 244.97 | 439469 | 438111.37 | 491.15 |
| | 50 | rnd | 440351 | 437703.63 | 1396.49 | 440559 | 438085.8 | 1478.47 | 440860 | 438231.53 | 1343.48 | 440286 | 437720.87 | 1612.93 |
| | | 2op | 437874 | 437623.63 | 126.77 | 438702 | 437946.33 | 278.09 | 438713 | 438003.9 | 352.6 | 439682 | 438275.7 | 542.49 |

Table A.579: *bx*842596_7: basicRRGA+IM: 5000 – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441686 | 437494.33 | 1731.2 | 439785 | 436974.07 | 1461.95 | 441218 | 437522.33 | 1733.37 | 439118 | 436875.57 | 1145.86 |
| | | 2op | 437597 | 437406.2 | 37.04 | 437625 | 437449.4 | 82.13 | 437655 | 437501.27 | 87.27 | 437800 | 437594.53 | 99.7 |
| | 50 | rnd | 440571 | 437587.43 | 1556.73 | 440287 | 437711.73 | 1594.45 | 439368 | 437053.03 | 1670.26 | 440146 | 437157.37 | 1626.69 |
| | | 2op | 437578 | 437416.47 | 54.32 | 437578 | 437407.2 | 35.31 | 437655 | 437479.53 | 89.94 | 437857 | 437596.2 | 103.47 |
| 51 | 20 | rnd | 440496 | 437135.93 | 1731.61 | 440320 | 437373.43 | 1558.86 | 439644 | 436821.17 | 1276.56 | 440858 | 437350.67 | 1473.43 |
| | | 2op | 437600 | 437408.9 | 39.12 | 437702 | 437458.87 | 90.29 | 437704 | 437540.8 | 93.98 | 437949 | 437672.43 | 96.99 |
| | 50 | rnd | 439084 | 437141.63 | 1293.09 | 439445 | 437298.7 | 1377.19 | 439070 | 437333 | 1218.75 | 439446 | 436894.87 | 1546.75 |
| | | 2op | 437476 | 437402.8 | 16.57 | 437578 | 437428.13 | 53.25 | 437691 | 437496.2 | 98.24 | 437757 | 437621.37 | 96.26 |

Table A.580: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440319 | 437301.53 | 1329.88 | 440097 | 437321 | 1368.05 | 439995 | 437661.3 | 1555.36 | 439635 | 436937.07 | 1732.31 |
| | | 2op | 437609 | 437416.7 | 57.32 | 437625 | 437476.33 | 86.71 | 437667 | 437495.2 | 103.81 | 437893 | 437579.23 | 105.89 |
| | 50 | rnd | 439977 | 437562.13 | 1352.1 | 439797 | 437325.93 | 1974.14 | 439689 | 437348.9 | 1444.76 | 439823 | 436852.27 | 1701.15 |
| | | 2op | 437398 | 437398 | 0 | 437578 | 437432.83 | 62 | 437633 | 437462.7 | 80.71 | 437757 | 437597.93 | 85.5 |
| 51 | 20 | rnd | 439363 | 437162.57 | 1419.09 | 440532 | 437395.13 | 1317.38 | 439833 | 437563.3 | 1286.39 | 440048 | 437460.53 | 1457.87 |
| | | 2op | 437573 | 437413.1 | 37.38 | 437650 | 437479.93 | 93.2 | 437702 | 437493.67 | 79.03 | 437956 | 437635.57 | 112.63 |
| | 50 | rnd | 440757 | 437610.33 | 1421.07 | 439733 | 437393.63 | 1503.32 | 439554 | 436892.43 | 1556.52 | 439491 | 437212.43 | 1294.19 |
| | | 2op | 437573 | 437405.17 | 32.53 | 437625 | 437448.73 | 81.69 | 437655 | 437532.73 | 81.16 | 438004 | 437612.7 | 129.75 |

Table A.581: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115476 | 114848.77 | 473.47 | 115520 | 114787.3 | 411.92 | 116048 | 114915.63 | 607.85 | 115847 | 114779.9 | 490.4 |
| | | 2op | 115856 | 115339.17 | 233.17 | 115993 | 115448.47 | 262.05 | 116037 | 115437.6 | 255.04 | 116198 | 115489.17 | 302.87 |
| | 50 | rnd | 115595 | 114644.13 | 531.2 | 115829 | 114841.9 | 548.12 | 115773 | 114741.53 | 590.74 | 115741 | 114919.03 | 543.1 |
| | | 2op | 115814 | 115281.6 | 177.93 | 116182 | 115408.03 | 320.1 | 115837 | 115347.73 | 214.06 | 116076 | 115480.1 | 255.74 |
| 51 | 20 | rnd | 115865 | 114922.27 | 620.52 | 115703 | 114827.43 | 600.92 | 115915 | 114863.5 | 531.22 | 115718 | 114831.5 | 461.82 |
| | | 2op | 116001 | 115356.73 | 224.08 | 115672 | 115308.8 | 148.01 | 115835 | 115356.17 | 215.73 | 115874 | 115413.53 | 187.26 |
| | 50 | rnd | 115457 | 114680.83 | 474.39 | 115852 | 114840.17 | 628.7 | 115742 | 114771.37 | 552 | 115991 | 114714.33 | 564.63 |
| | | 2op | 115638 | 115314.23 | 169.21 | 116079 | 115413.9 | 247.04 | 116051 | 115473.37 | 278.6 | 116036 | 115443.63 | 279.55 |

Table A.582: *j*02459_7: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115458 | 114591.87 | 554.29 | 115871 | 114695.77 | 491.01 | 115919 | 114903.67 | 540.74 | 116104 | 114787.17 | 605.97 |
| | | 2op | 115999 | 115378.1 | 246.18 | 116110 | 115466.37 | 274.18 | 116056 | 115339.8 | 261.3 | 116037 | 115579.87 | 282.81 |
| | 50 | rnd | 115895 | 114798.37 | 493.23 | 115882 | 114902.63 | 578.3 | 115808 | 114945.37 | 506.68 | 116101 | 114811.57 | 637.89 |
| | | 2op | 115745 | 115288.8 | 206.45 | 116004 | 115376.63 | 247.91 | 116081 | 115514.9 | 295.45 | 116087 | 115449.4 | 344.4 |
| 51 | 20 | rnd | 115866 | 114839.37 | 549.46 | 115689 | 114816.43 | 531.73 | 115563 | 114722.27 | 424.97 | 115707 | 114643.83 | 546.51 |
| | | 2op | 115668 | 115251.9 | 206.33 | 116028 | 115365.03 | 279.74 | 115889 | 115382.37 | 182 | 115679 | 115399.4 | 139.62 |
| | 50 | rnd | 115748 | 114779.77 | 516.06 | 115654 | 114723.83 | 471.48 | 115784 | 114681.03 | 613.06 | 115856 | 114726.9 | 599.13 |
| | | 2op | 115717 | 115204.03 | 160.82 | 116095 | 115387.77 | 221.5 | 115983 | 115393.4 | 233.69 | 115921 | 115422.57 | 234.12 |

Table A.583: *j*02459_7: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115506 | 114757.2 | 519.4 | 115902 | 114818.83 | 572.51 | 115883 | 114830.37 | 512.53 | 116016 | 114861.53 | 507.59 |
| | | 2op | 115605 | 115303.03 | 188.03 | 115697 | 115323.93 | 183.37 | 115716 | 115321.27 | 184.26 | 115746 | 115383.07 | 170.52 |
| | 50 | rnd | 115853 | 114681.63 | 568.23 | 115749 | 114849.53 | 543.94 | 115980 | 114765.1 | 574.23 | 115782 | 114556.93 | 599.2 |
| | | 2op | 115633 | 115237.33 | 162.63 | 115916 | 115319.83 | 186.05 | 116064 | 115328.4 | 187.52 | 116012 | 115479.43 | 202.2 |
| 51 | 20 | rnd | 115779 | 114813.8 | 526.51 | 115603 | 114758.87 | 587.84 | 115689 | 114767.77 | 526.49 | 116188 | 115045 | 530.95 |
| | | 2op | 115638 | 115281.83 | 178.03 | 115643 | 115328.17 | 167.73 | 115763 | 115367.43 | 161.58 | 115814 | 115407.53 | 181.65 |
| | 50 | rnd | 115844 | 114667.83 | 502.41 | 115918 | 114834.27 | 574.91 | 115937 | 114757.47 | 578.53 | 115958 | 114677.1 | 604.68 |
| | | 2op | 115649 | 115264.37 | 168.49 | 115647 | 115327.53 | 119.5 | 115803 | 115391.37 | 136.14 | 115841 | 115444.53 | 174.6 |

Table A.584: *j*02459_7: basicRRGA+IM: 500 – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 116336 | 114923.13 | 547.13 | 115668 | 114769.43 | 502.07 | 115631 | 114709.23 | 494.45 | 116112 | 114802.77 | 630.55 |
| | | 2op | 115724 | 115323.93 | 188.37 | 115758 | 115369.3 | 167.5 | 116063 | 115436.5 | 234.1 | 116018 | 115486.77 | 244.59 |
| | 50 | rnd | 116023 | 114788.33 | 661.94 | 115509 | 114729.63 | 484.12 | 116025 | 114870.5 | 597.29 | 115828 | 114820.53 | 526.63 |
| | | 2op | 115669 | 115343.9 | 148.11 | 115771 | 115354.7 | 114.94 | 116057 | 115462.17 | 247.33 | 116307 | 115593.43 | 323.91 |
| 51 | 20 | rnd | 115865 | 114714.13 | 582.72 | 116031 | 114889.9 | 416.08 | 115571 | 114709.27 | 562.36 | 115580 | 114725.9 | 585.08 |
| | | 2op | 115649 | 115281.77 | 158.32 | 115804 | 115382.5 | 177.04 | 115633 | 115448.73 | 123.74 | 116203 | 115530.27 | 286.5 |
| | 50 | rnd | 115772 | 114717.57 | 666.37 | 116244 | 114944.07 | 601.74 | 115950 | 114980.83 | 485.54 | 115549 | 114791.8 | 585.64 |
| | | 2op | 115816 | 115374.2 | 168.6 | 115849 | 115427.67 | 136.31 | 116082 | 115510.37 | 227.2 | 115980 | 115544 | 192.54 |

Table A.585: *j*02459_7: basicRRGA+IM: 5000 – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115463 | 114669.77 | 505.84 | 115397 | 114591.5 | 427.19 | 115532 | 114431.13 | 577.38 | 115225 | 114464.47 | 449.59 |
| | | 2op | 115508 | 115139.9 | 167.64 | 115541 | 115157.83 | 180.69 | 115571 | 115250.8 | 217.51 | 115680 | 115315.6 | 216.46 |
| | 50 | rnd | 115371 | 114480.1 | 570.76 | 115353 | 114467.3 | 555.4 | 115687 | 114444.3 | 667 | 116029 | 114531.03 | 729.3 |
| | | 2op | 115508 | 115095.93 | 112.41 | 115538 | 115160.17 | 171.91 | 115560 | 115197.2 | 192.61 | 115666 | 115275.17 | 201.52 |
| 51 | 20 | rnd | 115743 | 114571.73 | 654.15 | 115199 | 114541 | 533.12 | 115612 | 114495.27 | 518.74 | 115719 | 114575.07 | 500.76 |
| | | 2op | 115527 | 115139.53 | 170.47 | 115508 | 115098 | 97.33 | 115571 | 115178.87 | 185.01 | 115680 | 115291.17 | 202.39 |
| | 50 | rnd | 115770 | 114684.87 | 631.46 | 115738 | 114519.37 | 476.17 | 115750 | 114539.03 | 503.3 | 115531 | 114524.17 | 555.81 |
| | | 2op | 115571 | 115099.23 | 121.78 | 115538 | 115160.33 | 175.69 | 115552 | 115208.97 | 212.49 | 115666 | 115275.43 | 216.91 |

Table A.586: *j*02459_7: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115397 | 114412.77 | 532.71 | 115650 | 114397.93 | 588.39 | 115342 | 114613.2 | 607.92 | 115704 | 114588.17 | 608.25 |
| | | 2op | 115508 | 115078.37 | 81.17 | 115541 | 115175.7 | 191.63 | 115541 | 115160.13 | 157.17 | 115680 | 115292.9 | 207.17 |
| | 50 | rnd | 115590 | 114622.27 | 562.69 | 115878 | 114516.27 | 627.52 | 115619 | 114436.77 | 620.24 | 115778 | 114433.27 | 688.58 |
| | | 2op | 115508 | 115081.4 | 81.2 | 115541 | 115173.63 | 195.21 | 115560 | 115248.43 | 210.61 | 115560 | 115221.13 | 170.91 |
| 51 | 20 | rnd | 115522 | 114533.27 | 562.5 | 115347 | 114432.7 | 507.1 | 115943 | 114583.03 | 663.3 | 115757 | 114668.13 | 597.78 |
| | | 2op | 115527 | 115109.03 | 138.69 | 115527 | 115191.73 | 196.85 | 115571 | 115199.5 | 203.97 | 115666 | 115233.07 | 212.65 |
| | 50 | rnd | 115652 | 114341.77 | 588.29 | 115483 | 114729.77 | 540.07 | 115350 | 114354.6 | 634.12 | 115445 | 114584.6 | 579.49 |
| | | 2op | 115519 | 115109.2 | 136.49 | 115587 | 115253.6 | 225.98 | 115571 | 115178.1 | 180.46 | 115680 | 115215.23 | 183 |

Table A.587: *j*02459_7: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38604 | 38239.13 | 233.14 | 38579 | 38250.9 | 179.72 | 38657 | 38182.07 | 251.57 | 38639 | 38253.63 | 203.55 |
| | | 2op | 38442 | 38361.63 | 66.45 | 38552 | 38339.37 | 117.92 | 38553 | 38366.77 | 95.9 | 38504 | 38298.23 | 140.24 |
| | 50 | rnd | 38449 | 38235.9 | 144.81 | 38646 | 38252 | 248.91 | 38483 | 38162.8 | 188.65 | 38660 | 38175.27 | 276.58 |
| | | 2op | 38465 | 38368.47 | 63.41 | 38443 | 38336.27 | 124.99 | 38570 | 38362.77 | 120.87 | 38572 | 38293.97 | 200.99 |
| 51 | 20 | rnd | 38555 | 38258.2 | 226 | 38642 | 38301.7 | 187.14 | 38474 | 38221.2 | 185.42 | 38558 | 38289.57 | 156.26 |
| | | 2op | 38418 | 38390 | 24.51 | 38437 | 38380.2 | 44.13 | 38451 | 38372.7 | 61.19 | 38565 | 38369.83 | 81.44 |
| | 50 | rnd | 38490 | 38230.17 | 158.87 | 38548 | 38322.17 | 161.1 | 38675 | 38224.67 | 199.67 | 38649 | 38274.63 | 245.65 |
| | | 2op | 38437 | 38404.17 | 24.72 | 38495 | 38379.73 | 61.96 | 38555 | 38385.1 | 76.5 | 38451 | 38350.23 | 77.96 |

Table A.588: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38578 | 38237.7 | 236.59 | 38520 | 38240 | 182.96 | 38557 | 38282.87 | 213.91 | 38558 | 38237.73 | 216.89 |
| | | 2op | 38456 | 38359.53 | 73.96 | 38580 | 38331.93 | 158.92 | 38561 | 38349.33 | 120.79 | 38523 | 38290.87 | 122.1 |
| | 50 | rnd | 38597 | 38218.1 | 210.07 | 38544 | 38261.53 | 191.55 | 38611 | 38243.8 | 218.92 | 38531 | 38196.27 | 210.16 |
| | | 2op | 38456 | 38371.37 | 86.39 | 38557 | 38379.73 | 75.55 | 38548 | 38331.27 | 131.77 | 38511 | 38266.13 | 132.53 |
| 51 | 20 | rnd | 38574 | 38282.6 | 149.58 | 38556 | 38232.9 | 204.59 | 38522 | 38272.83 | 185.64 | 38609 | 38282.73 | 217.24 |
| | | 2op | 38440 | 38387.43 | 39.86 | 38432 | 38386.77 | 55.8 | 38441 | 38395.3 | 44.47 | 38454 | 38365.23 | 98.95 |
| | 50 | rnd | 38514 | 38240.53 | 223.95 | 38484 | 38271.3 | 151.93 | 38534 | 38273.07 | 163.29 | 38668 | 38273.47 | 191.83 |
| | | 2op | 38482 | 38397.4 | 31.9 | 38502 | 38383.8 | 56.01 | 38543 | 38368.97 | 85.76 | 38438 | 38324.23 | 102.12 |

Table A.589: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38535 | 38139.17 | 205.14 | 38632 | 38310.63 | 176.72 | 38566 | 38305.7 | 231.69 | 38507 | 38266.9 | 158.51 |
| | | 2op | 38441 | 38398 | 15.91 | 38437 | 38399.2 | 30.69 | 38499 | 38401.3 | 33.8 | 38442 | 38409.1 | 25.65 |
| | 50 | rnd | 38573 | 38325.47 | 158.57 | 38599 | 38295.37 | 169.99 | 38644 | 38319.97 | 160.29 | 38644 | 38259.1 | 206.17 |
| | | 2op | 38437 | 38401.83 | 26.29 | 38437 | 38400.53 | 23.59 | 38529 | 38415.2 | 38.87 | 38500 | 38397.2 | 58.95 |
| 51 | 20 | rnd | 38639 | 38273.8 | 200.47 | 38565 | 38299.07 | 178.77 | 38647 | 38298.07 | 183.45 | 38604 | 38315.77 | 144.07 |
| | | 2op | 38437 | 38406.17 | 12.22 | 38437 | 38412.17 | 7.29 | 38442 | 38418.93 | 16.18 | 38442 | 38429.3 | 14.44 |
| | 50 | rnd | 38568 | 38202.97 | 211.43 | 38667 | 38331.47 | 176.26 | 38668 | 38286.43 | 214.37 | 38540 | 38278.87 | 176.98 |
| | | 2op | 38437 | 38413.9 | 11.54 | 38442 | 38432.57 | 14.35 | 38442 | 38437.77 | 8.92 | 38442 | 38434.73 | 10.42 |

Table A.590: $m15421\_5$: basicRRGA+IM: 500 – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38637 | 38192.53 | 231.48 | 38610 | 38212.93 | 227.82 | 38649 | 38330.37 | 165.47 | 38608 | 38309.9 | 115.69 |
| | | 2op | 38437 | 38406.77 | 15.92 | 38442 | 38422.43 | 14.87 | 38442 | 38424.37 | 15.48 | 38442 | 38408.23 | 38.74 |
| | 50 | rnd | 38657 | 38295.1 | 223.68 | 38518 | 38259.17 | 159.74 | 38627 | 38277.1 | 180.79 | 38638 | 38363.5 | 133.45 |
| | | 2op | 38437 | 38416.2 | 14.19 | 38442 | 38430.43 | 11.12 | 38442 | 38422.67 | 14.32 | 38441 | 38400.27 | 36.06 |
| 51 | 20 | rnd | 38570 | 38266.33 | 143.47 | 38618 | 38283.27 | 166.89 | 38616 | 38336.97 | 130.89 | 38519 | 38265.27 | 184.58 |
| | | 2op | 38442 | 38416.43 | 14.95 | 38442 | 38439.47 | 7.13 | 38442 | 38441.17 | 1.9 | 38442 | 38416.57 | 13.78 |
| | 50 | rnd | 38636 | 38269.6 | 189.62 | 38657 | 38346.63 | 129.84 | 38564 | 38265.53 | 205.88 | 38546 | 38299.83 | 159.7 |
| | | 2op | 38442 | 38426.37 | 13.2 | 38442 | 38441.67 | 1.27 | 38442 | 38439.77 | 4.39 | 38456 | 38418.37 | 20.54 |

Table A.591: $m15421\_5$: basicRRGA+IM: 5000 – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38544 | 38022.8 | 265.91 | 38478 | 38123.07 | 224.5 | 38548 | 38120.6 | 224.2 | 38494 | 38112.33 | 256.8 |
| | | 2op | 38409 | 38347.13 | 69.17 | 38409 | 38390.1 | 39.2 | 38414 | 38406.93 | 5.89 | 38509 | 38405.13 | 31.55 |
| | 50 | rnd | 38546 | 38064.13 | 212.94 | 38543 | 38111.33 | 243.97 | 38482 | 38147.1 | 222.65 | 38582 | 38156.93 | 245.01 |
| | | 2op | 38409 | 38323.13 | 79.06 | 38409 | 38394.63 | 29.82 | 38414 | 38406.17 | 6.81 | 38437 | 38410.43 | 5.47 |
| 51 | 20 | rnd | 38407 | 38089.43 | 224.07 | 38567 | 38200.8 | 275.15 | 38558 | 38146.17 | 304.02 | 38652 | 38254.4 | 218.55 |
| | | 2op | 38409 | 38345.1 | 70.83 | 38414 | 38401.57 | 10.16 | 38409 | 38406.83 | 5.68 | 38418 | 38406.33 | 17.47 |
| | 50 | rnd | 38399 | 38073.83 | 219.86 | 38658 | 38146.2 | 282.96 | 38557 | 38178.23 | 237.88 | 38573 | 38203.37 | 205.89 |
| | | 2op | 38404 | 38331.3 | 77.01 | 38409 | 38399.33 | 9.96 | 38414 | 38408.27 | 4.23 | 38414 | 38409.63 | 1.9 |

Table A.592: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38447 | 38041.17 | 232.38 | 38655 | 38118.53 | 248.04 | 38525 | 38088.67 | 222.02 | 38533 | 38178.97 | 235.94 |
| | | 2op | 38404 | 38302 | 79.04 | 38409 | 38392.2 | 28.84 | 38413 | 38406.1 | 6.8 | 38437 | 38407.57 | 21.21 |
| | 50 | rnd | 38416 | 38134.8 | 197.79 | 38543 | 38082.33 | 198.38 | 38443 | 38172.47 | 219.17 | 38569 | 38189.2 | 277.33 |
| | | 2op | 38404 | 38324.17 | 80.26 | 38414 | 38399.2 | 10.6 | 38414 | 38406.97 | 5.79 | 38437 | 38406.93 | 12.47 |
| 51 | 20 | rnd | 38432 | 38035.33 | 183.67 | 38495 | 38203.97 | 210.72 | 38536 | 38170.53 | 212.88 | 38497 | 38171.93 | 203.54 |
| | | 2op | 38404 | 38323.3 | 76.06 | 38414 | 38402.8 | 10.34 | 38409 | 38407.77 | 3.44 | 38437 | 38403.13 | 35.03 |
| | 50 | rnd | 38428 | 38044.73 | 192.52 | 38561 | 38171.4 | 228.03 | 38526 | 38155.97 | 256.86 | 38518 | 38134.17 | 178.54 |
| | | 2op | 38404 | 38338.67 | 73.18 | 38414 | 38396.33 | 11.84 | 38414 | 38408.5 | 2.01 | 38418 | 38410.23 | 2.42 |

Table A.593: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47958 | 47442.1 | 246.54 | 47910 | 47457.73 | 328.28 | 48034 | 47506.57 | 254.23 | 47862 | 47478.5 | 275.42 |
| | | 2op | 47810 | 47510.1 | 227.39 | 47836 | 47591.7 | 156.48 | 47976 | 47571.23 | 216.24 | 47830 | 47590.47 | 190.57 |
| | 50 | rnd | 47919 | 47553.93 | 248.13 | 47907 | 47546.33 | 290.85 | 47847 | 47492.97 | 263.06 | 47860 | 47546.53 | 276.49 |
| | | 2op | 47758 | 47530.4 | 209.07 | 47758 | 47603.07 | 150.08 | 47803 | 47590.6 | 191.13 | 47829 | 47563.17 | 233.13 |
| 51 | 20 | rnd | 47844 | 47511.87 | 235.5 | 47840 | 47462.87 | 312.05 | 48021 | 47559.57 | 289.43 | 47920 | 47602.83 | 249.04 |
| | | 2op | 47691 | 47452.17 | 169.17 | 47760 | 47549.47 | 180.36 | 47814 | 47634.97 | 110.17 | 47874 | 47626.13 | 139.33 |
| | 50 | rnd | 47873 | 47567.67 | 299.28 | 47858 | 47553.93 | 283.84 | 47846 | 47552 | 216.81 | 47978 | 47625.93 | 244.84 |
| | | 2op | 47758 | 47591.83 | 145.5 | 47800 | 47632.57 | 117.34 | 47814 | 47592.87 | 126.07 | 47810 | 47600.83 | 126.17 |

Table A.594: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47872 | 47511.03 | 259.24 | 47855 | 47384.67 | 379.32 | 47923 | 47508.4 | 349.01 | 47980 | 47642.7 | 180.83 |
| | | 2op | 47763 | 47491.33 | 230.3 | 47830 | 47589.53 | 186.6 | 47830 | 47617.13 | 141.89 | 47813 | 47561.47 | 197.34 |
| | 50 | rnd | 47885 | 47558.63 | 191.98 | 47960 | 47535.07 | 263.27 | 47973 | 47487.47 | 364.2 | 48034 | 47412.73 | 263.32 |
| | | 2op | 47758 | 47550.67 | 174.34 | 47830 | 47570 | 181.56 | 47810 | 47593.13 | 145.37 | 47821 | 47541.27 | 251.04 |
| 51 | 20 | rnd | 47881 | 47514.63 | 263.59 | 47879 | 47542.17 | 278.37 | 47950 | 47567.6 | 197.7 | 47850 | 47560.9 | 230.73 |
| | | 2op | 47758 | 47461.5 | 207.32 | 47748 | 47562.77 | 169.23 | 47758 | 47637.9 | 117.01 | 47758 | 47608.83 | 130.76 |
| | 50 | rnd | 47939 | 47492.53 | 281.97 | 48025 | 47560.87 | 277.54 | 48048 | 47516.03 | 332.89 | 47973 | 47423.1 | 347.32 |
| | | 2op | 47758 | 47580.6 | 137.58 | 47746 | 47583.97 | 156.61 | 47805 | 47636 | 106.96 | 47829 | 47592.2 | 116.38 |

Table A.595: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47842 | 47521.57 | 217.73 | 47959 | 47540.63 | 228.46 | 47917 | 47540.8 | 268.46 | 47982 | 47561.83 | 239.88 |
| | | 2op | 47691 | 47403.87 | 179.76 | 47758 | 47597 | 144.47 | 47758 | 47623.23 | 108.22 | 47758 | 47634.97 | 62.98 |
| | 50 | rnd | 47919 | 47559.2 | 291.25 | 48021 | 47590.63 | 229.03 | 47870 | 47532.1 | 215.1 | 47949 | 47467.83 | 287.33 |
| | | 2op | 47733 | 47547.23 | 159.89 | 47758 | 47641.3 | 45.21 | 47758 | 47628.7 | 61.38 | 47821 | 47636.6 | 105.47 |
| 51 | 20 | rnd | 47921 | 47543.03 | 276.09 | 47958 | 47500.57 | 363.48 | 48052 | 47550.93 | 267.71 | 47867 | 47470.3 | 267.93 |
| | | 2op | 47691 | 47447.1 | 177.83 | 47733 | 47596.87 | 101.12 | 47636 | 47629.83 | 7.62 | 47636 | 47634.23 | 4.49 |
| | 50 | rnd | 47942 | 47542.7 | 241.5 | 48049 | 47601.5 | 240.16 | 47907 | 47501.7 | 254.71 | 47864 | 47502.4 | 297.15 |
| | | 2op | 47675 | 47597.27 | 99.95 | 47636 | 47631.97 | 6.73 | 47691 | 47634.57 | 12.46 | 47636 | 47633.53 | 11.92 |

Table A.596: $m15421\_6$: basicRRGA+IM: 500 – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48023 | 47521.63 | 240.03 | 48052 | 47475.37 | 261.98 | 47919 | 47604.2 | 211.64 | 47895 | 47538.77 | 191.2 |
| | | 2op | 47758 | 47513.63 | 175.37 | 47758 | 47626.5 | 34.66 | 47758 | 47641.2 | 52.82 | 47758 | 47685.33 | 107.4 |
| | 50 | rnd | 47949 | 47574.53 | 195.74 | 47937 | 47602.73 | 241.99 | 47977 | 47561.1 | 219.98 | 47964 | 47506.87 | 373.21 |
| | | 2op | 47691 | 47629.07 | 26.22 | 47636 | 47616.67 | 42.52 | 47758 | 47626.9 | 48.55 | 47814 | 47653.17 | 104.12 |
| 51 | 20 | rnd | 47964 | 47568.33 | 277.04 | 47947 | 47575.93 | 231.85 | 48048 | 47596.8 | 235.08 | 47872 | 47522.37 | 269.27 |
| | | 2op | 47636 | 47564.47 | 132.29 | 47636 | 47631.53 | 12.67 | 47636 | 47632.2 | 12.54 | 47758 | 47724.07 | 50.03 |
| | 50 | rnd | 48048 | 47472.07 | 262.04 | 47892 | 47549.87 | 300.91 | 47889 | 47607.37 | 178.32 | 47921 | 47442.03 | 306.39 |
| | | 2op | 47636 | 47620.5 | 60 | 47636 | 47628.93 | 19.86 | 47636 | 47629.5 | 19.83 | 47758 | 47660.53 | 109.66 |

Table A.597: $m15421\_6$: basicRRGA+IM: 5000 – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47848 | 47417.2 | 361.19 | 47817 | 47417.67 | 241.54 | 47819 | 47441.47 | 215.33 | 47912 | 47422.97 | 272.33 |
| | | 2op | 47418 | 47263.27 | 57.03 | 47691 | 47339.7 | 97.19 | 47758 | 47377.47 | 144.31 | 47742 | 47521.87 | 180.81 |
| | 50 | rnd | 47830 | 47436.57 | 238.71 | 47852 | 47472.73 | 246.5 | 47832 | 47456.47 | 254.16 | 47823 | 47467.23 | 253.1 |
| | | 2op | 47635 | 47258.5 | 74.74 | 47675 | 47330 | 82.32 | 47742 | 47407.27 | 144.35 | 47758 | 47511.6 | 168.75 |
| 51 | 20 | rnd | 47801 | 47408.57 | 295.29 | 47773 | 47389.7 | 234.21 | 47916 | 47438.8 | 247.97 | 47805 | 47436.5 | 218.28 |
| | | 2op | 47691 | 47260.37 | 84.52 | 47742 | 47346.97 | 98.97 | 47758 | 47425.07 | 156.53 | 47758 | 47554.33 | 173.94 |
| | 50 | rnd | 47755 | 47472.13 | 217.62 | 47844 | 47516.13 | 210.78 | 47812 | 47372.43 | 258.06 | 47864 | 47371.4 | 272.91 |
| | | 2op | 47416 | 47255.6 | 40.83 | 47691 | 47342.4 | 102.41 | 47675 | 47371.43 | 126.16 | 47758 | 47521.57 | 185.26 |

Table A.598: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47821 | 47522.13 | 186.11 | 47875 | 47493.47 | 237.24 | 47832 | 47460.43 | 256.3 | 47844 | 47414.13 | 256.48 |
| | | 2op | 47418 | 47263.9 | 50.63 | 47691 | 47325.73 | 81.85 | 47758 | 47397.7 | 149.8 | 47758 | 47515.83 | 182.22 |
| | 50 | rnd | 47830 | 47530.6 | 244.29 | 47801 | 47392.8 | 272.85 | 47821 | 47435.83 | 282.15 | 47844 | 47420.73 | 275.25 |
| | | 2op | 47416 | 47246.8 | 36.28 | 47691 | 47358.43 | 103.11 | 47758 | 47437.87 | 180.11 | 47742 | 47524 | 187.52 |
| 51 | 20 | rnd | 47821 | 47508.1 | 235.87 | 47757 | 47444.77 | 240.05 | 47828 | 47396.47 | 294.38 | 47849 | 47479.23 | 286.64 |
| | | 2op | 47303 | 47247.5 | 25.26 | 47635 | 47317.43 | 78 | 47742 | 47392.7 | 124.99 | 47742 | 47439.77 | 160.02 |
| | 50 | rnd | 47832 | 47524.1 | 230.05 | 47839 | 47466.17 | 257.75 | 47832 | 47376.2 | 311.63 | 47848 | 47420.23 | 290.53 |
| | | 2op | 47305 | 47240.53 | 17.25 | 47675 | 47341.33 | 96.54 | 47758 | 47368.5 | 113.65 | 47758 | 47493.83 | 189.17 |

Table A.599: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54883 | 54313.73 | 331.51 | 55094 | 54404.8 | 401.01 | 54980 | 54376.03 | 342.41 | 54953 | 54289.8 | 400.53 |
| | | 2op | 54888 | 54664.97 | 94.31 | 54958 | 54646.53 | 159.36 | 54903 | 54625.07 | 157.14 | 54831 | 54567.17 | 152.46 |
| | 50 | rnd | 54965 | 54320.67 | 331.17 | 54943 | 54371.37 | 369.66 | 54851 | 54310.53 | 314.17 | 54871 | 54234.1 | 332.89 |
| | | 2op | 54744 | 54643.83 | 100.74 | 54818 | 54615.57 | 139.54 | 54894 | 54624.33 | 162.46 | 54920 | 54539.53 | 218.25 |
| 51 | 20 | rnd | 54818 | 54417.57 | 277.86 | 54906 | 54323.47 | 351.23 | 54746 | 54304.93 | 358.39 | 54876 | 54294.2 | 379.34 |
| | | 2op | 54744 | 54692.83 | 41.28 | 54949 | 54647.47 | 110.27 | 54765 | 54684.07 | 50.74 | 54899 | 54672.47 | 111.48 |
| | 50 | rnd | 54703 | 54311.23 | 260.23 | 54870 | 54305.8 | 384.68 | 54994 | 54337.47 | 424.3 | 54866 | 54420.17 | 252.21 |
| | | 2op | 54745 | 54693.57 | 33.6 | 54924 | 54684.17 | 87.18 | 54920 | 54683.33 | 86.11 | 55006 | 54620.63 | 160.1 |

Table A.600: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54877 | 54360.23 | 326.52 | 54892 | 54349.77 | 356.26 | 54898 | 54362.93 | 299.94 | 54924 | 54379.9 | 367.99 |
| | | 2op | 54870 | 54639.2 | 82.47 | 54859 | 54640.8 | 126.98 | 54944 | 54630.03 | 123.01 | 54866 | 54578.47 | 153.08 |
| | 50 | rnd | 54860 | 54360.23 | 337.47 | 54940 | 54432.13 | 310.01 | 54825 | 54415.37 | 258.53 | 54919 | 54357.5 | 326.9 |
| | | 2op | 54899 | 54673.27 | 103.74 | 54900 | 54665.87 | 103.16 | 54931 | 54584.5 | 167.14 | 54900 | 54602.9 | 176.99 |
| 51 | 20 | rnd | 54815 | 54378.6 | 220.87 | 55020 | 54414.4 | 382.47 | 54937 | 54427.13 | 286.69 | 54947 | 54322.53 | 307.59 |
| | | 2op | 54805 | 54692.73 | 36.97 | 54939 | 54681.7 | 75.47 | 54870 | 54670.5 | 62.57 | 54802 | 54606.33 | 132.48 |
| | 50 | rnd | 54908 | 54412.3 | 361.04 | 54959 | 54453.6 | 307.03 | 54915 | 54382.67 | 315 | 54993 | 54483.73 | 312.28 |
| | | 2op | 54745 | 54695.83 | 44.8 | 54959 | 54698.2 | 82.81 | 54861 | 54676.77 | 62.91 | 54809 | 54638.9 | 108.72 |

Table A.601: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54963 | 54444 | 280.54 | 54836 | 54441.07 | 237.96 | 54925 | 54328.7 | 375.04 | 54966 | 54287.13 | 311.46 |
| | | 2op | 54745 | 54710.97 | 24.93 | 54745 | 54715.07 | 25.04 | 54860 | 54700.17 | 54.09 | 54745 | 54690.17 | 42.95 |
| | 50 | rnd | 54908 | 54381.87 | 358.21 | 54798 | 54354.9 | 298.82 | 55123 | 54346.83 | 378.18 | 54901 | 54477.63 | 299.1 |
| | | 2op | 54753 | 54714.43 | 32.75 | 54749 | 54722 | 21.63 | 54745 | 54710.9 | 24.07 | 54948 | 54669.13 | 81.1 |
| 51 | 20 | rnd | 54855 | 54310.53 | 373.12 | 55125 | 54326.57 | 364.83 | 54873 | 54389.63 | 263.4 | 54862 | 54336.43 | 349.01 |
| | | 2op | 54745 | 54734.13 | 17.49 | 54754 | 54745.4 | 2.46 | 54754 | 54742.17 | 13.04 | 54754 | 54734.43 | 18.72 |
| | 50 | rnd | 54923 | 54385.73 | 309.95 | 54876 | 54256.73 | 356.42 | 55165 | 54434.6 | 358.83 | 54911 | 54319.9 | 382.19 |
| | | 2op | 54745 | 54737.47 | 15.5 | 54754 | 54745.7 | 6.97 | 54754 | 54746.57 | 7.42 | 54754 | 54741.5 | 12.26 |

Table A.602: $m15421\_7$: basicRRGA+IM: 500 – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54974 | 54334.6 | 378.2 | 54786 | 54322.63 | 354.29 | 54870 | 54478.83 | 271.36 | 54962 | 54395.47 | 334.87 |
| | | 2op | 54754 | 54725.23 | 20.09 | 54753 | 54724.1 | 23.79 | 54754 | 54717.27 | 36.96 | 54749 | 54694.83 | 47.22 |
| | 50 | rnd | 54908 | 54271.3 | 328.88 | 54872 | 54351.43 | 290.61 | 54832 | 54434.43 | 271.32 | 54947 | 54464.57 | 297.68 |
| | | 2op | 54745 | 54724.07 | 29.18 | 54764 | 54739.97 | 12.36 | 54754 | 54712.83 | 45.7 | 54908 | 54707 | 73.15 |
| 51 | 20 | rnd | 54963 | 54345.3 | 343.89 | 54897 | 54313.43 | 285.3 | 54986 | 54507.53 | 342.01 | 54905 | 54343.57 | 308.98 |
| | | 2op | 54754 | 54744.2 | 6.07 | 54754 | 54748.87 | 4.57 | 54754 | 54749.73 | 4.51 | 54916 | 54717.97 | 60.3 |
| | 50 | rnd | 54836 | 54302.8 | 316.54 | 54846 | 54346.3 | 306.4 | 55093 | 54395 | 440.08 | 54978 | 54422.67 | 359.76 |
| | | 2op | 54754 | 54744.2 | 7.58 | 54754 | 54750.1 | 4.54 | 54764 | 54749.67 | 7.06 | 54927 | 54713 | 68.7 |

Table A.603: $m15421\_7$: basicRRGA+IM: 5000 – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54688 | 54201.37 | 374.89 | 54756 | 54147.5 | 420.96 | 54762 | 54180.17 | 427.76 | 54712 | 54082.07 | 355.92 |
| | | 2op | 54745 | 54711.63 | 14.91 | 54745 | 54723.57 | 19.51 | 54753 | 54741.1 | 12 | 54754 | 54739.57 | 18.25 |
| | 50 | rnd | 54778 | 54267.03 | 331.34 | 54852 | 54237.4 | 284.09 | 54779 | 54297.97 | 296.91 | 54737 | 54235.77 | 249.79 |
| | | 2op | 54744 | 54710.2 | 13.48 | 54747 | 54728.87 | 19.56 | 54745 | 54739.3 | 13.9 | 54754 | 54739.63 | 17.35 |
| 51 | 20 | rnd | 54807 | 54244.47 | 364.03 | 54815 | 54138.37 | 373.15 | 54778 | 54247.63 | 395.17 | 54832 | 54248.47 | 362.42 |
| | | 2op | 54745 | 54716.73 | 18.23 | 54745 | 54725.03 | 19.77 | 54745 | 54736.8 | 16.35 | 54754 | 54743.2 | 10.73 |
| | 50 | rnd | 54683 | 54157.8 | 301.34 | 54794 | 54291.37 | 324.85 | 54897 | 54206.57 | 357.84 | 54850 | 54277.93 | 329.83 |
| | | 2op | 54744 | 54707.67 | 9.88 | 54745 | 54731.23 | 18.59 | 54745 | 54735.03 | 16.73 | 54754 | 54743.37 | 13.71 |

Table A.604: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54888 | 54454.3 | 284.36 | 54840 | 54210.13 | 445.14 | 54790 | 54277.27 | 329.59 | 54682 | 54250.2 | 276.5 |
| | | 2op | 54745 | 54711.7 | 14.88 | 54745 | 54719.37 | 19.76 | 54747 | 54726.17 | 31.09 | 54754 | 54737.37 | 21.77 |
| | 50 | rnd | 54702 | 54143.67 | 336 | 54833 | 54309.5 | 429.02 | 54822 | 54224.3 | 403.63 | 54795 | 54244.73 | 318.86 |
| | | 2op | 54744 | 54707.73 | 9.87 | 54746 | 54726.43 | 19.86 | 54747 | 54735.33 | 17.12 | 54754 | 54737.13 | 20.16 |
| 51 | 20 | rnd | 54826 | 54280.63 | 361.31 | 54857 | 54164.63 | 427.44 | 54702 | 54259.2 | 327.2 | 54763 | 54380.57 | 320.64 |
| | | 2op | 54745 | 54710.43 | 13.5 | 54745 | 54729.2 | 19.21 | 54745 | 54736.83 | 19.66 | 54754 | 54736.53 | 25.96 |
| | 50 | rnd | 54781 | 54354.63 | 214.35 | 54838 | 54274.57 | 296.54 | 54855 | 54303.6 | 379.44 | 54690 | 54132.33 | 353.45 |
| | | 2op | 54745 | 54709.13 | 11.94 | 54745 | 54724.93 | 19.87 | 54746 | 54742.07 | 9.95 | 54754 | 54743.37 | 12.8 |

Table A.605: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11187.17 | 141.72 | 11478 | 11232.47 | 143.99 | 11478 | 11217.9 | 138.19 | 11411 | 11206.43 | 138.12 |
| | | 2op | 11305 | 11139.23 | 107.1 | 11373 | 11184.1 | 123.22 | 11394 | 11193.87 | 125.08 | 11394 | 11183.37 | 127.76 |
| | 50 | rnd | 11478 | 11164.17 | 153.25 | 11478 | 11176.83 | 165.59 | 11478 | 11235.4 | 149.6 | 11478 | 11185.8 | 167.58 |
| | | 2op | 11346 | 11143.77 | 114.36 | 11346 | 11178.37 | 160.89 | 11373 | 11182.83 | 147.44 | 11373 | 11194.43 | 136.17 |
| 51 | 20 | rnd | 11478 | 11186.6 | 153.06 | 11478 | 11180.87 | 148.11 | 11394 | 11184.97 | 159.31 | 11411 | 11222.37 | 125.81 |
| | | 2op | 11285 | 11061.5 | 68.6 | 11346 | 11086.43 | 79.78 | 11348 | 11157.33 | 112.4 | 11338 | 11198.37 | 110.18 |
| | 50 | rnd | 11478 | 11228.03 | 156.51 | 11478 | 11205 | 162.22 | 11478 | 11194.8 | 153.32 | 11478 | 11262.5 | 115.86 |
| | | 2op | 11285 | 11097.33 | 79.07 | 11478 | 11152.93 | 118.56 | 11478 | 11222.6 | 95.61 | 11394 | 11199.27 | 126.66 |

Table A.606: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11219.17 | 137.24 | 11478 | 11186.63 | 178.76 | 11413 | 11148.67 | 162.4 | 11478 | 11217.6 | 166.39 |
| | | 2op | 11348 | 11152.07 | 109.38 | 11478 | 11235.17 | 119.66 | 11348 | 11216.13 | 121.94 | 11411 | 11226.7 | 139.68 |
| | 50 | rnd | 11478 | 11221.87 | 147.93 | 11394 | 11223.03 | 129.16 | 11478 | 11227.43 | 155.85 | 11478 | 11224.37 | 174.25 |
| | | 2op | 11413 | 11116.53 | 117.29 | 11478 | 11236.7 | 95.76 | 11413 | 11221.7 | 110.98 | 11478 | 11208.6 | 129.82 |
| 51 | 20 | rnd | 11478 | 11216.33 | 122.14 | 11478 | 11195.17 | 171.38 | 11348 | 11153.83 | 135.86 | 11478 | 11188.93 | 161.77 |
| | | 2op | 11213 | 11054.2 | 53.03 | 11305 | 11126.73 | 131.86 | 11305 | 11112.43 | 100.14 | 11348 | 11186.77 | 133.87 |
| | 50 | rnd | 11478 | 11185.63 | 112.76 | 11411 | 11158.63 | 158.98 | 11411 | 11201.03 | 135.59 | 11478 | 11235.43 | 177.12 |
| | | 2op | 11285 | 11109.43 | 63.16 | 11332 | 11176.13 | 94.4 | 11373 | 11173.17 | 128.51 | 11305 | 11195.03 | 115.63 |

Table A.607: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11372 | 11203.9 | 117.97 | 11394 | 11193.43 | 131.85 | 11348 | 11174.17 | 131.36 | 11478 | 11220.17 | 124.42 |
| | | 2op | 11118 | 11075.57 | 45.35 | 11305 | 11110.67 | 56.5 | 11346 | 11138.3 | 84.25 | 11478 | 11217.23 | 109.05 |
| | 50 | rnd | 11373 | 11134.17 | 148.12 | 11478 | 11257.43 | 133.89 | 11478 | 11311.93 | 121.82 | 11478 | 11279.57 | 102.51 |
| | | 2op | 11240 | 11088.1 | 57.48 | 11373 | 11156.27 | 96.84 | 11305 | 11202.97 | 118.23 | 11394 | 11238.93 | 95.86 |
| 51 | 20 | rnd | 11478 | 11248.67 | 123.61 | 11411 | 11200.17 | 182.45 | 11478 | 11205 | 153.49 | 11413 | 11230 | 126.61 |
| | | 2op | 11109 | 11079.87 | 42.68 | 11109 | 11109 | 0 | 11305 | 11144.93 | 73.85 | 11394 | 11256.2 | 80.1 |
| | 50 | rnd | 11478 | 11222.07 | 142.37 | 11478 | 11226 | 130.03 | 11478 | 11216.1 | 177.83 | 11478 | 11271.03 | 125.82 |
| | | 2op | 11256 | 11101.63 | 41.36 | 11305 | 11136.77 | 63.93 | 11373 | 11221.67 | 90.68 | 11373 | 11293.6 | 33.77 |

Table A.608: $x60189\_4$: basicRRGA+IM: 500 – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11169.5 | 159.87 | 11478 | 11209.23 | 117.38 | 11478 | 11236.13 | 123.93 | 11478 | 11234.8 | 154.53 |
| | | 2op | 11305 | 11075.67 | 63 | 11305 | 11157.17 | 101.37 | 11373 | 11215.03 | 100.89 | 11305 | 11231.03 | 90.08 |
| | 50 | rnd | 11478 | 11220.13 | 114.95 | 11478 | 11280.27 | 123.02 | 11478 | 11258.23 | 123.44 | 11478 | 11252.8 | 108.09 |
| | | 2op | 11240 | 11086.17 | 57.83 | 11332 | 11183.4 | 97.11 | 11373 | 11247.57 | 82.86 | 11394 | 11280.53 | 65.79 |
| 51 | 20 | rnd | 11394 | 11179 | 140.81 | 11478 | 11251.23 | 112.6 | 11478 | 11237.77 | 133.68 | 11478 | 11243.77 | 146.78 |
| | | 2op | 11109 | 11093.67 | 34.87 | 11305 | 11121.4 | 47.26 | 11305 | 11167.13 | 84.71 | 11373 | 11256.17 | 67.78 |
| | 50 | rnd | 11478 | 11229.03 | 136.98 | 11478 | 11283.47 | 112.6 | 11478 | 11313.37 | 118.04 | 11478 | 11305.53 | 100.68 |
| | | 2op | 11256 | 11113.9 | 26.84 | 11373 | 11205.47 | 94.95 | 11394 | 11268.43 | 80.87 | 11411 | 11265.87 | 78.36 |

Table A.609: $x60189\_4$: basicRRGA+IM: 5000 – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11114 | 170.05 | 11372 | 11085.93 | 150.36 | 11478 | 11168.17 | 199.48 | 11478 | 11163.9 | 177.72 |
| | | 2op | 11153 | 11031 | 38.28 | 11151 | 11076.97 | 47.04 | 11285 | 11118.4 | 51.79 | 11243 | 11106.47 | 40.48 |
| | 50 | rnd | 11411 | 11082.73 | 227.08 | 11478 | 11149.97 | 148.11 | 11394 | 11148.37 | 143.41 | 11478 | 11195.53 | 164.65 |
| | | 2op | 11109 | 11042.27 | 43.72 | 11109 | 11072.2 | 45.84 | 11151 | 11099.67 | 30.32 | 11346 | 11126.9 | 73.64 |
| 51 | 20 | rnd | 11343 | 11141.23 | 129.01 | 11372 | 11152.87 | 175.32 | 11478 | 11195.37 | 154.19 | 11478 | 11154.53 | 189.29 |
| | | 2op | 11109 | 11038.6 | 39.56 | 11109 | 11070.5 | 45.55 | 11285 | 11116.07 | 38.69 | 11305 | 11106 | 68.61 |
| | 50 | rnd | 11291 | 11117.7 | 154.69 | 11478 | 11156.93 | 169.04 | 11411 | 11168.43 | 179.4 | 11478 | 11193.43 | 161.92 |
| | | 2op | 11109 | 11039 | 44.05 | 11109 | 11078.33 | 44.11 | 11109 | 11102.87 | 19.97 | 11153 | 11102.8 | 26.15 |

Table A.610: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11164.63 | 157.59 | 11478 | 11180.8 | 173.66 | 11478 | 11132.87 | 206.98 | 11478 | 11183.07 | 212.82 |
| | | 2op | 11109 | 11045.33 | 45.09 | 11153 | 11065.7 | 48.03 | 11109 | 11095.2 | 32.3 | 11305 | 11141.47 | 81.36 |
| | 50 | rnd | 11394 | 11152.33 | 155.76 | 11411 | 11200.63 | 149.21 | 11478 | 11175.57 | 156.05 | 11478 | 11228.43 | 118.68 |
| | | 2op | 11109 | 11052.4 | 47.18 | 11109 | 11081.4 | 42.88 | 11285 | 11105.03 | 53.43 | 11305 | 11123.83 | 59.99 |
| 51 | 20 | rnd | 11340 | 11089.83 | 182.71 | 11411 | 11165.47 | 162.12 | 11478 | 11225.47 | 134.59 | 11478 | 11109.27 | 211.05 |
| | | 2op | 11109 | 11045.33 | 43.08 | 11109 | 11072.2 | 45.84 | 11305 | 11114.4 | 45.08 | 11305 | 11110.2 | 73.48 |
| | 50 | rnd | 11372 | 11136.03 | 187.65 | 11478 | 11130.63 | 166.75 | 11411 | 11228.5 | 155.21 | 11478 | 11195.83 | 199.13 |
| | | 2op | 11109 | 11037.07 | 40.58 | 11109 | 11087.53 | 39.58 | 11109 | 11096.73 | 31.81 | 11285 | 11103.23 | 62.41 |

Table A.611: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14137 | 13753.8 | 195.36 | 14161 | 13853.97 | 174.53 | 14161 | 13879.47 | 150.18 | 14133 | 13870.03 | 130.56 |
| | | 2op | 14038 | 13894.93 | 87.15 | 14055 | 13925.8 | 130.22 | 14038 | 13875.9 | 144.74 | 14137 | 13854.97 | 151.97 |
| | 50 | rnd | 14139 | 13857.3 | 158.27 | 14100 | 13854.7 | 159.84 | 14139 | 13880.73 | 134.71 | 14161 | 13892.27 | 176.39 |
| | | 2op | 14038 | 13899.97 | 111.48 | 14038 | 13938.8 | 90.93 | 14157 | 13912.53 | 152.43 | 14157 | 13910.8 | 176.9 |
| 51 | 20 | rnd | 14161 | 13873.37 | 167.04 | 14139 | 13841.93 | 171.42 | 14026 | 13783.03 | 180.9 | 14139 | 13782.93 | 186.88 |
| | | 2op | 14038 | 13858.6 | 90.09 | 14038 | 13963.27 | 77.17 | 14038 | 13917.8 | 106.13 | 14157 | 13940.9 | 100.03 |
| | 50 | rnd | 14139 | 13842.83 | 151.21 | 14079 | 13844.13 | 171.37 | 14161 | 13895.13 | 135.58 | 14161 | 13905.53 | 172.57 |
| | | 2op | 14018 | 13892.83 | 101.32 | 14038 | 13949.43 | 81.69 | 14038 | 13935.03 | 109.18 | 14157 | 13961.97 | 100.83 |

Table A.612: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14036 | 13799.63 | 158.86 | 14139 | 13827.7 | 164.72 | 14161 | 13888.93 | 166.99 | 14103 | 13853.83 | 116.47 |
| | | 2op | 14038 | 13885.23 | 92.09 | 14038 | 13950.5 | 84.81 | 14047 | 13932.03 | 81.21 | 14157 | 13868.73 | 195.46 |
| | 50 | rnd | 14161 | 13857.2 | 196.33 | 14161 | 13876.23 | 168.14 | 14139 | 13877.33 | 173.56 | 14161 | 13822.13 | 168.5 |
| | | 2op | 14038 | 13906.7 | 98.37 | 14038 | 13911.67 | 137.55 | 14157 | 13966.7 | 97.66 | 14038 | 13841.8 | 160.6 |
| 51 | 20 | rnd | 14139 | 13836.73 | 162.67 | 14139 | 13865.9 | 146.28 | 14018 | 13852.8 | 111.21 | 14161 | 13852.93 | 183.26 |
| | | 2op | 13995 | 13851.67 | 81.61 | 14038 | 13955.23 | 79.61 | 14038 | 13941.23 | 86.51 | 14038 | 13882.57 | 132.1 |
| | 50 | rnd | 14161 | 13853.7 | 184.95 | 14161 | 13879.4 | 163.28 | 14161 | 13854.9 | 144.65 | 14101 | 13888.83 | 121.14 |
| | | 2op | 14038 | 13895.5 | 91.69 | 14038 | 13959.07 | 80.51 | 14133 | 13955.23 | 103.31 | 14157 | 13949.43 | 106.17 |

Table A.613: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13823.47 | 185.71 | 14161 | 13895.37 | 149.49 | 14139 | 13888.43 | 129.43 | 14139 | 13855.2 | 148.64 |
| | | 2op | 14038 | 13886.7 | 97.3 | 14038 | 13994.37 | 31.44 | 14038 | 13989.17 | 34.97 | 14038 | 13956.77 | 77.22 |
| | 50 | rnd | 14139 | 13833.57 | 179.34 | 14157 | 13866.53 | 168.47 | 14133 | 13842.83 | 158.24 | 14137 | 13896.33 | 128.93 |
| | | 2op | 14038 | 13937.47 | 88.93 | 14038 | 13992.47 | 52.06 | 14064 | 13976.2 | 58.87 | 14133 | 13994.13 | 72.1 |
| 51 | 20 | rnd | 14137 | 13876.5 | 166.64 | 14161 | 13896.57 | 165.08 | 14157 | 13842.6 | 146.2 | 14161 | 13847.73 | 201.11 |
| | | 2op | 14038 | 13917.63 | 96.95 | 14038 | 13986.7 | 36.07 | 14038 | 13986.23 | 33.53 | 14064 | 13990.3 | 25.55 |
| | 50 | rnd | 14137 | 13836.23 | 151.06 | 14137 | 13865.13 | 168.53 | 14161 | 13920.83 | 126.7 | 14157 | 13949.37 | 140.25 |
| | | 2op | 14018 | 13957.8 | 62.63 | 14038 | 13988.37 | 31.51 | 14064 | 13993.23 | 33.4 | 14133 | 14012.93 | 47.59 |

Table A.614: $x60189\_5$: basicRRGA+IM: 500 – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13822.53 | 169.93 | 14157 | 13907.4 | 152.73 | 14133 | 13901.6 | 147.12 | 14161 | 13894.2 | 190.59 |
| | | 2op | 14038 | 13961.1 | 73.71 | 14038 | 14000.57 | 30.47 | 14038 | 13992.33 | 30.98 | 14097 | 13987.57 | 46.53 |
| | 50 | rnd | 14161 | 13851.97 | 182.81 | 14157 | 13887.33 | 150.94 | 14139 | 13895.9 | 134.12 | 14161 | 13921.23 | 148.71 |
| | | 2op | 14038 | 13970.7 | 45.14 | 14157 | 14015.9 | 50.78 | 14133 | 14007.87 | 43.74 | 14157 | 13976.23 | 77.47 |
| 51 | 20 | rnd | 14066 | 13818.73 | 162.09 | 14161 | 13885.87 | 191.74 | 14161 | 13902 | 150.36 | 14161 | 13933.13 | 154.49 |
| | | 2op | 14038 | 13941.47 | 78.18 | 14038 | 13979.87 | 33.12 | 14133 | 13987.8 | 38.6 | 14038 | 13985.1 | 29.57 |
| | 50 | rnd | 14137 | 13871.2 | 147.67 | 14157 | 13944.43 | 129.7 | 14133 | 13920.63 | 132.65 | 14161 | 13959.83 | 127.22 |
| | | 2op | 14038 | 13966.6 | 52.16 | 14038 | 13982.3 | 27.03 | 14038 | 13993.17 | 28.16 | 14133 | 13999.1 | 46.55 |

Table A.615: $x60189\_5$: basicRRGA+IM: 5000 – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14127 | 13823.73 | 176.78 | 14067 | 13802.13 | 173.59 | 14009 | 13754.97 | 169.22 | 14089 | 13785.13 | 168.76 |
| | | 2op | 13938 | 13790.63 | 78.58 | 13995 | 13885.33 | 67.5 | 14038 | 13921.07 | 70.65 | 14038 | 13940.87 | 57.88 |
| | 50 | rnd | 14127 | 13853.43 | 160.93 | 14038 | 13763.8 | 176.26 | 14105 | 13817.93 | 164.96 | 14067 | 13842.67 | 113.63 |
| | | 2op | 13938 | 13806.47 | 71.68 | 13995 | 13872.33 | 63.21 | 13968 | 13904.8 | 57.93 | 13995 | 13939.83 | 58.33 |
| 51 | 20 | rnd | 14127 | 13878.83 | 183.87 | 14133 | 13826.2 | 175.01 | 14060 | 13812.33 | 190.41 | 13998 | 13771.7 | 144.3 |
| | | 2op | 14038 | 13797.1 | 80.71 | 14038 | 13892.33 | 65.04 | 13995 | 13940 | 46.29 | 14038 | 13950.83 | 50.51 |
| | 50 | rnd | 14067 | 13788.2 | 200.42 | 14127 | 13828.63 | 169.53 | 14127 | 13750 | 212.2 | 14127 | 13795.1 | 162.13 |
| | | 2op | 13932 | 13795.13 | 63.02 | 13968 | 13862.1 | 55.01 | 14038 | 13914.27 | 67.55 | 14038 | 13943.07 | 50.23 |

Table A.616: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14127 | 13793.9 | 183.63 | 14127 | 13836.77 | 219.55 | 14127 | 13828.67 | 185.42 | 14127 | 13840.43 | 176.2 |
| | | 2op | 13938 | 13797.2 | 79.49 | 13995 | 13874.77 | 72.1 | 14038 | 13920.17 | 85.46 | 14001 | 13938.33 | 69.52 |
| | 50 | rnd | 14103 | 13840.13 | 162.96 | 14105 | 13840.7 | 158.98 | 14127 | 13781.93 | 158.01 | 14002 | 13731.27 | 135.06 |
| | | 2op | 13938 | 13818.7 | 81.72 | 14038 | 13885.6 | 69.75 | 13968 | 13921.43 | 58.33 | 14038 | 13968.3 | 43.48 |
| 51 | 20 | rnd | 14004 | 13778.07 | 154.07 | 14089 | 13832.5 | 167.3 | 14105 | 13777.43 | 176.98 | 14105 | 13791.93 | 165.07 |
| | | 2op | 13968 | 13818 | 78.25 | 13968 | 13874.07 | 57.15 | 14038 | 13941.93 | 47.58 | 14038 | 13948.23 | 43.55 |
| | 50 | rnd | 14038 | 13818.7 | 143.56 | 14060 | 13794.4 | 155.58 | 14091 | 13807.73 | 163.52 | 14127 | 13758 | 209.55 |
| | | 2op | 13938 | 13781.37 | 72.63 | 13968 | 13862.07 | 62.29 | 13968 | 13910.6 | 68.45 | 14038 | 13950.2 | 49.59 |

Table A.617: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18142 | 17910.07 | 152.98 | 18159 | 17878.9 | 168.74 | 18175 | 17920.23 | 165.28 | 18301 | 17920.27 | 215.67 |
| | | 2op | 18142 | 18012.7 | 43.49 | 18090 | 18004.1 | 37.62 | 18064 | 17966.93 | 82.49 | 18142 | 17937.7 | 169.46 |
| | 50 | rnd | 18175 | 17917.47 | 153.51 | 18176 | 17904.17 | 171.38 | 18275 | 17921.03 | 145.36 | 18126 | 17935.53 | 157.81 |
| | | 2op | 18142 | 18010.4 | 39.94 | 18063 | 17986.53 | 55.52 | 18142 | 17984.93 | 63.3 | 18142 | 17961.43 | 106.87 |
| 51 | 20 | rnd | 18301 | 17892.97 | 227.37 | 18165 | 17886.07 | 172.11 | 18301 | 17933.63 | 130.21 | 18156 | 17910.67 | 169.64 |
| | | 2op | 18017 | 18012.37 | 14.37 | 18107 | 18016.93 | 19.47 | 18017 | 17990.67 | 45.05 | 18142 | 17991.73 | 63.36 |
| | 50 | rnd | 18165 | 17832.6 | 198.29 | 18292 | 17877.23 | 195.31 | 18170 | 17896.37 | 154.38 | 18176 | 17967.83 | 185.49 |
| | | 2op | 18142 | 18013.57 | 30.02 | 18025 | 17994.2 | 33.46 | 18142 | 17974.9 | 84.83 | 18064 | 17969.4 | 70.03 |

Table A.618: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17904.03 | 204.63 | 18136 | 17912.8 | 144.81 | 18186 | 17958.93 | 161.84 | 18152 | 17911.7 | 177.25 |
| | | 2op | 18064 | 18001.07 | 30.53 | 18142 | 17978.7 | 102.6 | 18142 | 17951.1 | 105.59 | 18107 | 17939.33 | 120.65 |
| | 50 | rnd | 18186 | 17902 | 200.05 | 18119 | 17904.77 | 176.53 | 18301 | 17975.37 | 148.6 | 18125 | 17924.03 | 115.07 |
| | | 2op | 18064 | 17993.13 | 35.35 | 18142 | 18010.97 | 58.46 | 18142 | 17972.23 | 91.41 | 18142 | 17939.43 | 134.72 |
| 51 | 20 | rnd | 18301 | 17918.6 | 200.92 | 18158 | 17907.37 | 175.89 | 18275 | 17926.27 | 150.69 | 18151 | 17937.47 | 191.91 |
| | | 2op | 18017 | 18009.3 | 18.16 | 18017 | 18004.7 | 21.32 | 18017 | 17994.67 | 41.47 | 18025 | 17969.27 | 43.85 |
| | 50 | rnd | 18152 | 17912.03 | 173.11 | 18301 | 17931.9 | 160.53 | 18184 | 17946.8 | 135.08 | 18186 | 17906.4 | 184.57 |
| | | 2op | 18017 | 18004.5 | 21.28 | 18025 | 17995.83 | 58.91 | 18142 | 18001.73 | 64.58 | 18142 | 17973.4 | 74.02 |

Table A.619: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18171 | 17886.63 | 176.02 | 18165 | 17889.57 | 146.73 | 18172 | 17869.27 | 186.18 | 18142 | 17948.87 | 180.38 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18016.23 | 4.2 | 18017 | 18014.17 | 11.07 | 18041 | 17999.33 | 42.08 |
| | 50 | rnd | 18184 | 17958.5 | 169.67 | 18275 | 17885.17 | 217.1 | 18134 | 17880.37 | 183.5 | 18098 | 17867.37 | 208.4 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18015.83 | 6.39 | 18017 | 18005.5 | 36.16 | 18142 | 18002.87 | 43.13 |
| 51 | 20 | rnd | 18165 | 17925.47 | 144.99 | 18165 | 17931.77 | 131.34 | 18152 | 17930.23 | 191.81 | 18165 | 17902.3 | 184.92 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 18104 | 17908.6 | 132.84 | 18301 | 17867.17 | 187.4 | 18165 | 17965.6 | 130.54 | 18156 | 17932.03 | 144.07 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |

Table A.620: $x60189\_6$: basicRRGA+IM: 500 – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18125 | 17846.77 | 160.71 | 18165 | 17916.87 | 156.64 | 18125 | 17939.3 | 130.57 | 18165 | 17964.77 | 118.27 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18016.23 | 4.2 | 18017 | 18009.53 | 24.07 | 18142 | 18015.3 | 26.77 |
| | 50 | rnd | 18175 | 17919.6 | 188.57 | 18165 | 17886.57 | 202.24 | 18175 | 17928.03 | 143.67 | 18171 | 17955.97 | 162.81 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18015.63 | 6.15 | 18142 | 18022.13 | 25.48 | 18064 | 18012.87 | 18.88 |
| 51 | 20 | rnd | 18158 | 17861.33 | 168.27 | 18123 | 17933.83 | 148.83 | 18133 | 17911.47 | 160.34 | 18159 | 17902.77 | 141.47 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| | 50 | rnd | 18261 | 17887.37 | 238.75 | 18158 | 17923.03 | 133.5 | 18165 | 17920.13 | 169.78 | 18125 | 17964.27 | 132.5 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.03 | 16.16 |

Table A.621: $x60189\_6$: basicRRGA+IM: 5000 – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18105 | 17838.8 | 172.26 | 18090 | 17804.1 | 219.58 | 18105 | 17852.9 | 145.25 | 18119 | 17815.63 | 191.73 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18015.27 | 9.49 | 18017 | 18013.53 | 13.19 |
| | 50 | rnd | 18142 | 17865.17 | 178.05 | 18039 | 17800.27 | 145.82 | 18063 | 17830.9 | 164.45 | 18105 | 17817.43 | 151.33 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 18017 | 0 |
| 51 | 20 | rnd | 18142 | 17815.03 | 170.52 | 18074 | 17793.5 | 183.2 | 18039 | 17805.4 | 201.81 | 18142 | 17873.4 | 171.98 |
| | | 2op | 18017 | 18009.33 | 11.03 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18015.27 | 9.49 |
| | 50 | rnd | 18046 | 17809.4 | 147.02 | 18184 | 17816.4 | 189.58 | 18074 | 17824.7 | 175.37 | 18039 | 17760.37 | 224.86 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 18015.27 | 9.49 |

Table A.622: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18142 | 17845.17 | 189.92 | 18074 | 17844.03 | 166.68 | 18105 | 17822.33 | 172.48 | 18142 | 17893.6 | 164.06 |
| | | 2op | 18017 | 18003 | 13.5 | 18017 | 18017 | 0 | 18017 | 18015.27 | 9.49 | 18017 | 18013.53 | 13.19 |
| | 50 | rnd | 18184 | 17840.07 | 184.95 | 18090 | 17838.07 | 158.43 | 18142 | 17893.63 | 200.38 | 18142 | 17808.43 | 181.32 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18015.27 | 9.49 |
| 51 | 20 | rnd | 18142 | 17840.2 | 178.26 | 18013 | 17810.07 | 168.1 | 18142 | 17772.57 | 223.12 | 18090 | 17777.93 | 155.19 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18015.27 | 9.49 | 18017 | 18017 | 0 | 18017 | 18013.53 | 13.19 |
| | 50 | rnd | 18055 | 17809 | 146.32 | 18142 | 17868.33 | 179.28 | 18090 | 17815.83 | 199.84 | 18105 | 17849.93 | 204.84 |
| | | 2op | 18017 | 18002.43 | 11.27 | 18017 | 18016.23 | 4.2 | 18017 | 18015.27 | 9.49 | 18017 | 18017 | 0 |

Table A.623: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21218 | 20863.9 | 184.53 | 21200 | 20875.43 | 169.13 | 21175 | 20866.1 | 178.85 | 21156 | 20854.07 | 191.4 |
| | | 2op | 21187 | 20851.4 | 80.48 | 21109 | 20906.87 | 98.56 | 21125 | 20901.3 | 104.36 | 21168 | 20928.13 | 180.42 |
| | 50 | rnd | 21156 | 20772.93 | 244.04 | 21113 | 20856.43 | 168.67 | 21228 | 20811.7 | 216.38 | 21169 | 20860.53 | 225.1 |
| | | 2op | 21115 | 20866.53 | 104.72 | 21120 | 20901.57 | 128.56 | 21207 | 20987.3 | 118.42 | 21139 | 20897.6 | 136.51 |
| 51 | 20 | rnd | 21128 | 20881.8 | 193.81 | 21153 | 20857.9 | 183.22 | 21211 | 20928.47 | 181.55 | 21190 | 20866.93 | 154.55 |
| | | 2op | 20874 | 20824 | 17.56 | 20936 | 20839.2 | 34.08 | 21193 | 20863.97 | 105.45 | 21165 | 20874.17 | 135.82 |
| | 50 | rnd | 21170 | 20849.57 | 178.38 | 21166 | 20896.6 | 186.72 | 21128 | 20874.77 | 175.98 | 21177 | 20853.43 | 173.4 |
| | | 2op | 21187 | 20863.07 | 92.6 | 21154 | 20864.3 | 91.84 | 21199 | 20908.23 | 131.5 | 21193 | 20917.27 | 137.84 |

Table A.624: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21197 | 20836.97 | 228.45 | 21197 | 20832.13 | 194.54 | 21118 | 20843.87 | 177.3 | 21195 | 20881.53 | 199.9 |
| | | 2op | 21190 | 20876.63 | 112.84 | 21154 | 20914.23 | 142.31 | 21193 | 20917.93 | 166.31 | 21209 | 20883.47 | 185.19 |
| | 50 | rnd | 21149 | 20852.67 | 240.52 | 21121 | 20843.6 | 163.74 | 21206 | 20842.8 | 215.39 | 21208 | 20898.93 | 168.8 |
| | | 2op | 21079 | 20865.13 | 71.77 | 21210 | 20914.07 | 145.79 | 21193 | 20964.43 | 165.04 | 21187 | 20953.27 | 143.81 |
| 51 | 20 | rnd | 21257 | 20811.93 | 232.23 | 21109 | 20840.47 | 169.91 | 21197 | 20868.47 | 168.76 | 21190 | 20872.33 | 213.53 |
| | | 2op | 20984 | 20827.17 | 36.26 | 21025 | 20829.8 | 46.07 | 21106 | 20850.97 | 91.95 | 21174 | 20904.4 | 147.59 |
| | 50 | rnd | 21206 | 20850.63 | 186.96 | 21155 | 20859.2 | 183.3 | 21148 | 20865.5 | 160.33 | 21249 | 20899.73 | 187.56 |
| | | 2op | 20969 | 20832.6 | 30.67 | 21058 | 20853.43 | 78.39 | 21057 | 20905.9 | 85.82 | 21162 | 20921.9 | 94.09 |

Table A.625: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21212 | 20880.37 | 159.8 | 21215 | 20840.57 | 179.12 | 21206 | 20916.97 | 186.33 | 21186 | 20930.17 | 197.48 |
| | | 2op | 20987 | 20834.07 | 28.91 | 21187 | 20830.2 | 75.61 | 21187 | 20846.97 | 87.93 | 21187 | 20917.17 | 134.37 |
| | 50 | rnd | 21196 | 20874.33 | 176.51 | 21172 | 20909.4 | 140.48 | 21207 | 20888.53 | 222.96 | 21190 | 20893.97 | 148.88 |
| | | 2op | 21046 | 20846.8 | 59.64 | 21193 | 20869.13 | 90.29 | 21210 | 20897.93 | 113.83 | 21199 | 20994.4 | 108.14 |
| 51 | 20 | rnd | 21166 | 20877.63 | 149.72 | 21176 | 20846.8 | 192.94 | 21197 | 20882.27 | 146.39 | 21206 | 20934.9 | 191.6 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20841.13 | 66.46 | 20889 | 20830.6 | 11.13 | 21193 | 20936 | 125.06 |
| | 50 | rnd | 21218 | 20909.67 | 175.63 | 21206 | 20937.9 | 190.55 | 21166 | 20849.63 | 187.68 | 21190 | 20947.8 | 147.11 |
| | | 2op | 20977 | 20833.93 | 27.02 | 21193 | 20845.13 | 67.44 | 21193 | 20912.63 | 121.47 | 21210 | 21014.53 | 73.12 |

Table A.626: $x60189\_7$: basicRRGA+IM: 500 – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21166 | 20855.27 | 212.58 | 21162 | 20915.23 | 158.46 | 21180 | 20886.8 | 171.32 | 21178 | 20922.4 | 178.08 |
| | | 2op | 20880 | 20830.3 | 9.51 | 21051 | 20862.23 | 67.18 | 21193 | 20951.77 | 118.05 | 21193 | 21015.67 | 96.2 |
| | 50 | rnd | 21157 | 20818.7 | 195.68 | 21176 | 20899 | 193.36 | 21174 | 20899.8 | 223.25 | 21145 | 20964.8 | 133.8 |
| | | 2op | 21035 | 20857.83 | 66.83 | 21193 | 20924.5 | 95.69 | 21193 | 21002.2 | 90.08 | 21193 | 21041.43 | 57.23 |
| 51 | 20 | rnd | 21200 | 20931.7 | 144.31 | 21168 | 20887.17 | 200.77 | 21218 | 20997.8 | 139.91 | 21271 | 20954.9 | 162.58 |
| | | 2op | 20829 | 20829 | 0 | 20889 | 20833 | 15.22 | 21193 | 20873.33 | 102.86 | 21193 | 20995.93 | 96.74 |
| | 50 | rnd | 21117 | 20825.8 | 170.53 | 21187 | 20920.33 | 205.67 | 21207 | 20920.7 | 177.89 | 21165 | 20962.87 | 118.66 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20913 | 113.92 | 21193 | 20936.6 | 102.18 | 21193 | 21016.63 | 83.87 |

Table A.627: $x60189\_7$: basicRRGA+IM: 5000 – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21193 | 20904.2 | 185.19 | 21168 | 20782.63 | 219.19 | 21139 | 20859.73 | 206.47 | 21199 | 20853.83 | 221.52 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.7 | 1.12 | 20829 | 20828.87 | 0.35 | 20997 | 20832.93 | 32.95 |
| | 50 | rnd | 21199 | 20835.33 | 234.14 | 21139 | 20855.13 | 180.06 | 21121 | 20883.27 | 161.07 | 21199 | 20858.53 | 214.7 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.87 | 0.35 | 20840 | 20829.3 | 2.04 | 21108 | 20846.8 | 59.99 |
| 51 | 20 | rnd | 21174 | 20786.13 | 286.51 | 21218 | 20814.8 | 208.68 | 21210 | 20854.93 | 198.52 | 21207 | 20897.07 | 213.08 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 0.41 | 20969 | 20833.53 | 25.59 | 20867 | 20827.77 | 12.74 |
| | 50 | rnd | 21168 | 20838.83 | 215.19 | 21148 | 20870.5 | 182.28 | 21181 | 20887.8 | 169 | 21174 | 20855.27 | 225.18 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.87 | 0.35 | 20829 | 20827.6 | 7.29 | 20969 | 20833.67 | 25.56 |

Table A.628: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21185 | 20896.83 | 188.44 | 21170 | 20852.67 | 226.09 | 21185 | 20842.5 | 167.81 | 21185 | 20875.17 | 192.03 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.7 | 0.47 | 20829 | 20827.57 | 7.29 | 21101 | 20847.43 | 60.7 |
| | 50 | rnd | 21207 | 20883.37 | 191.12 | 21164 | 20824.47 | 182.28 | 21190 | 20858.83 | 206.06 | 21185 | 20807.63 | 187.35 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.83 | 0.38 | 20829 | 20829 | 0 | 20969 | 20832.27 | 26.83 |
| 51 | 20 | rnd | 21210 | 20898.27 | 192.68 | 21190 | 20852.07 | 209.84 | 21190 | 20845.97 | 221.03 | 21210 | 20800.1 | 239.71 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20827.47 | 7.28 | 20829 | 20828.87 | 0.35 | 20867 | 20820.4 | 40.83 |
| | 50 | rnd | 21190 | 20836.67 | 199.35 | 21139 | 20834.53 | 174.47 | 21210 | 20928.67 | 203.21 | 21154 | 20842.73 | 214.99 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 0.41 | 20829 | 20828.9 | 0.31 | 20829 | 20828.9 | 0.31 |

Table A.629: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 590.97 | 2.41 | 596 | 590.87 | 2.7 | 596 | 590.7 | 2.9 | 596 | 590.8 | 3.48 |
| | | 2op | 595 | 590.7 | 3.51 | 595 | 591.13 | 2.73 | 596 | 591.2 | 3.43 | 595 | 590.6 | 3.21 |
| | 50 | rnd | 595 | 590.8 | 2.34 | 595 | 591.9 | 2.92 | 596 | 590.27 | 2.94 | 595 | 590.07 | 2.82 |
| | | 2op | 596 | 591.97 | 2.91 | 595 | 591.7 | 2.67 | 595 | 590.3 | 2.83 | 596 | 590.77 | 2.98 |
| 51 | 20 | rnd | 595 | 591.03 | 2.82 | 596 | 590.87 | 3.52 | 595 | 591.9 | 2.32 | 596 | 591.13 | 3.05 |
| | | 2op | 595 | 592.23 | 2.28 | 595 | 591.63 | 2.62 | 596 | 590.87 | 2.47 | 595 | 591.33 | 3.29 |
| | 50 | rnd | 595 | 591.8 | 2.41 | 596 | 591.77 | 2.42 | 596 | 591.8 | 2.87 | 596 | 591.67 | 2.59 |
| | | 2op | 596 | 592.63 | 2.75 | 595 | 591.63 | 3.21 | 596 | 592.7 | 2.48 | 595 | 591.97 | 2.81 |

Table A.630: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 590.93 | 3.71 | 596 | 591.9 | 2.64 | 596 | 590.37 | 3.15 | 596 | 590.67 | 3.13 |
| | | 2op | 596 | 591.67 | 2.63 | 596 | 591.37 | 2.74 | 596 | 590 | 3.43 | 595 | 590.77 | 3.18 |
| | 50 | rnd | 596 | 591.03 | 2.97 | 596 | 591.6 | 3 | 596 | 591.97 | 3.51 | 596 | 591.13 | 2.5 |
| | | 2op | 596 | 591.97 | 2.61 | 596 | 591.37 | 3.11 | 596 | 591.03 | 2.85 | 596 | 591.57 | 2.79 |
| 51 | 20 | rnd | 595 | 590.83 | 2.77 | 596 | 590.9 | 3.17 | 595 | 590.97 | 3.36 | 596 | 590.57 | 4.26 |
| | | 2op | 596 | 592.33 | 2.97 | 596 | 592.03 | 2.39 | 595 | 590.8 | 3.17 | 596 | 590.47 | 3.58 |
| | 50 | rnd | 595 | 591.67 | 2.43 | 596 | 591.77 | 3.16 | 595 | 590.57 | 3.3 | 595 | 590.67 | 2.95 |
| | | 2op | 596 | 593.33 | 2.37 | 596 | 592.73 | 2.13 | 596 | 592.1 | 2.5 | 596 | 591.87 | 3.27 |

Table A.631: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.43 | 2.8 | 596 | 591.73 | 2.7 | 595 | 591.53 | 3.14 | 596 | 591.87 | 2.3 |
| | | 2op | 595 | 592.13 | 2.45 | 596 | 592.5 | 2.58 | 596 | 592.53 | 2.56 | 596 | 591.93 | 2.53 |
| | 50 | rnd | 595 | 591.1 | 2.92 | 596 | 592.73 | 1.93 | 596 | 592.27 | 2.13 | 596 | 592 | 2.55 |
| | | 2op | 596 | 593.47 | 1.76 | 595 | 592.3 | 2.35 | 596 | 592.07 | 2.27 | 596 | 591.67 | 2.41 |
| 51 | 20 | rnd | 595 | 591.83 | 2.7 | 596 | 593.07 | 2.08 | 596 | 593.2 | 2.09 | 596 | 593.17 | 2.29 |
| | | 2op | 596 | 594.33 | 0.92 | 596 | 594.8 | 1.06 | 596 | 594.2 | 1.67 | 596 | 593.5 | 2.06 |
| | 50 | rnd | 595 | 592.77 | 2.03 | 596 | 593.53 | 1.91 | 596 | 593.8 | 2.55 | 596 | 593.23 | 2.06 |
| | | 2op | 596 | 594.6 | 1.04 | 596 | 594.23 | 1.63 | 596 | 593.63 | 1.79 | 596 | 593.43 | 2.16 |

Table A.632: $f25\_305$: basicRRGA+IM: 500 – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.43 | 2.39 | 596 | 592.7 | 2.44 | 596 | 592.6 | 2.75 | 595 | 591.33 | 2.22 |
| | | 2op | 596 | 593.43 | 2.11 | 596 | 592.4 | 2.69 | 596 | 592.07 | 2.89 | 596 | 591.97 | 2.61 |
| | 50 | rnd | 596 | 592.43 | 2.31 | 596 | 593.33 | 1.83 | 596 | 592.37 | 2.11 | 595 | 592.4 | 1.92 |
| | | 2op | 596 | 593.8 | 2.02 | 596 | 593.53 | 1.8 | 596 | 593.13 | 1.68 | 596 | 592.17 | 2.59 |
| 51 | 20 | rnd | 596 | 592.93 | 2.02 | 596 | 593.67 | 1.73 | 596 | 594.1 | 1.56 | 596 | 591.93 | 2.7 |
| | | 2op | 596 | 594.47 | 0.86 | 596 | 594.87 | 0.73 | 595 | 594.5 | 1.25 | 596 | 593.27 | 2.05 |
| | 50 | rnd | 596 | 593.3 | 1.91 | 596 | 593.93 | 1.39 | 596 | 593.83 | 1.42 | 595 | 592.37 | 2.34 |
| | | 2op | 596 | 594.8 | 0.61 | 596 | 594.07 | 1.62 | 596 | 593.87 | 1.46 | 596 | 592.33 | 2.2 |

Table A.633: $f25\_305$: basicRRGA+IM: 5000 – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 587.93 | 4.92 | 594 | 587.63 | 4.28 | 595 | 588.13 | 6.27 | 594 | 587.1 | 6.5 |
| | | 2op | 595 | 593.57 | 1.63 | 595 | 593 | 2.59 | 595 | 592.57 | 2.57 | 595 | 592.4 | 2.7 |
| | 50 | rnd | 596 | 585 | 8.81 | 594 | 586.87 | 5.69 | 594 | 588.23 | 5.02 | 595 | 589.8 | 2.99 |
| | | 2op | 595 | 593.3 | 2 | 595 | 594.23 | 0.97 | 595 | 593.17 | 2.15 | 596 | 593.57 | 2.18 |
| 51 | 20 | rnd | 595 | 587.23 | 5.16 | 595 | 587.23 | 6.81 | 595 | 587.5 | 5.53 | 596 | 590.1 | 3.61 |
| | | 2op | 595 | 593.03 | 1.96 | 595 | 593.93 | 1.46 | 595 | 592.37 | 2.44 | 596 | 591.87 | 2.8 |
| | 50 | rnd | 595 | 588.6 | 2.54 | 595 | 587 | 5.65 | 596 | 590.2 | 3.33 | 595 | 589.13 | 5.36 |
| | | 2op | 595 | 592.73 | 1.95 | 595 | 594 | 1.46 | 595 | 593.47 | 2.11 | 596 | 592.37 | 2.34 |

Table A.634: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 594 | 586.13 | 5.62 | 595 | 586.87 | 5.98 | 596 | 588.1 | 3.72 | 595 | 587.6 | 5.93 |
| | | 2op | 595 | 593.07 | 1.76 | 595 | 592.77 | 2.24 | 595 | 592.43 | 2.87 | 596 | 591.87 | 2.65 |
| | 50 | rnd | 595 | 583.77 | 9.91 | 594 | 588.17 | 5.34 | 596 | 589.07 | 7.07 | 596 | 588.6 | 4.41 |
| | | 2op | 595 | 593.4 | 1.33 | 595 | 593.93 | 1.41 | 596 | 593.03 | 2.57 | 595 | 592.77 | 2.5 |
| 51 | 20 | rnd | 595 | 584.3 | 10.01 | 595 | 584.8 | 8.57 | 596 | 587.4 | 7.58 | 595 | 589.1 | 3.3 |
| | | 2op | 595 | 593.17 | 2.02 | 595 | 593.97 | 1.22 | 596 | 592.4 | 2.55 | 595 | 591.87 | 2.84 |
| | 50 | rnd | 596 | 585.23 | 8.22 | 593 | 586.03 | 7.43 | 595 | 585.8 | 7.41 | 595 | 588.4 | 5.59 |
| | | 2op | 595 | 593.4 | 1.89 | 595 | 594.37 | 0.56 | 595 | 593.83 | 1.74 | 595 | 592.33 | 2.47 |

Table A.635: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 772 | 3.38 | 777 | 769.9 | 7.6 | 777 | 769.67 | 6.54 | 775 | 770.93 | 5.17 |
| | | 2op | 777 | 771.3 | 2.81 | 777 | 771.13 | 3.42 | 777 | 768 | 8.73 | 777 | 770.8 | 7.67 |
| | 50 | rnd | 777 | 772.37 | 3.49 | 777 | 770.77 | 7.11 | 776 | 771.37 | 5.13 | 777 | 772.47 | 2.94 |
| | | 2op | 777 | 772.53 | 3.12 | 777 | 772.93 | 2.38 | 777 | 772.27 | 5.25 | 777 | 770.83 | 7.01 |
| 51 | 20 | rnd | 777 | 771.73 | 4.7 | 777 | 770.9 | 4.29 | 777 | 770.9 | 4.64 | 777 | 770.43 | 5.64 |
| | | 2op | 777 | 769.93 | 3.35 | 777 | 771.07 | 5.61 | 777 | 770.1 | 4.65 | 777 | 767.8 | 10.05 |
| | 50 | rnd | 775 | 772.53 | 1.96 | 777 | 773.27 | 2.75 | 777 | 772.4 | 3.92 | 777 | 772.37 | 6.7 |
| | | 2op | 777 | 771.9 | 2.92 | 777 | 773 | 2.82 | 777 | 772.23 | 3.09 | 777 | 772.27 | 3.38 |

Table A.636: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 772.1 | 3.71 | 776 | 770.27 | 7.9 | 777 | 770.23 | 6.43 | 777 | 767.03 | 9.63 |
| | | 2op | 775 | 770.77 | 2.87 | 777 | 770.63 | 6.8 | 777 | 768.5 | 9.39 | 777 | 770.07 | 8.59 |
| | 50 | rnd | 777 | 773.13 | 2.99 | 777 | 771.57 | 5.56 | 777 | 771.63 | 4.99 | 777 | 767.8 | 9.71 |
| | | 2op | 777 | 771.53 | 3.42 | 777 | 772.13 | 3.65 | 777 | 771.63 | 6.36 | 777 | 769.37 | 8.14 |
| 51 | 20 | rnd | 777 | 772.43 | 3.42 | 776 | 771.27 | 4.26 | 777 | 771.6 | 6 | 777 | 771.53 | 3.43 |
| | | 2op | 777 | 769.67 | 2.97 | 777 | 770 | 5.48 | 776 | 770.07 | 6.64 | 776 | 768.3 | 8.8 |
| | 50 | rnd | 777 | 772.07 | 3.6 | 777 | 772.6 | 2.54 | 777 | 773.3 | 3.63 | 777 | 771.2 | 6 |
| | | 2op | 777 | 772.3 | 2.55 | 777 | 770.93 | 4.27 | 777 | 771.47 | 5.61 | 777 | 770.67 | 5.27 |

Table A.637: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.93 | 3.15 | 777 | 773.03 | 2.47 | 777 | 772.77 | 2.81 | 777 | 773.5 | 2.83 |
| | | 2op | 775 | 770.47 | 2.47 | 776 | 772.1 | 2.54 | 777 | 771.37 | 3.1 | 777 | 771.67 | 3.5 |
| | 50 | rnd | 776 | 771.27 | 4.93 | 777 | 773.13 | 2.74 | 777 | 772.93 | 2.75 | 777 | 772.37 | 3.25 |
| | | 2op | 777 | 771.8 | 2.61 | 777 | 772.17 | 3.18 | 777 | 771.5 | 3.15 | 777 | 772.03 | 3.02 |
| 51 | 20 | rnd | 777 | 772.5 | 3.25 | 777 | 773.4 | 2.39 | 777 | 773.6 | 2.54 | 777 | 773.57 | 2.36 |
| | | 2op | 774 | 770.63 | 1.71 | 774 | 771.83 | 2.17 | 777 | 771.93 | 2.38 | 775 | 772.13 | 1.83 |
| | 50 | rnd | 777 | 772.73 | 2.83 | 777 | 773.27 | 3.04 | 777 | 774.13 | 1.87 | 777 | 773.57 | 2.62 |
| | | 2op | 777 | 771.73 | 2.12 | 777 | 772.53 | 2.29 | 777 | 772.33 | 3.27 | 777 | 772.57 | 2.88 |

Table A.638: $f25\_400$: basicRRGA+IM: 500 – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 772.3 | 3.13 | 777 | 772.53 | 2.52 | 777 | 773.07 | 2.7 | 777 | 771.13 | 4.74 |
| | | 2op | 777 | 771 | 2.3 | 775 | 772.37 | 2.36 | 777 | 772.93 | 2.77 | 776 | 771.8 | 3.55 |
| | 50 | rnd | 777 | 772.13 | 2.87 | 776 | 773.63 | 2.04 | 777 | 772.23 | 3.2 | 777 | 772.73 | 2.7 |
| | | 2op | 777 | 771.4 | 1.92 | 777 | 773.63 | 2.54 | 777 | 772.53 | 2.65 | 777 | 772.57 | 2.88 |
| 51 | 20 | rnd | 777 | 772.4 | 2.87 | 777 | 773.33 | 2.31 | 777 | 774.9 | 1.75 | 777 | 773.37 | 2.5 |
| | | 2op | 775 | 770.73 | 2.05 | 777 | 772.87 | 1.96 | 775 | 772.67 | 1.27 | 776 | 771.97 | 2.65 |
| | 50 | rnd | 777 | 773.7 | 2.77 | 777 | 775.1 | 1.47 | 777 | 774.87 | 1.72 | 777 | 773.7 | 2.38 |
| | | 2op | 777 | 771.93 | 2 | 777 | 773.6 | 1.98 | 777 | 773.57 | 2.91 | 777 | 773.33 | 2.47 |

Table A.639: $f25\_400$: basicRRGA+IM: 5000 – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 768.17 | 5.62 | 777 | 761.67 | 12.1 | 777 | 768.83 | 5.9 | 775 | 768.57 | 6.86 |
| | | 2op | 774 | 768.63 | 2.13 | 774 | 769.23 | 1.89 | 774 | 767.33 | 5.52 | 774 | 763.9 | 9.65 |
| | 50 | rnd | 773 | 764 | 8.77 | 775 | 764.03 | 11.3 | 777 | 766.2 | 9.62 | 777 | 767.43 | 6.83 |
| | | 2op | 774 | 768.73 | 2.08 | 774 | 769.1 | 2.35 | 772 | 768.8 | 1.83 | 772 | 767.67 | 5.29 |
| 51 | 20 | rnd | 775 | 765.5 | 10.5 | 776 | 763.37 | 9.68 | 775 | 767.23 | 5.78 | 774 | 766.67 | 9.19 |
| | | 2op | 771 | 768.03 | 3.1 | 770 | 769.27 | 1.01 | 774 | 768.87 | 2.43 | 775 | 766.67 | 7.25 |
| | 50 | rnd | 775 | 762.03 | 11.8 | 775 | 765.13 | 10.07 | 777 | 767.03 | 8.21 | 776 | 767.13 | 9.02 |
| | | 2op | 770 | 768.77 | 1.72 | 774 | 769.07 | 2.38 | 771 | 768.83 | 2.68 | 775 | 767.63 | 5.37 |

Table A.640: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 766.3 | 5.24 | 774 | 767.9 | 6.47 | 777 | 767.07 | 7.32 | 776 | 769.8 | 5.18 |
| | | 2op | 770 | 767.77 | 1.91 | 774 | 769.27 | 2.55 | 774 | 767.23 | 5.66 | 774 | 765.37 | 7.59 |
| | 50 | rnd | 777 | 768.2 | 6.55 | 777 | 766.67 | 10.44 | 777 | 767.1 | 8.82 | 777 | 768.9 | 5.25 |
| | | 2op | 774 | 768.43 | 2.56 | 774 | 769.03 | 1.9 | 774 | 768.93 | 5.66 | 773 | 765.67 | 7.77 |
| 51 | 20 | rnd | 775 | 765.4 | 9.84 | 777 | 767.23 | 7.64 | 777 | 766.57 | 9.91 | 776 | 767.27 | 8.69 |
| | | 2op | 771 | 767.73 | 2.92 | 774 | 769.5 | 1.17 | 771 | 767.63 | 3.1 | 772 | 766.13 | 7.88 |
| | 50 | rnd | 775 | 764.47 | 10.14 | 777 | 769.3 | 7.71 | 777 | 763.3 | 10.99 | 777 | 769.53 | 7.05 |
| | | 2op | 770 | 768.57 | 2.43 | 774 | 769.7 | 1.58 | 772 | 768.03 | 5.04 | 774 | 767.67 | 5.13 |

Table A.641: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 914.1 | 3.36 | 919 | 913.6 | 2.66 | 919 | 914.17 | 2.96 | 919 | 913.87 | 2.86 |
| | | 2op | 921 | 914.3 | 3.82 | 921 | 913.6 | 3.25 | 921 | 913.8 | 3.83 | 921 | 914.47 | 4.24 |
| | 50 | rnd | 921 | 914.97 | 3.48 | 919 | 913.57 | 3.38 | 919 | 914.33 | 3.24 | 921 | 913.07 | 3.77 |
| | | 2op | 919 | 915.47 | 2.5 | 921 | 914.77 | 3.34 | 921 | 913.83 | 3.21 | 921 | 915.73 | 2.8 |
| 51 | 20 | rnd | 921 | 915.23 | 3.07 | 921 | 915 | 3.21 | 921 | 914.03 | 3.95 | 921 | 915.6 | 3.1 |
| | | 2op | 919 | 914.7 | 3.06 | 919 | 915.57 | 2.78 | 919 | 914.17 | 4 | 919 | 914.9 | 3.34 |
| | 50 | rnd | 919 | 913.93 | 3.58 | 921 | 915.1 | 2.8 | 921 | 915.33 | 3.61 | 921 | 914.87 | 3.59 |
| | | 2op | 921 | 915.57 | 2.65 | 921 | 915.33 | 2.84 | 921 | 915.67 | 3.27 | 921 | 915.13 | 3.1 |

Table A.642: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.9 | 2.82 | 919 | 913.5 | 3.64 | 919 | 913.7 | 2.78 | 921 | 915.33 | 3 |
| | | 2op | 921 | 914.77 | 3.81 | 919 | 913.9 | 3.69 | 921 | 915.7 | 2.88 | 921 | 914.4 | 3.72 |
| | 50 | rnd | 921 | 915.23 | 3.13 | 921 | 914.27 | 2.85 | 919 | 914.8 | 3.19 | 921 | 913.37 | 3.69 |
| | | 2op | 921 | 914.97 | 3.8 | 919 | 914.73 | 3.81 | 921 | 915.1 | 2.95 | 921 | 915.3 | 3.21 |
| 51 | 20 | rnd | 921 | 914.47 | 4.11 | 919 | 914.17 | 3.65 | 919 | 913.43 | 4.02 | 921 | 913.57 | 4.48 |
| | | 2op | 919 | 913.07 | 3.63 | 921 | 915.37 | 3.44 | 918 | 913.67 | 3.4 | 919 | 914.5 | 2.76 |
| | 50 | rnd | 921 | 914.3 | 3.15 | 921 | 914.93 | 3.2 | 919 | 914.53 | 2.93 | 921 | 915.2 | 2.77 |
| | | 2op | 919 | 915.7 | 2.64 | 921 | 916.07 | 2.83 | 919 | 915.37 | 3.05 | 919 | 915.23 | 2.69 |

Table A.643: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 914.5 | 3.97 | 921 | 914.77 | 3.3 | 921 | 914.07 | 3.53 | 919 | 914.67 | 2.94 |
| | | 2op | 918 | 914.2 | 2.62 | 921 | 914.6 | 3.47 | 921 | 916.47 | 3.2 | 921 | 915.37 | 3.27 |
| | 50 | rnd | 921 | 915.47 | 3.18 | 921 | 915.23 | 3.04 | 921 | 915.3 | 3.24 | 921 | 914.97 | 3.09 |
| | | 2op | 921 | 915.3 | 2.83 | 921 | 916.57 | 2.06 | 921 | 916.07 | 2.92 | 921 | 915.5 | 3.12 |
| 51 | 20 | rnd | 921 | 914.6 | 3.94 | 921 | 915.57 | 2.71 | 921 | 917.43 | 2.34 | 921 | 917.4 | 2.46 |
| | | 2op | 916 | 915.53 | 1.36 | 921 | 916.3 | 1.34 | 921 | 916.63 | 2.17 | 921 | 916.83 | 2.26 |
| | 50 | rnd | 921 | 916.23 | 2.61 | 921 | 917.17 | 2.61 | 921 | 917.33 | 2.4 | 921 | 915.73 | 2.52 |
| | | 2op | 919 | 916.23 | 1.17 | 921 | 917.23 | 2.16 | 921 | 918.3 | 2.35 | 921 | 916.7 | 3.05 |

Table A.644: $f25\_500$: basicRRGA+IM: 500 – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 914.5 | 3.39 | 921 | 915.63 | 2.72 | 921 | 916.3 | 3.37 | 919 | 915.87 | 2.34 |
| | | 2op | 919 | 915.3 | 2.52 | 921 | 916.23 | 3.07 | 921 | 915.87 | 2.58 | 921 | 916.07 | 2.82 |
| | 50 | rnd | 921 | 915.63 | 2.86 | 921 | 916.6 | 2.65 | 921 | 916.43 | 3.15 | 921 | 915.97 | 3.33 |
| | | 2op | 921 | 915.67 | 2.83 | 921 | 917.47 | 2.49 | 921 | 917.47 | 2.53 | 921 | 916.4 | 2.65 |
| 51 | 20 | rnd | 921 | 915.9 | 3.29 | 921 | 916.13 | 2.61 | 921 | 917.47 | 2.49 | 921 | 916.77 | 2.03 |
| | | 2op | 918 | 915.9 | 0.99 | 921 | 917.03 | 1.79 | 921 | 918.73 | 1.84 | 921 | 916.33 | 2.92 |
| | 50 | rnd | 921 | 916 | 2.53 | 921 | 917.17 | 2.6 | 921 | 917.8 | 2.22 | 921 | 917.33 | 1.81 |
| | | 2op | 921 | 916.37 | 1.61 | 921 | 917.63 | 2.36 | 921 | 918.13 | 2.56 | 921 | 916.93 | 2.45 |

Table A.645: $f25\_500$: basicRRGA+IM: 5000 – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 918 | 908.5 | 8.93 | 918 | 911.2 | 4.92 | 919 | 912 | 3.22 | 919 | 912.43 | 3.73 |
| | | 2op | 916 | 913.3 | 3.65 | 919 | 915.67 | 1.49 | 921 | 915.6 | 2.61 | 919 | 913.47 | 4.18 |
| | 50 | rnd | 918 | 911.87 | 5.59 | 917 | 912.67 | 3.78 | 919 | 912.33 | 5.82 | 917 | 912.97 | 3.09 |
| | | 2op | 916 | 914.13 | 2.36 | 918 | 915.53 | 1.87 | 921 | 915.87 | 1.43 | 921 | 915.33 | 2.71 |
| 51 | 20 | rnd | 917 | 908.13 | 8.03 | 919 | 912 | 5.47 | 917 | 911.07 | 4.03 | 918 | 912.6 | 4.78 |
| | | 2op | 916 | 914.8 | 2.61 | 916 | 915.53 | 1.33 | 919 | 916.23 | 1.3 | 921 | 915.23 | 3 |
| | 50 | rnd | 916 | 910.6 | 5.01 | 918 | 913.6 | 3.7 | 919 | 912 | 3.54 | 917 | 912.83 | 3.18 |
| | | 2op | 916 | 914.57 | 2.53 | 919 | 916.07 | 0.87 | 919 | 915.77 | 1.72 | 919 | 915.3 | 3.22 |

Table A.646: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 916 | 912.33 | 2.52 | 918 | 911.13 | 5.22 | 919 | 912.9 | 2.92 | 919 | 912.87 | 3.61 |
| | | 2op | 919 | 914 | 3.35 | 918 | 915.9 | 1.6 | 919 | 915.23 | 2.47 | 921 | 914.43 | 3.48 |
| | 50 | rnd | 918 | 908.1 | 10.15 | 918 | 911.93 | 4.46 | 917 | 912.03 | 3.79 | 921 | 913.23 | 3.48 |
| | | 2op | 916 | 914.33 | 2.54 | 917 | 915.37 | 1.83 | 921 | 915.6 | 2.47 | 919 | 914.87 | 2.81 |
| 51 | 20 | rnd | 918 | 909.4 | 6.49 | 918 | 910.63 | 5.56 | 919 | 910.63 | 5.77 | 921 | 911.83 | 5 |
| | | 2op | 916 | 915 | 2.42 | 917 | 915.6 | 1.28 | 919 | 915.77 | 1.61 | 921 | 914.7 | 3.42 |
| | 50 | rnd | 916 | 910.33 | 6.43 | 919 | 912 | 5.04 | 919 | 911.87 | 5.55 | 919 | 912.9 | 5.1 |
| | | 2op | 916 | 914.57 | 2.24 | 916 | 916 | 0 | 919 | 915.93 | 0.83 | 921 | 915.53 | 2.54 |

Table A.647: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1557.57 | 10.12 | 1573 | 1555.23 | 12.25 | 1572 | 1558.27 | 7.85 | 1572 | 1553.63 | 13.88 |
| | | 2op | 1572 | 1558.43 | 6.7 | 1573 | 1559.47 | 7.3 | 1575 | 1558.13 | 8.08 | 1572 | 1557.3 | 8.97 |
| | 50 | rnd | 1574 | 1558.6 | 7.46 | 1576 | 1559.8 | 7.46 | 1574 | 1558.23 | 8.67 | 1578 | 1558.67 | 10.71 |
| | | 2op | 1578 | 1561.23 | 6.33 | 1581 | 1558.53 | 10.6 | 1573 | 1557.6 | 8.99 | 1572 | 1560.67 | 7.75 |
| 51 | 20 | rnd | 1573 | 1561 | 6.56 | 1575 | 1559.6 | 8.37 | 1575 | 1561.87 | 8.53 | 1575 | 1558.83 | 8.2 |
| | | 2op | 1575 | 1560.67 | 7.02 | 1569 | 1560.2 | 4.68 | 1575 | 1559.2 | 7.92 | 1575 | 1559.87 | 9.53 |
| | 50 | rnd | 1575 | 1557.9 | 10.47 | 1570 | 1560.5 | 7.74 | 1576 | 1559.47 | 9.57 | 1572 | 1558.13 | 9.25 |
| | | 2op | 1572 | 1559.8 | 5.12 | 1571 | 1559.17 | 5.99 | 1573 | 1561.3 | 6.43 | 1573 | 1558.47 | 8.87 |

Table A.648: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1577 | 1557.3 | 8.48 | 1579 | 1559.4 | 11.4 | 1575 | 1558.97 | 10.02 | 1574 | 1556.83 | 12.35 |
| | | 2op | 1572 | 1559.07 | 7.73 | 1574 | 1559 | 8.97 | 1573 | 1556.73 | 9.57 | 1575 | 1556.3 | 9.83 |
| | 50 | rnd | 1577 | 1559.5 | 11.31 | 1572 | 1560.93 | 7.19 | 1576 | 1559.7 | 8.53 | 1572 | 1555.97 | 10.01 |
| | | 2op | 1573 | 1557.4 | 8.57 | 1577 | 1559.97 | 11.24 | 1573 | 1556.83 | 10.88 | 1575 | 1558.33 | 7.15 |
| 51 | 20 | rnd | 1572 | 1559.97 | 7.17 | 1572 | 1558.4 | 8.1 | 1575 | 1558.87 | 9.07 | 1573 | 1556 | 10.95 |
| | | 2op | 1570 | 1556.37 | 6.09 | 1573 | 1559.47 | 7.21 | 1570 | 1558.83 | 7.69 | 1574 | 1557.9 | 8.31 |
| | 50 | rnd | 1570 | 1560.53 | 6.34 | 1577 | 1562.2 | 8.37 | 1569 | 1558.7 | 8.38 | 1573 | 1559.2 | 9 |
| | | 2op | 1569 | 1560.83 | 5.77 | 1571 | 1561.77 | 5.76 | 1573 | 1561.83 | 8.88 | 1570 | 1558.43 | 5.85 |

Table A.649: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1554.07 | 11.01 | 1580 | 1560.43 | 10.3 | 1577 | 1562.07 | 7.34 | 1573 | 1560.37 | 6.47 |
| | | 2op | 1572 | 1558.87 | 5.88 | 1574 | 1560.4 | 8.66 | 1574 | 1562.3 | 6.91 | 1577 | 1559.63 | 9.82 |
| | 50 | rnd | 1571 | 1559.9 | 7.06 | 1574 | 1560.5 | 8.38 | 1574 | 1560.67 | 8.36 | 1573 | 1559.7 | 8.2 |
| | | 2op | 1574 | 1560.07 | 5.39 | 1574 | 1562.23 | 6.06 | 1573 | 1561.97 | 7.06 | 1570 | 1558 | 10.22 |
| 51 | 20 | rnd | 1575 | 1557.87 | 9.73 | 1570 | 1556.17 | 9.7 | 1575 | 1561.3 | 6.51 | 1576 | 1562.83 | 7.66 |
| | | 2op | 1565 | 1556.33 | 2.67 | 1569 | 1561.33 | 4.79 | 1572 | 1564.9 | 4.15 | 1570 | 1562.73 | 6.88 |
| | 50 | rnd | 1571 | 1560.67 | 7.51 | 1577 | 1561.5 | 7.59 | 1576 | 1562.57 | 7.26 | 1574 | 1561.67 | 7.93 |
| | | 2op | 1564 | 1557.2 | 3.02 | 1572 | 1565.83 | 5.05 | 1576 | 1566.47 | 5.06 | 1577 | 1561.27 | 7.39 |

Table A.650: $f50\_315$: basicRRGA+IM: 500 – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1561.73 | 6.11 | 1574 | 1559.3 | 8.37 | 1575 | 1559.5 | 9.07 | 1572 | 1560.03 | 7.51 |
| | | 2op | 1577 | 1558.17 | 7.1 | 1574 | 1562.7 | 6.49 | 1574 | 1560.17 | 7.76 | 1574 | 1560.57 | 6.8 |
| | 50 | rnd | 1575 | 1557.07 | 9.01 | 1577 | 1565.63 | 5.93 | 1575 | 1563.2 | 6.66 | 1577 | 1562.27 | 6.61 |
| | | 2op | 1570 | 1559.57 | 5.77 | 1575 | 1562.7 | 6.08 | 1572 | 1557.5 | 7.34 | 1577 | 1560.03 | 9.53 |
| 51 | 20 | rnd | 1574 | 1558.83 | 8.02 | 1573 | 1562.87 | 6.92 | 1573 | 1562.37 | 7.22 | 1578 | 1560.4 | 9.24 |
| | | 2op | 1569 | 1558.77 | 4.11 | 1572 | 1564.43 | 4.12 | 1578 | 1566.03 | 4.48 | 1575 | 1560.13 | 7.46 |
| | 50 | rnd | 1579 | 1561.63 | 8.83 | 1574 | 1562.3 | 6.5 | 1578 | 1562.8 | 7.31 | 1572 | 1559.1 | 7.68 |
| | | 2op | 1576 | 1562.33 | 5.05 | 1576 | 1565.93 | 5.81 | 1573 | 1563.8 | 6 | 1574 | 1562.37 | 7.15 |

Table A.651: $f50\_315$: basicRRGA+IM: 5000 – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1569 | 1555.53 | 8.91 | 1571 | 1553.73 | 12.42 | 1574 | 1556.3 | 8.05 | 1572 | 1552.27 | 14.28 |
| | | 2op | 1558 | 1553.8 | 1.27 | 1568 | 1557.3 | 4.01 | 1567 | 1558.07 | 5.64 | 1574 | 1561.73 | 7.15 |
| | 50 | rnd | 1570 | 1553.33 | 10.1 | 1573 | 1557.93 | 8.81 | 1570 | 1555 | 10.39 | 1568 | 1555.13 | 10.4 |
| | | 2op | 1555 | 1553.4 | 0.81 | 1570 | 1556.77 | 3.97 | 1571 | 1558.67 | 7.37 | 1576 | 1561.3 | 7.23 |
| 51 | 20 | rnd | 1570 | 1557.17 | 9.94 | 1568 | 1554.2 | 8.84 | 1572 | 1554.9 | 11.05 | 1572 | 1555.47 | 10.04 |
| | | 2op | 1560 | 1554.33 | 1.69 | 1571 | 1558.07 | 4.31 | 1574 | 1558.83 | 4.78 | 1570 | 1560.57 | 4.53 |
| | 50 | rnd | 1572 | 1556.03 | 10.92 | 1569 | 1551.57 | 9.27 | 1572 | 1554.53 | 8.69 | 1570 | 1552.8 | 9.7 |
| | | 2op | 1558 | 1554.2 | 1.35 | 1567 | 1557.4 | 3.39 | 1571 | 1559.1 | 5.08 | 1574 | 1562.3 | 5.43 |

Table A.652: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1569 | 1552.43 | 9.12 | 1567 | 1553.1 | 9.87 | 1567 | 1555.63 | 8.29 | 1573 | 1557.17 | 9.63 |
| | | 2op | 1555 | 1553.3 | 1.15 | 1570 | 1557.93 | 4.81 | 1573 | 1560.77 | 5.22 | 1570 | 1560.3 | 6.76 |
| | 50 | rnd | 1570 | 1555.57 | 8.25 | 1579 | 1552.57 | 11.24 | 1572 | 1553.6 | 9.43 | 1573 | 1556.93 | 9.68 |
| | | 2op | 1566 | 1554.6 | 3.11 | 1567 | 1555.97 | 3.63 | 1571 | 1560.77 | 4.94 | 1575 | 1561.9 | 7.24 |
| 51 | 20 | rnd | 1569 | 1554.63 | 8.5 | 1574 | 1556.37 | 9.39 | 1570 | 1555.03 | 8.6 | 1574 | 1556.9 | 11.1 |
| | | 2op | 1562 | 1553.97 | 2.03 | 1570 | 1557.23 | 4.03 | 1567 | 1557.4 | 5.76 | 1572 | 1562.8 | 6.7 |
| | 50 | rnd | 1572 | 1554.3 | 11.19 | 1571 | 1550.43 | 13.43 | 1571 | 1556.57 | 9.74 | 1568 | 1556.4 | 6.78 |
| | | 2op | 1558 | 1553.73 | 1.46 | 1564 | 1556.57 | 2.37 | 1569 | 1557.37 | 3.56 | 1575 | 1563.7 | 5.54 |

Table A.653: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1552.3 | 9.59 | 1569 | 1550.93 | 9.1 | 1564 | 1551.8 | 9.22 | 1569 | 1554.93 | 7.89 |
| | | 2op | 1563 | 1547.97 | 11.62 | 1567 | 1551.33 | 9.43 | 1564 | 1551.77 | 9.51 | 1565 | 1552.53 | 9.39 |
| | 50 | rnd | 1565 | 1553.23 | 13.63 | 1571 | 1555.5 | 9.92 | 1570 | 1555.2 | 8.77 | 1569 | 1555.13 | 6.83 |
| | | 2op | 1565 | 1554.73 | 8.03 | 1569 | 1555.17 | 9.56 | 1566 | 1553.93 | 7.92 | 1566 | 1551.1 | 10.29 |
| 51 | 20 | rnd | 1568 | 1553.67 | 8.64 | 1567 | 1554.47 | 9.84 | 1570 | 1551.87 | 13.04 | 1570 | 1554.3 | 9.05 |
| | | 2op | 1568 | 1545.3 | 11.88 | 1569 | 1551.63 | 9.98 | 1568 | 1552.97 | 7.86 | 1569 | 1551.93 | 9.78 |
| | 50 | rnd | 1569 | 1553.27 | 8.86 | 1571 | 1555.47 | 9.18 | 1570 | 1556.63 | 8.16 | 1566 | 1551.43 | 11.55 |
| | | 2op | 1569 | 1551.37 | 9.29 | 1566 | 1551.37 | 10.99 | 1566 | 1553.2 | 9.33 | 1568 | 1557.4 | 6.48 |

Table A.654: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1568 | 1552.8 | 9.64 | 1564 | 1553.23 | 8.72 | 1564 | 1551.43 | 8.39 | 1566 | 1552.13 | 11.28 |
| | | 2op | 1572 | 1551.6 | 10.92 | 1568 | 1549.27 | 11.86 | 1566 | 1549.4 | 10.55 | 1568 | 1547.83 | 10.83 |
| | 50 | rnd | 1569 | 1552.4 | 9.89 | 1569 | 1555.57 | 8.05 | 1569 | 1554.87 | 8.9 | 1568 | 1554.03 | 9.26 |
| | | 2op | 1565 | 1550.97 | 10.42 | 1569 | 1552.43 | 11.36 | 1572 | 1554.67 | 10.12 | 1565 | 1553.8 | 7.44 |
| 51 | 20 | rnd | 1567 | 1551.13 | 12.24 | 1569 | 1552.67 | 8.87 | 1565 | 1552.77 | 6.55 | 1567 | 1549.87 | 10.93 |
| | | 2op | 1565 | 1544.77 | 11.14 | 1572 | 1553.1 | 8.23 | 1566 | 1549.87 | 10.25 | 1568 | 1551.73 | 10.67 |
| | 50 | rnd | 1569 | 1554.47 | 9.29 | 1568 | 1553.7 | 8.69 | 1567 | 1556.07 | 8.21 | 1566 | 1554.87 | 8.22 |
| | | 2op | 1569 | 1551.53 | 11.92 | 1572 | 1554.27 | 6.89 | 1564 | 1552.33 | 8.64 | 1569 | 1554.23 | 9.25 |

Table A.655: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1553.57 | 7.13 | 1569 | 1557.97 | 7 | 1570 | 1556.27 | 6.61 | 1566 | 1554.37 | 7.41 |
| | | 2op | 1566 | 1546.27 | 12.09 | 1572 | 1553.2 | 7.07 | 1569 | 1554.3 | 9.41 | 1567 | 1552.3 | 10.96 |
| | 50 | rnd | 1568 | 1553.63 | 7.77 | 1566 | 1555.83 | 9.48 | 1573 | 1555.8 | 7.63 | 1571 | 1556.07 | 7.25 |
| | | 2op | 1566 | 1550.87 | 9.86 | 1571 | 1554.3 | 7.53 | 1566 | 1553.67 | 10.28 | 1568 | 1553.2 | 9.4 |
| 51 | 20 | rnd | 1568 | 1553.43 | 10 | 1567 | 1553.17 | 7.51 | 1569 | 1559.07 | 8.23 | 1568 | 1557.03 | 7.19 |
| | | 2op | 1561 | 1551.3 | 8.92 | 1565 | 1553.57 | 4.85 | 1561 | 1554.03 | 4.92 | 1568 | 1555.23 | 6.12 |
| | 50 | rnd | 1567 | 1555.47 | 6.84 | 1570 | 1557.9 | 7.38 | 1570 | 1558.47 | 7.59 | 1570 | 1559.17 | 6.68 |
| | | 2op | 1565 | 1551.23 | 7.41 | 1569 | 1556.87 | 6.54 | 1567 | 1555.63 | 7.63 | 1568 | 1556.57 | 7.05 |

Table A.656: $f50\_412$: basicRRGA+IM: 500 – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1554.77 | 7.53 | 1569 | 1556.3 | 10.42 | 1567 | 1555.87 | 8.72 | 1567 | 1555.07 | 7.42 |
| | | 2op | 1564 | 1553.73 | 7.96 | 1569 | 1556.93 | 9.04 | 1568 | 1555.5 | 6.47 | 1571 | 1554.73 | 8.23 |
| | 50 | rnd | 1565 | 1553.37 | 10.44 | 1567 | 1556.73 | 7.03 | 1569 | 1557.43 | 7.69 | 1569 | 1553.77 | 9.42 |
| | | 2op | 1567 | 1550.23 | 9.89 | 1568 | 1552.4 | 8.95 | 1565 | 1555.37 | 7 | 1568 | 1552.5 | 10.84 |
| 51 | 20 | rnd | 1570 | 1553.23 | 8.83 | 1569 | 1556.8 | 8.8 | 1571 | 1559.03 | 7.96 | 1568 | 1555.53 | 8.34 |
| | | 2op | 1568 | 1552.07 | 9.44 | 1563 | 1554.47 | 5.34 | 1563 | 1554.2 | 5.06 | 1573 | 1555.63 | 8.17 |
| | 50 | rnd | 1569 | 1556.5 | 7.01 | 1569 | 1559.53 | 5.2 | 1569 | 1558.57 | 7.41 | 1568 | 1557.43 | 7.51 |
| | | 2op | 1570 | 1553.57 | 5.62 | 1568 | 1557.07 | 7.18 | 1566 | 1557.57 | 4.55 | 1570 | 1553.83 | 10.37 |

Table A.657: $f50\_412$: basicRRGA+IM: 5000 – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1543.03 | 14.51 | 1567 | 1547.7 | 9.44 | 1563 | 1545.93 | 12.52 | 1568 | 1547.57 | 11.75 |
| | | 2op | 1554 | 1532.47 | 5.23 | 1554 | 1533.57 | 5.6 | 1564 | 1536.43 | 12 | 1564 | 1544.6 | 11.97 |
| | 50 | rnd | 1567 | 1547.2 | 13.06 | 1558 | 1547.73 | 7.72 | 1566 | 1544.1 | 12.76 | 1568 | 1552.77 | 9.55 |
| | | 2op | 1533 | 1530.73 | 1.26 | 1558 | 1534.63 | 7.17 | 1561 | 1535.27 | 9.64 | 1566 | 1545.4 | 12 |
| 51 | 20 | rnd | 1567 | 1540.97 | 13.83 | 1563 | 1543.07 | 14.08 | 1564 | 1546.97 | 12.31 | 1565 | 1548.2 | 10.43 |
| | | 2op | 1556 | 1531.77 | 4.62 | 1561 | 1534.83 | 8.3 | 1562 | 1536.6 | 11.34 | 1565 | 1542.77 | 11.77 |
| | 50 | rnd | 1560 | 1540.17 | 10.72 | 1564 | 1544.7 | 14.12 | 1567 | 1548.3 | 11.35 | 1568 | 1550.2 | 9.4 |
| | | 2op | 1540 | 1531.53 | 2.3 | 1550 | 1532.2 | 3.99 | 1550 | 1533.6 | 5.38 | 1564 | 1547.63 | 11.05 |

Table A.658: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1538.6 | 13.17 | 1569 | 1549.27 | 12.79 | 1569 | 1546.3 | 14.09 | 1562 | 1545.87 | 9.61 |
| | | 2op | 1540 | 1530.77 | 1.98 | 1546 | 1533.73 | 4.33 | 1556 | 1537.57 | 9.89 | 1565 | 1548.77 | 12.21 |
| | 50 | rnd | 1570 | 1547.57 | 15.52 | 1563 | 1543.8 | 13.27 | 1566 | 1548.57 | 12.4 | 1570 | 1549.37 | 10.44 |
| | | 2op | 1532 | 1530.97 | 0.41 | 1546 | 1532.97 | 4.37 | 1563 | 1537.7 | 9.89 | 1565 | 1547.87 | 12.09 |
| 51 | 20 | rnd | 1566 | 1544.67 | 13.54 | 1565 | 1547.27 | 9.67 | 1566 | 1549.33 | 11.06 | 1567 | 1548.27 | 10.68 |
| | | 2op | 1540 | 1531.17 | 1.74 | 1557 | 1534.87 | 8.55 | 1558 | 1537.43 | 8.23 | 1564 | 1543.3 | 12.59 |
| | 50 | rnd | 1563 | 1543.33 | 14.87 | 1564 | 1545.03 | 11.24 | 1570 | 1547.63 | 13.88 | 1564 | 1542.77 | 14 |
| | | 2op | 1531 | 1531 | 0 | 1556 | 1533.07 | 6.15 | 1540 | 1532.77 | 3.32 | 1561 | 1542.47 | 10.87 |

Table A.659: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1546.9 | 8.88 | 1560 | 1547.7 | 9.22 | 1564 | 1551.1 | 8.76 | 1566 | 1547.27 | 9.21 |
| | | 2op | 1566 | 1551.6 | 5.92 | 1567 | 1550.87 | 11.19 | 1567 | 1550.13 | 9.5 | 1565 | 1551.13 | 7.05 |
| | 50 | rnd | 1565 | 1548.13 | 8.89 | 1565 | 1548.67 | 9.47 | 1562 | 1549.5 | 7.3 | 1566 | 1550.73 | 7.82 |
| | | 2op | 1568 | 1553.07 | 7.97 | 1562 | 1548.3 | 8.58 | 1564 | 1550.5 | 10.03 | 1568 | 1551.73 | 11.06 |
| 51 | 20 | rnd | 1567 | 1549.83 | 7.17 | 1562 | 1551.17 | 6.8 | 1568 | 1550.27 | 8.33 | 1563 | 1549.9 | 10.25 |
| | | 2op | 1561 | 1549.73 | 6.39 | 1564 | 1551.33 | 6.71 | 1565 | 1551.37 | 7.35 | 1567 | 1554.63 | 6.39 |
| | 50 | rnd | 1562 | 1550.17 | 7.61 | 1562 | 1549.13 | 9.38 | 1563 | 1549.37 | 8.45 | 1563 | 1549.13 | 7.36 |
| | | 2op | 1561 | 1552.37 | 4.78 | 1561 | 1551.07 | 6.23 | 1562 | 1550 | 7.58 | 1565 | 1549.27 | 8.72 |

Table A.660: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1549.67 | 9.04 | 1566 | 1552.17 | 8.91 | 1565 | 1547.07 | 9.3 | 1567 | 1549.63 | 11.51 |
| | | 2op | 1560 | 1548.57 | 7.66 | 1568 | 1551.8 | 10.41 | 1565 | 1553.4 | 8.67 | 1560 | 1548.5 | 8.05 |
| | 50 | rnd | 1563 | 1550.77 | 8.45 | 1563 | 1551.57 | 6.95 | 1566 | 1551.23 | 8.34 | 1560 | 1549.73 | 7.85 |
| | | 2op | 1565 | 1550.5 | 9.21 | 1561 | 1550.23 | 7.56 | 1568 | 1553.63 | 8.34 | 1561 | 1551.03 | 6.75 |
| 51 | 20 | rnd | 1562 | 1551.1 | 6.82 | 1563 | 1547.3 | 10.68 | 1566 | 1550.4 | 9.99 | 1563 | 1546.57 | 8.81 |
| | | 2op | 1560 | 1549.13 | 4.02 | 1565 | 1553.33 | 7.35 | 1566 | 1553.27 | 7.48 | 1564 | 1554.27 | 6.96 |
| | 50 | rnd | 1562 | 1549.4 | 9.43 | 1562 | 1548.07 | 7.33 | 1565 | 1550.17 | 9.54 | 1566 | 1549.5 | 10.06 |
| | | 2op | 1566 | 1551.3 | 5.86 | 1565 | 1549.4 | 8.47 | 1560 | 1550.8 | 5.5 | 1566 | 1551.97 | 7.62 |

Table A.661: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1562 | 1549.23 | 7.72 | 1565 | 1551.2 | 8.47 | 1563 | 1551.13 | 7.74 | 1560 | 1545.6 | 10.18 |
| | | 2op | 1558 | 1549.53 | 4.62 | 1565 | 1551.23 | 5.67 | 1563 | 1552.23 | 5.82 | 1565 | 1550.6 | 8.21 |
| | 50 | rnd | 1567 | 1551.3 | 8.53 | 1562 | 1547.2 | 8.87 | 1564 | 1546.17 | 10.43 | 1570 | 1553.77 | 9.34 |
| | | 2op | 1566 | 1550.87 | 6.75 | 1565 | 1552.87 | 8.91 | 1567 | 1554.2 | 7.77 | 1563 | 1550.77 | 7.25 |
| 51 | 20 | rnd | 1565 | 1551.5 | 9.79 | 1562 | 1549.73 | 9.88 | 1564 | 1550.5 | 9.25 | 1564 | 1552.9 | 6.16 |
| | | 2op | 1548 | 1548 | 0 | 1550 | 1548.13 | 1.04 | 1564 | 1550.27 | 3.89 | 1564 | 1551.87 | 5.45 |
| | 50 | rnd | 1563 | 1549.3 | 7.63 | 1565 | 1550.37 | 7.94 | 1565 | 1551.57 | 8.59 | 1568 | 1551.73 | 8.54 |
| | | 2op | 1562 | 1549.1 | 2.86 | 1560 | 1549.73 | 4.6 | 1564 | 1552.57 | 5.11 | 1568 | 1552.17 | 7.48 |

Table A.662: $f50\_498$: basicRRGA+IM: 500 – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1550.23 | 9.66 | 1564 | 1549.5 | 8.42 | 1559 | 1549.57 | 6.87 | 1566 | 1550.9 | 8.21 |
| | | 2op | 1563 | 1550.3 | 6.42 | 1563 | 1553.87 | 4.85 | 1570 | 1554.5 | 7.86 | 1561 | 1551.03 | 7.03 |
| | 50 | rnd | 1563 | 1549.83 | 6.18 | 1562 | 1550 | 8.43 | 1566 | 1550.87 | 8.65 | 1568 | 1550.63 | 9.74 |
| | | 2op | 1562 | 1550.83 | 6.84 | 1565 | 1552.63 | 7.96 | 1567 | 1554.63 | 8.67 | 1568 | 1550.03 | 9.28 |
| 51 | 20 | rnd | 1563 | 1551.23 | 6.96 | 1563 | 1548.7 | 8.82 | 1566 | 1550.97 | 8.34 | 1565 | 1549.4 | 8.32 |
| | | 2op | 1552 | 1548.33 | 0.92 | 1556 | 1549 | 1.72 | 1568 | 1551.07 | 4.77 | 1565 | 1552.73 | 6.89 |
| | 50 | rnd | 1564 | 1550.47 | 6.42 | 1564 | 1550.8 | 9.03 | 1563 | 1551.07 | 7.8 | 1567 | 1552.57 | 8.94 |
| | | 2op | 1557 | 1548.73 | 2.39 | 1566 | 1551.07 | 5.01 | 1564 | 1552.57 | 5.86 | 1564 | 1551.4 | 7.19 |

Table A.663: $f50\_498$: basicRRGA+IM: 5000 – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1549.03 | 8.62 | 1564 | 1548.4 | 9.54 | 1566 | 1546.37 | 10.02 | 1561 | 1544.93 | 9.34 |
| | | 2op | 1548 | 1548 | 0 | 1557 | 1548.8 | 2.5 | 1557 | 1548.43 | 4.75 | 1560 | 1550.93 | 5.72 |
| | 50 | rnd | 1562 | 1547.63 | 8.48 | 1563 | 1547.37 | 9.3 | 1562 | 1546.7 | 10 | 1560 | 1547.33 | 8.52 |
| | | 2op | 1551 | 1548.1 | 0.55 | 1560 | 1548.73 | 3.42 | 1560 | 1549.17 | 4.8 | 1558 | 1549.2 | 5.7 |
| 51 | 20 | rnd | 1565 | 1551.2 | 7.98 | 1559 | 1546.5 | 6.89 | 1565 | 1547.93 | 7.52 | 1561 | 1546.9 | 8.27 |
| | | 2op | 1548 | 1548 | 0 | 1560 | 1549.1 | 3.66 | 1556 | 1548.4 | 4.54 | 1560 | 1549.47 | 5.56 |
| | 50 | rnd | 1560 | 1551.3 | 5.85 | 1562 | 1546.87 | 8.16 | 1560 | 1546.1 | 8.75 | 1561 | 1546.53 | 7.22 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1547.53 | 2.06 | 1556 | 1546.93 | 4.67 | 1558 | 1549.73 | 2.72 |

Table A.664: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1548.83 | 12.77 | 1563 | 1546.7 | 9.94 | 1564 | 1547.87 | 8.17 | 1564 | 1547.17 | 10.71 |
| | | 2op | 1554 | 1548.2 | 1.1 | 1557 | 1548.63 | 1.97 | 1560 | 1551.23 | 5.09 | 1566 | 1550.47 | 4.94 |
| | 50 | rnd | 1565 | 1550.13 | 8.2 | 1564 | 1548.57 | 7.44 | 1560 | 1545.03 | 10.66 | 1561 | 1546.8 | 8.99 |
| | | 2op | 1548 | 1547.9 | 0.55 | 1552 | 1548.13 | 1.17 | 1560 | 1550.4 | 5 | 1558 | 1550.8 | 4.79 |
| 51 | 20 | rnd | 1565 | 1551.67 | 8.34 | 1565 | 1547.4 | 8.87 | 1560 | 1548.47 | 6.69 | 1568 | 1545.47 | 9.28 |
| | | 2op | 1553 | 1548.3 | 1.15 | 1557 | 1548.77 | 3.06 | 1558 | 1548.7 | 4.94 | 1561 | 1549.57 | 5.88 |
| | 50 | rnd | 1567 | 1547.67 | 11.83 | 1559 | 1546.1 | 9.57 | 1566 | 1545.83 | 9.05 | 1562 | 1544.87 | 9.12 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1547.83 | 0.91 | 1560 | 1548.63 | 3.76 | 1560 | 1550.63 | 4.22 |

Table A.665: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2784 | 2744.57 | 16.46 | 2766 | 2743.57 | 11.8 | 2767 | 2743.8 | 9.77 | 2762 | 2741.3 | 13.97 |
| | | 2op | 2770 | 2753.07 | 11.49 | 2765 | 2746.37 | 11.59 | 2765 | 2745.53 | 12.92 | 2772 | 2747.2 | 13.09 |
| | 50 | rnd | 2766 | 2745.27 | 12.76 | 2773 | 2742.37 | 14.51 | 2770 | 2743.7 | 13.38 | 2773 | 2743.67 | 11.33 |
| | | 2op | 2774 | 2754.5 | 10.93 | 2769 | 2747.93 | 11.57 | 2775 | 2747.6 | 12.77 | 2766 | 2745.1 | 12.03 |
| 51 | 20 | rnd | 2767 | 2742.77 | 12.43 | 2763 | 2744.7 | 12.43 | 2771 | 2743.17 | 9.95 | 2765 | 2744 | 11.98 |
| | | 2op | 2773 | 2758.4 | 9.45 | 2776 | 2757.07 | 9.82 | 2778 | 2753.03 | 11.99 | 2775 | 2747.43 | 14.48 |
| | 50 | rnd | 2767 | 2745.63 | 10.85 | 2765 | 2744.57 | 13.22 | 2763 | 2744.8 | 10.82 | 2761 | 2740.5 | 10.18 |
| | | 2op | 2772 | 2757.17 | 8.53 | 2771 | 2755.27 | 10.04 | 2767 | 2751.93 | 9.42 | 2777 | 2746.57 | 13.98 |

Table A.666: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2767 | 2744.33 | 17.69 | 2768 | 2747.23 | 12.44 | 2764 | 2740.87 | 12.02 | 2774 | 2746.57 | 15.73 |
| | | 2op | 2772 | 2755.27 | 11.19 | 2771 | 2746.87 | 10.11 | 2760 | 2742.97 | 11.96 | 2769 | 2748.83 | 11.19 |
| | 50 | rnd | 2774 | 2746.3 | 11.64 | 2767 | 2747.7 | 10.5 | 2766 | 2747.23 | 10.17 | 2760 | 2743.57 | 13.82 |
| | | 2op | 2766 | 2752.6 | 10.88 | 2766 | 2744.63 | 15.59 | 2768 | 2746.13 | 9.89 | 2764 | 2741.9 | 13.5 |
| 51 | 20 | rnd | 2773 | 2746.07 | 15.89 | 2764 | 2746.43 | 11.22 | 2765 | 2743.9 | 12.91 | 2769 | 2744.67 | 11.57 |
| | | 2op | 2774 | 2759.97 | 8.82 | 2771 | 2753.7 | 11.86 | 2766 | 2753.3 | 9.78 | 2770 | 2752.07 | 9.69 |
| | 50 | rnd | 2773 | 2746.27 | 13.76 | 2772 | 2746.37 | 13.43 | 2769 | 2746.4 | 14.73 | 2762 | 2743.53 | 13.47 |
| | | 2op | 2779 | 2760.37 | 8.02 | 2770 | 2752.97 | 9.41 | 2772 | 2751.43 | 11.06 | 2772 | 2749.43 | 12.16 |

Table A.667: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2777 | 2744.93 | 14.63 | 2772 | 2748.6 | 10.92 | 2771 | 2744.53 | 13.57 | 2763 | 2741.97 | 12.86 |
| | | 2op | 2772 | 2762.33 | 6.14 | 2771 | 2758 | 6.4 | 2776 | 2754.17 | 11.49 | 2768 | 2749.33 | 11.7 |
| | 50 | rnd | 2766 | 2746 | 11.02 | 2774 | 2744.7 | 12.48 | 2771 | 2747.5 | 11.96 | 2769 | 2746.93 | 12.55 |
| | | 2op | 2778 | 2759.87 | 8.01 | 2768 | 2751.17 | 10.79 | 2772 | 2746.07 | 15.53 | 2783 | 2751.57 | 12.49 |
| 51 | 20 | rnd | 2770 | 2746.97 | 12.32 | 2762 | 2744.73 | 11.68 | 2761 | 2743.77 | 13.88 | 2771 | 2748.7 | 11.5 |
| | | 2op | 2762 | 2761.7 | 1.64 | 2771 | 2762.63 | 2.09 | 2769 | 2762.6 | 2.27 | 2778 | 2762.03 | 7 |
| | 50 | rnd | 2766 | 2743.9 | 11.95 | 2770 | 2749.63 | 8.12 | 2768 | 2747.07 | 10.63 | 2772 | 2747.33 | 12.46 |
| | | 2op | 2770 | 2761.87 | 2.01 | 2778 | 2765.07 | 4.91 | 2771 | 2761.47 | 7.1 | 2776 | 2754.07 | 9.53 |

Table A.668: $f100\_307$: basicRRGA+IM: 500 – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2761 | 2740.73 | 12.42 | 2771 | 2749.83 | 12.71 | 2764 | 2743.83 | 12.32 | 2766 | 2746.6 | 13.95 |
| | | 2op | 2781 | 2763.43 | 7.5 | 2770 | 2756.07 | 9.9 | 2772 | 2753.07 | 11.39 | 2764 | 2745.07 | 13.49 |
| | 50 | rnd | 2770 | 2750.3 | 11.89 | 2770 | 2746.43 | 12.62 | 2765 | 2748.8 | 12.4 | 2770 | 2746.67 | 14.74 |
| | | 2op | 2778 | 2761.4 | 7.91 | 2774 | 2754.77 | 9.13 | 2778 | 2751.13 | 10.35 | 2774 | 2746.53 | 16.54 |
| 51 | 20 | rnd | 2763 | 2744.8 | 12.91 | 2780 | 2749.73 | 14.09 | 2783 | 2746.23 | 12.97 | 2769 | 2745 | 11.38 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2761.83 | 0.59 | 2778 | 2763.47 | 4.31 | 2771 | 2757.23 | 7.23 |
| | 50 | rnd | 2768 | 2744.57 | 11.75 | 2766 | 2747 | 12.69 | 2771 | 2747.3 | 11.15 | 2772 | 2748.5 | 11.6 |
| | | 2op | 2772 | 2763.13 | 3.29 | 2780 | 2765.77 | 6.72 | 2775 | 2762.07 | 9.15 | 2765 | 2750.6 | 10.75 |

Table A.669: $f100\_307$: basicRRGA+IM: 5000 – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2764 | 2742.4 | 13.12 | 2763 | 2743.23 | 13.58 | 2765 | 2738.57 | 16.87 | 2765 | 2745.37 | 13.11 |
| | | 2op | 2762 | 2762 | 0 | 2771 | 2762.43 | 3.78 | 2768 | 2762.9 | 2.48 | 2774 | 2761.7 | 6.33 |
| | 50 | rnd | 2769 | 2743.13 | 15.18 | 2765 | 2738.53 | 16 | 2755 | 2735.13 | 14.25 | 2759 | 2738.73 | 13.76 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2761.87 | 0.51 | 2767 | 2761.8 | 3.43 | 2776 | 2762.03 | 5.84 |
| 51 | 20 | rnd | 2767 | 2740.43 | 14.68 | 2771 | 2740.9 | 12.79 | 2759 | 2736.23 | 13 | 2777 | 2740.3 | 17.3 |
| | | 2op | 2762 | 2762 | 0 | 2766 | 2762.13 | 1.07 | 2778 | 2763.3 | 7.92 | 2774 | 2763.73 | 5.64 |
| | 50 | rnd | 2762 | 2744.2 | 12.77 | 2768 | 2743.8 | 13.78 | 2763 | 2742.27 | 11.62 | 2761 | 2732.47 | 14.23 |
| | | 2op | 2762 | 2762 | 0 | 2766 | 2762.07 | 0.83 | 2771 | 2761.83 | 3.61 | 2769 | 2761.1 | 4.89 |

Table A.670: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2763 | 2738.9 | 16.71 | 2761 | 2741.33 | 12.38 | 2768 | 2741.5 | 14.12 | 2765 | 2740.27 | 12.85 |
| | | 2op | 2765 | 2762.1 | 0.55 | 2770 | 2762.53 | 2.15 | 2770 | 2761.3 | 4.63 | 2772 | 2761 | 6.52 |
| | 50 | rnd | 2765 | 2745.83 | 13.75 | 2765 | 2741.3 | 14.69 | 2760 | 2739.27 | 14.14 | 2776 | 2743.5 | 14.97 |
| | | 2op | 2762 | 2761.9 | 0.55 | 2771 | 2762.6 | 2.39 | 2772 | 2762.17 | 3.82 | 2770 | 2760.23 | 6.58 |
| 51 | 20 | rnd | 2779 | 2747.37 | 15.26 | 2758 | 2737.53 | 14.71 | 2775 | 2741.83 | 13.93 | 2768 | 2742.57 | 17.46 |
| | | 2op | 2762 | 2761.97 | 0.18 | 2771 | 2762.7 | 2.32 | 2779 | 2764.37 | 4.39 | 2773 | 2760.5 | 7.66 |
| | 50 | rnd | 2774 | 2743.1 | 15.98 | 2767 | 2741.9 | 14.29 | 2767 | 2745.13 | 12.09 | 2768 | 2742 | 15.59 |
| | | 2op | 2762 | 2762 | 0 | 2765 | 2762.1 | 0.55 | 2773 | 2762.83 | 2.88 | 2772 | 2763.07 | 5.03 |

Table A.671: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2838 | 2815.07 | 11.79 | 2829 | 2812.17 | 10.54 | 2840 | 2818 | 10.88 | 2833 | 2811.6 | 11.48 |
| | | 2op | 2831 | 2811.73 | 10.98 | 2841 | 2809.23 | 15.08 | 2839 | 2809.8 | 14.92 | 2840 | 2812.1 | 13.48 |
| | 50 | rnd | 2841 | 2813.07 | 17.2 | 2835 | 2811.83 | 14.1 | 2838 | 2819.4 | 10.06 | 2844 | 2813.93 | 15.25 |
| | | 2op | 2839 | 2813.03 | 13.49 | 2836 | 2811.83 | 13.84 | 2837 | 2811.03 | 14.58 | 2834 | 2811.4 | 12.09 |
| 51 | 20 | rnd | 2837 | 2817.03 | 13.57 | 2845 | 2817.5 | 12.94 | 2844 | 2815.4 | 12.86 | 2838 | 2814.03 | 11.68 |
| | | 2op | 2842 | 2813.5 | 10.61 | 2827 | 2808.47 | 10.21 | 2839 | 2809.7 | 14.37 | 2835 | 2812.57 | 12.82 |
| | 50 | rnd | 2837 | 2818.77 | 13.11 | 2848 | 2820.27 | 12.7 | 2847 | 2818.47 | 14.7 | 2837 | 2817.5 | 10.49 |
| | | 2op | 2833 | 2809.5 | 10.77 | 2833 | 2810.27 | 11.37 | 2831 | 2810.4 | 14.98 | 2831 | 2811.37 | 11.44 |

Table A.672: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2840 | 2813.87 | 16.36 | 2845 | 2812.87 | 14.79 | 2840 | 2812.97 | 13.01 | 2830 | 2815.77 | 12.47 |
| | | 2op | 2828 | 2812.8 | 11.04 | 2844 | 2818.03 | 11.37 | 2843 | 2814.87 | 11.86 | 2848 | 2812.93 | 13.42 |
| | 50 | rnd | 2842 | 2818.87 | 11.5 | 2838 | 2816.03 | 15.33 | 2838 | 2812.8 | 18.12 | 2843 | 2816.93 | 14.27 |
| | | 2op | 2835 | 2812 | 12.63 | 2835 | 2812.7 | 11.88 | 2843 | 2812.03 | 12.89 | 2834 | 2809.07 | 13.12 |
| 51 | 20 | rnd | 2834 | 2810.33 | 14.76 | 2837 | 2816.57 | 12.21 | 2843 | 2816.37 | 12.07 | 2834 | 2817.27 | 12.56 |
| | | 2op | 2829 | 2807.9 | 10.84 | 2834 | 2810.47 | 13.66 | 2834 | 2812.5 | 14.4 | 2833 | 2811.03 | 12.48 |
| | 50 | rnd | 2837 | 2816.27 | 11.48 | 2843 | 2816.67 | 16.53 | 2830 | 2813.93 | 11.86 | 2834 | 2816.83 | 11.64 |
| | | 2op | 2820 | 2807.27 | 5.32 | 2833 | 2811.5 | 13.31 | 2835 | 2814.93 | 9.18 | 2832 | 2809.43 | 13.24 |

Table A.673: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2839 | 2810.47 | 13.62 | 2841 | 2818.3 | 12.8 | 2831 | 2809.83 | 11.7 | 2838 | 2812.93 | 13.55 |
| | | 2op | 2825 | 2808.8 | 6.95 | 2832 | 2810.77 | 11.3 | 2836 | 2811 | 15.57 | 2835 | 2812.8 | 12.5 |
| | 50 | rnd | 2827 | 2812.67 | 9.62 | 2838 | 2817.5 | 10.86 | 2841 | 2817.23 | 14.26 | 2842 | 2815.93 | 14.85 |
| | | 2op | 2839 | 2810.8 | 10.94 | 2835 | 2815.9 | 9.55 | 2840 | 2814.53 | 12.92 | 2833 | 2810.63 | 12.53 |
| 51 | 20 | rnd | 2839 | 2815.07 | 16.7 | 2846 | 2813.93 | 15.71 | 2838 | 2814.43 | 14.32 | 2838 | 2816.77 | 13.21 |
| | | 2op | 2810 | 2806 | 2.88 | 2810 | 2806.17 | 3.42 | 2826 | 2806.6 | 5.06 | 2837 | 2811.7 | 8.44 |
| | 50 | rnd | 2838 | 2816.37 | 12.06 | 2841 | 2817.9 | 13.97 | 2842 | 2820.93 | 11.59 | 2836 | 2816.3 | 9.16 |
| | | 2op | 2810 | 2807.07 | 3 | 2825 | 2808 | 5.61 | 2830 | 2813.1 | 7.48 | 2840 | 2809.9 | 13.95 |

Table A.674: $f100\_415$: basicRRGA+IM: 500 – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2838 | 2818.33 | 9.03 | 2840 | 2822.4 | 10.76 | 2836 | 2815 | 13.79 | 2830 | 2812.17 | 12.85 |
| | | 2op | 2840 | 2809.4 | 12.2 | 2839 | 2813.53 | 14.02 | 2838 | 2813.9 | 16.12 | 2834 | 2813 | 11.71 |
| | 50 | rnd | 2837 | 2820.97 | 9.25 | 2834 | 2816.87 | 12.57 | 2832 | 2815.4 | 11.21 | 2842 | 2817.07 | 11.68 |
| | | 2op | 2837 | 2813.37 | 10.65 | 2834 | 2816.3 | 10.82 | 2828 | 2808.27 | 9.74 | 2830 | 2813.57 | 10.16 |
| 51 | 20 | rnd | 2837 | 2811.87 | 13.3 | 2835 | 2816.8 | 12.8 | 2839 | 2819.13 | 13.1 | 2844 | 2817.27 | 12.13 |
| | | 2op | 2810 | 2806.2 | 2.94 | 2813 | 2807.7 | 3.12 | 2819 | 2808 | 3.64 | 2841 | 2811.97 | 12.37 |
| | 50 | rnd | 2832 | 2817.9 | 13.41 | 2839 | 2818.07 | 12.61 | 2841 | 2817.5 | 13.93 | 2844 | 2819.07 | 14.6 |
| | | 2op | 2821 | 2807.83 | 3.89 | 2819 | 2808.63 | 4.58 | 2838 | 2813.07 | 11.73 | 2832 | 2811.2 | 12.57 |

Table A.675: $f100\_415$: basicRRGA+IM: 5000 – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2827 | 2811.1 | 10.95 | 2834 | 2806.43 | 13.52 | 2826 | 2808.53 | 10.1 | 2832 | 2805.07 | 15.93 |
| | | 2op | 2814 | 2806.73 | 3.26 | 2818 | 2807.57 | 4.24 | 2823 | 2808.33 | 6.19 | 2825 | 2811.93 | 6.96 |
| | 50 | rnd | 2842 | 2813.8 | 14.32 | 2826 | 2807.97 | 12.22 | 2835 | 2808.07 | 10.76 | 2841 | 2809.23 | 14.17 |
| | | 2op | 2810 | 2805.6 | 2.7 | 2825 | 2806.9 | 4.84 | 2824 | 2807.5 | 4.86 | 2829 | 2807.53 | 9.09 |
| 51 | 20 | rnd | 2834 | 2807.6 | 13.66 | 2828 | 2808.87 | 14.78 | 2833 | 2805.73 | 13.84 | 2829 | 2810.47 | 14.35 |
| | | 2op | 2814 | 2805.7 | 3.19 | 2810 | 2805.57 | 3.65 | 2828 | 2808.57 | 6.32 | 2824 | 2807.47 | 7.95 |
| | 50 | rnd | 2830 | 2808.67 | 14.41 | 2844 | 2808.43 | 13.26 | 2830 | 2803.67 | 13.71 | 2834 | 2808.6 | 13.53 |
| | | 2op | 2810 | 2804.6 | 1.83 | 2814 | 2806.1 | 4.23 | 2817 | 2806.77 | 3.64 | 2825 | 2809.43 | 6.16 |

Table A.676: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2835 | 2806.1 | 17.46 | 2832 | 2807.93 | 13.17 | 2821 | 2805.1 | 13.12 | 2835 | 2809.1 | 14.31 |
| | | 2op | 2813 | 2806 | 2.96 | 2817 | 2807.33 | 4.14 | 2815 | 2805.83 | 4.97 | 2837 | 2807.93 | 8.82 |
| | 50 | rnd | 2831 | 2807.9 | 15.36 | 2834 | 2807.7 | 12.15 | 2827 | 2808.6 | 14.1 | 2829 | 2809.6 | 14.43 |
| | | 2op | 2810 | 2805.2 | 2.44 | 2814 | 2808.13 | 4.01 | 2820 | 2806.07 | 4.99 | 2824 | 2810.03 | 7.83 |
| 51 | 20 | rnd | 2829 | 2812.63 | 8.4 | 2838 | 2808.73 | 12.42 | 2834 | 2811.83 | 14.58 | 2842 | 2809.3 | 14.43 |
| | | 2op | 2813 | 2806.47 | 3.13 | 2818 | 2807.13 | 4.08 | 2820 | 2808.7 | 4.98 | 2819 | 2806.23 | 6.44 |
| | 50 | rnd | 2833 | 2812.13 | 12.11 | 2820 | 2804.73 | 10.89 | 2835 | 2805.87 | 15.96 | 2835 | 2807.47 | 12.43 |
| | | 2op | 2810 | 2805 | 2.27 | 2822 | 2807.63 | 4.67 | 2813 | 2806.87 | 3.61 | 2825 | 2809.27 | 5.81 |

Table A.677: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2685.3 | 10.44 | 2708 | 2686.27 | 12.8 | 2716 | 2689.57 | 13.58 | 2710 | 2688.37 | 14.2 |
| | | 2op | 2706 | 2694.77 | 10.04 | 2707 | 2687.67 | 9.86 | 2705 | 2688.2 | 11.44 | 2710 | 2686 | 14.28 |
| | 50 | rnd | 2712 | 2687.2 | 13.69 | 2713 | 2688.2 | 11.88 | 2711 | 2687.9 | 12.79 | 2716 | 2686.7 | 13.03 |
| | | 2op | 2703 | 2689.33 | 8.93 | 2708 | 2689.43 | 10.37 | 2707 | 2687.73 | 10.02 | 2709 | 2684.87 | 13.03 |
| 51 | 20 | rnd | 2713 | 2689.1 | 11.18 | 2706 | 2685.3 | 10.94 | 2712 | 2689.87 | 11.46 | 2711 | 2690.07 | 11.11 |
| | | 2op | 2713 | 2693.7 | 8.95 | 2709 | 2691.2 | 9.03 | 2708 | 2691.07 | 10.74 | 2717 | 2689.97 | 9.65 |
| | 50 | rnd | 2708 | 2686.47 | 12.8 | 2717 | 2688.53 | 13.13 | 2710 | 2688.07 | 12.47 | 2707 | 2687.27 | 11.44 |
| | | 2op | 2713 | 2693.47 | 6.45 | 2711 | 2692.17 | 8.79 | 2709 | 2691.97 | 9.81 | 2711 | 2687.73 | 16.13 |

Table A.678: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2687.4 | 10.51 | 2707 | 2687.6 | 12.76 | 2709 | 2690.27 | 14.89 | 2705 | 2684.23 | 12.65 |
| | | 2op | 2705 | 2693.27 | 7.79 | 2718 | 2689.37 | 10.17 | 2700 | 2687.07 | 10.32 | 2710 | 2685.07 | 13 |
| | 50 | rnd | 2710 | 2686.03 | 14.8 | 2703 | 2687 | 8.41 | 2711 | 2686 | 11.48 | 2709 | 2685.47 | 13.5 |
| | | 2op | 2709 | 2691.9 | 11.33 | 2707 | 2687.63 | 9.75 | 2702 | 2685.83 | 10.91 | 2709 | 2687.63 | 11.02 |
| 51 | 20 | rnd | 2710 | 2687.97 | 11.86 | 2718 | 2689.37 | 10.88 | 2711 | 2682.87 | 11.96 | 2706 | 2687.4 | 12.04 |
| | | 2op | 2711 | 2696.07 | 6.63 | 2707 | 2692.43 | 9.83 | 2705 | 2691.13 | 9.04 | 2708 | 2690.7 | 10.26 |
| | 50 | rnd | 2713 | 2688.53 | 12.51 | 2706 | 2686.33 | 13.7 | 2707 | 2689.37 | 13.05 | 2706 | 2687.63 | 12.81 |
| | | 2op | 2710 | 2693.93 | 8.21 | 2707 | 2694.83 | 7.28 | 2711 | 2693.67 | 10.83 | 2710 | 2690.1 | 12.91 |

Table A.679: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2687.2 | 11.89 | 2703 | 2686.73 | 11.67 | 2707 | 2687.07 | 13.89 | 2704 | 2688.6 | 8.97 |
| | | 2op | 2709 | 2695.07 | 7.05 | 2712 | 2692.83 | 10.08 | 2715 | 2694 | 10.16 | 2711 | 2691.97 | 10.05 |
| | 50 | rnd | 2713 | 2689.47 | 13.79 | 2710 | 2688.7 | 10.84 | 2704 | 2686.57 | 10.71 | 2717 | 2686.57 | 11.46 |
| | | 2op | 2707 | 2694.03 | 8.21 | 2710 | 2691.9 | 10.39 | 2705 | 2690.7 | 7.46 | 2709 | 2689.33 | 11.82 |
| 51 | 20 | rnd | 2704 | 2682.6 | 13.39 | 2708 | 2686.23 | 13.65 | 2711 | 2684.2 | 13.69 | 2715 | 2686.5 | 16.62 |
| | | 2op | 2701 | 2695.33 | 1.21 | 2701 | 2695.63 | 1.27 | 2709 | 2697.13 | 4.29 | 2708 | 2695.43 | 6.46 |
| | 50 | rnd | 2708 | 2685.23 | 14.13 | 2710 | 2689.7 | 11.79 | 2712 | 2689.87 | 11.37 | 2711 | 2687.87 | 13.37 |
| | | 2op | 2705 | 2695.83 | 3.67 | 2713 | 2696.93 | 4.56 | 2710 | 2697.8 | 5.55 | 2712 | 2692.8 | 9.45 |

Table A.680: $f100\_512$: basicRRGA+IM: 500 – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2701 | 2684.83 | 13.04 | 2713 | 2685.1 | 11.5 | 2711 | 2690.13 | 11.85 | 2706 | 2685.33 | 14.01 |
| | | 2op | 2712 | 2694.13 | 8.75 | 2704 | 2691.07 | 9.43 | 2713 | 2691.6 | 10.56 | 2710 | 2691.67 | 13.82 |
| | 50 | rnd | 2713 | 2686.1 | 15.7 | 2707 | 2686.3 | 10.76 | 2709 | 2689.63 | 13.42 | 2711 | 2691.17 | 10.86 |
| | | 2op | 2713 | 2695.77 | 8.99 | 2712 | 2693.13 | 9.72 | 2705 | 2693.47 | 7.29 | 2706 | 2692.63 | 9.1 |
| 51 | 20 | rnd | 2713 | 2689.5 | 13.83 | 2710 | 2691.63 | 11.75 | 2711 | 2685.97 | 16.05 | 2714 | 2688.67 | 10.4 |
| | | 2op | 2701 | 2695.73 | 1.7 | 2702 | 2696.73 | 2.36 | 2706 | 2697.67 | 5.35 | 2706 | 2696.2 | 7.06 |
| | 50 | rnd | 2708 | 2685.57 | 11.53 | 2712 | 2692 | 10.75 | 2708 | 2688.43 | 11.38 | 2710 | 2687.43 | 12.39 |
| | | 2op | 2706 | 2695.7 | 4.06 | 2712 | 2697.03 | 7.23 | 2707 | 2693.3 | 10.89 | 2709 | 2692.83 | 10.91 |

Table A.681: $f100\_512$: basicRRGA+IM: 5000 – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2696 | 2674.67 | 11.83 | 2707 | 2676 | 12.46 | 2700 | 2678.37 | 13.42 | 2705 | 2676.8 | 13.9 |
| | | 2op | 2698 | 2692.43 | 4.27 | 2700 | 2695.2 | 1.99 | 2704 | 2692.97 | 6.91 | 2711 | 2696.8 | 5.95 |
| | 50 | rnd | 2704 | 2676.23 | 11.48 | 2710 | 2672.87 | 15.96 | 2703 | 2678.53 | 15.57 | 2699 | 2676.27 | 13.35 |
| | | 2op | 2695 | 2692.5 | 3.7 | 2698 | 2693.6 | 3.38 | 2700 | 2694.37 | 5.16 | 2706 | 2696.8 | 4.57 |
| 51 | 20 | rnd | 2705 | 2674.7 | 15.79 | 2710 | 2678.2 | 16.46 | 2704 | 2681.07 | 13.32 | 2706 | 2679.83 | 14.69 |
| | | 2op | 2700 | 2692.47 | 3.99 | 2700 | 2694.37 | 3.7 | 2704 | 2694.8 | 4.04 | 2703 | 2693.27 | 6 |
| | 50 | rnd | 2699 | 2673.2 | 16.27 | 2702 | 2677.8 | 15.11 | 2702 | 2676.77 | 15.61 | 2696 | 2675.67 | 16.04 |
| | | 2op | 2698 | 2691.63 | 4.16 | 2695 | 2694.93 | 0.37 | 2700 | 2695.4 | 2.16 | 2713 | 2695.6 | 5.02 |

Table A.682: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2698 | 2679.63 | 12.41 | 2694 | 2676.1 | 13.03 | 2708 | 2682.43 | 13.32 | 2710 | 2684.7 | 12.84 |
| | | 2op | 2698 | 2692.47 | 3.77 | 2700 | 2695.5 | 3.3 | 2700 | 2694.13 | 2.78 | 2709 | 2693.1 | 7.42 |
| | 50 | rnd | 2695 | 2673.97 | 11.9 | 2704 | 2680.33 | 14.29 | 2704 | 2678 | 14.33 | 2704 | 2679.63 | 14.73 |
| | | 2op | 2695 | 2692.07 | 3.92 | 2700 | 2695.33 | 2.02 | 2702 | 2694.97 | 4.19 | 2711 | 2695.57 | 6.09 |
| 51 | 20 | rnd | 2696 | 2678.07 | 11.66 | 2701 | 2673.23 | 15.52 | 2701 | 2679.1 | 13.71 | 2698 | 2677.97 | 11.79 |
| | | 2op | 2699 | 2692.23 | 4.17 | 2700 | 2693.97 | 3.03 | 2705 | 2695.57 | 4.03 | 2705 | 2695.5 | 6.33 |
| | 50 | rnd | 2698 | 2678.9 | 11.21 | 2702 | 2681.7 | 12.63 | 2697 | 2676.4 | 12.96 | 2702 | 2679.47 | 16.14 |
| | | 2op | 2695 | 2692.33 | 3.84 | 2695 | 2694.53 | 2.56 | 2703 | 2695.53 | 3.48 | 2702 | 2694.3 | 6.02 |

Table A.683: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17829 | 17710.3 | 67.8 | 17854 | 17713 | 69.24 | 17848 | 17727 | 69.52 | 17794 | 17699.4 | 59.2 |
| | | 2op | 17832 | 17759.53 | 44.93 | 17887 | 17747.4 | 81.65 | 17807 | 17752 | 40.6 | 17821 | 17736 | 48.76 |
| | 50 | rnd | 17794 | 17717.47 | 51.88 | 17799 | 17669.2 | 104.31 | 17803 | 17679.67 | 73.81 | 17786 | 17678.7 | 96.76 |
| | | 2op | 17841 | 17760.57 | 49.05 | 17838 | 17740.33 | 75.33 | 17845 | 17742.37 | 69.93 | 17836 | 17733.23 | 76.88 |
| 51 | 20 | rnd | 17805 | 17691.9 | 73.87 | 17800 | 17716.1 | 56.92 | 17834 | 17733.93 | 67.48 | 17817 | 17708.53 | 58.78 |
| | | 2op | 17812 | 17773.97 | 20.54 | 17835 | 17779.37 | 41.62 | 17847 | 17768.5 | 48.76 | 17835 | 17748.33 | 62.15 |
| | 50 | rnd | 17803 | 17690.83 | 75.15 | 17803 | 17726.93 | 54.65 | 17828 | 17690.8 | 85.72 | 17817 | 17698.03 | 74.85 |
| | | 2op | 17834 | 17779.1 | 31.22 | 17839 | 17764.83 | 56.04 | 17867 | 17744.23 | 58.34 | 17836 | 17751.8 | 50.93 |

Table A.684: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17888 | 17728.1 | 62.72 | 17861 | 17710.33 | 80.12 | 17781 | 17691.73 | 70.1 | 17790 | 17689.83 | 51.19 |
| | | 2op | 17835 | 17766.43 | 38.93 | 17851 | 17759.33 | 59.1 | 17836 | 17767.9 | 46.39 | 17829 | 17732.37 | 70.8 |
| | 50 | rnd | 17826 | 17682 | 84.52 | 17845 | 17714.67 | 63.18 | 17795 | 17685.17 | 72.24 | 17798 | 17698.03 | 72.63 |
| | | 2op | 17842 | 17778.63 | 39.67 | 17853 | 17756.2 | 68.78 | 17848 | 17748.5 | 65.45 | 17854 | 17742.63 | 51.67 |
| 51 | 20 | rnd | 17832 | 17693.23 | 73.09 | 17799 | 17681.97 | 86.68 | 17827 | 17704.97 | 76.67 | 17806 | 17697.57 | 76.32 |
| | | 2op | 17849 | 17777.67 | 31.75 | 17825 | 17760.47 | 44.49 | 17830 | 17765.3 | 52.32 | 17871 | 17774.6 | 45.93 |
| | 50 | rnd | 17790 | 17695.23 | 73.88 | 17810 | 17690.87 | 114.04 | 17828 | 17721.63 | 66.82 | 17837 | 17710.33 | 66.24 |
| | | 2op | 17823 | 17764.43 | 31.9 | 17846 | 17752.8 | 51.95 | 17854 | 17755.63 | 55.15 | 17844 | 17758.8 | 67.6 |

Table A.685: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17823 | 17707.83 | 72.29 | 17810 | 17708.47 | 45.77 | 17822 | 17714.2 | 60.71 | 17802 | 17722.7 | 59.66 |
| | | 2op | 17814 | 17778.57 | 17.71 | 17815 | 17774.83 | 25.74 | 17837 | 17771 | 38.87 | 17848 | 17781.43 | 41.77 |
| | 50 | rnd | 17841 | 17681.53 | 94.41 | 17788 | 17658.53 | 84.97 | 17802 | 17708.5 | 59.39 | 17877 | 17707.8 | 86.46 |
| | | 2op | 17817 | 17770.83 | 21.51 | 17849 | 17775.83 | 28.32 | 17874 | 17774.67 | 37.5 | 17828 | 17767.23 | 30.44 |
| 51 | 20 | rnd | 17841 | 17694.9 | 83.92 | 17853 | 17697.63 | 73.54 | 17808 | 17708.87 | 66.11 | 17827 | 17685.7 | 72.91 |
| | | 2op | 17806 | 17775.77 | 9.58 | 17802 | 17775.17 | 8.91 | 17812 | 17781.53 | 11.43 | 17817 | 17788.33 | 20.65 |
| | 50 | rnd | 17784 | 17708.93 | 53.35 | 17805 | 17675.03 | 84.91 | 17793 | 17704.73 | 63.07 | 17802 | 17695.07 | 74.85 |
| | | 2op | 17789 | 17774.77 | 7.49 | 17813 | 17778.47 | 12.14 | 17830 | 17784.93 | 15.97 | 17843 | 17791.93 | 20.28 |

Table A.686: $f508\_354$: basicRRGA+IM: 500 – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17850 | 17714.67 | 66.88 | 17834 | 17711.97 | 76.41 | 17816 | 17711.73 | 65.35 | 17806 | 17706.97 | 46.16 |
| | | 2op | 17813 | 17775.93 | 18.39 | 17838 | 17773.8 | 22.16 | 17872 | 17795.13 | 28.54 | 17876 | 17768.57 | 43.94 |
| | 50 | rnd | 17801 | 17729.73 | 58.07 | 17807 | 17690.7 | 70.79 | 17811 | 17721.2 | 64.02 | 17832 | 17709.63 | 72.19 |
| | | 2op | 17847 | 17780.57 | 19.76 | 17846 | 17778.93 | 36.67 | 17824 | 17773.7 | 37.23 | 17845 | 17761 | 48.52 |
| 51 | 20 | rnd | 17900 | 17712.33 | 102.09 | 17827 | 17708.37 | 82.35 | 17808 | 17694.93 | 97.71 | 17851 | 17707.6 | 90.18 |
| | | 2op | 17806 | 17774.1 | 8.4 | 17825 | 17782.7 | 14.21 | 17825 | 17793.03 | 17.73 | 17814 | 17753.7 | 39.79 |
| | 50 | rnd | 17828 | 17726.13 | 60.56 | 17853 | 17720.67 | 70.08 | 17798 | 17706.77 | 49.34 | 17801 | 17712.83 | 58.96 |
| | | 2op | 17813 | 17776.27 | 11.02 | 17826 | 17784.07 | 12.57 | 17831 | 17781.9 | 32.36 | 17851 | 17755.9 | 43.88 |

Table A.687: $f508\_354$: basicRRGA+IM: 5000 – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17809 | 17710.93 | 61.42 | 17805 | 17709.77 | 60.03 | 17817 | 17706.8 | 54.94 | 17780 | 17709.23 | 67.46 |
| | | 2op | 17787 | 17771.33 | 4.33 | 17812 | 17773.03 | 8.42 | 17788 | 17774.43 | 7.2 | 17806 | 17777.13 | 11.63 |
| | 50 | rnd | 17829 | 17727.57 | 66.47 | 17824 | 17709.47 | 58.69 | 17789 | 17688.1 | 75.1 | 17794 | 17706.37 | 53.61 |
| | | 2op | 17787 | 17771.03 | 3.25 | 17813 | 17777.17 | 10.61 | 17796 | 17773.93 | 7.38 | 17795 | 17776 | 8.58 |
| 51 | 20 | rnd | 17837 | 17698 | 55.4 | 17796 | 17698.9 | 66.68 | 17816 | 17720.33 | 53.51 | 17839 | 17700.63 | 76.47 |
| | | 2op | 17787 | 17771.7 | 5.19 | 17806 | 17775.03 | 10.21 | 17830 | 17778.43 | 14.08 | 17796 | 17777.57 | 10.11 |
| | 50 | rnd | 17805 | 17709.33 | 72.49 | 17829 | 17713.73 | 61.28 | 17820 | 17714.8 | 54.75 | 17853 | 17714.9 | 74.11 |
| | | 2op | 17787 | 17771.47 | 3.5 | 17795 | 17775.4 | 7.54 | 17813 | 17777.9 | 12.15 | 17796 | 17776.6 | 7.88 |

Table A.688: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17808 | 17718.87 | 43.2 | 17818 | 17697.07 | 70.75 | 17816 | 17686.8 | 69.42 | 17837 | 17698.67 | 59.24 |
| | | 2op | 17802 | 17772.1 | 6.51 | 17795 | 17773.07 | 6.3 | 17789 | 17773.03 | 6.13 | 17811 | 17780.43 | 10.7 |
| | 50 | rnd | 17815 | 17710.17 | 79.09 | 17853 | 17702.43 | 81.15 | 17795 | 17705.23 | 47.46 | 17820 | 17690.7 | 65.94 |
| | | 2op | 17795 | 17772.87 | 6.64 | 17795 | 17773.13 | 6.44 | 17812 | 17774.7 | 9.35 | 17816 | 17778.4 | 12.22 |
| 51 | 20 | rnd | 17868 | 17705.67 | 70.84 | 17828 | 17698.83 | 85.24 | 17785 | 17699.67 | 62.2 | 17858 | 17716.7 | 63 |
| | | 2op | 17787 | 17773.33 | 5.73 | 17795 | 17775.5 | 7.97 | 17809 | 17777.53 | 11.1 | 17806 | 17778 | 10.07 |
| | 50 | rnd | 17851 | 17724.47 | 58.01 | 17828 | 17708.5 | 67.58 | 17810 | 17720.53 | 51.06 | 17810 | 17710.03 | 52.94 |
| | | 2op | 17815 | 17773.27 | 9.57 | 17812 | 17774.77 | 10.62 | 17830 | 17777.5 | 13.42 | 17806 | 17775.53 | 8.77 |

Table A.689: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22149 | 21915.7 | 101.64 | 22116 | 21935.53 | 99.87 | 22082 | 21962.27 | 87.9 | 22044 | 21925.47 | 74.53 |
| | | 2op | 22116 | 22036.27 | 50.58 | 22151 | 22005.33 | 78.12 | 22153 | 22005.2 | 81.93 | 22122 | 22003.2 | 99.96 |
| | 50 | rnd | 22106 | 21937.3 | 85.04 | 22036 | 21880.37 | 156.04 | 22084 | 21924.3 | 135.43 | 22123 | 21921.87 | 98.17 |
| | | 2op | 22141 | 22035 | 54.28 | 22155 | 22022.4 | 81.56 | 22091 | 21999.2 | 80.08 | 22126 | 21999.6 | 66.86 |
| 51 | 20 | rnd | 22073 | 21905.77 | 89.36 | 22064 | 21913.83 | 147.92 | 22102 | 21918 | 98.35 | 22044 | 21925.2 | 98.66 |
| | | 2op | 22107 | 22048.43 | 30.89 | 22119 | 22032.13 | 46.01 | 22125 | 22008.37 | 58.92 | 22113 | 22032.23 | 46.09 |
| | 50 | rnd | 22089 | 21913.17 | 108.64 | 22127 | 21919.23 | 130.66 | 22105 | 21935.63 | 84.02 | 22091 | 21906.2 | 174.65 |
| | | 2op | 22130 | 22031.97 | 52.56 | 22128 | 22017 | 52.36 | 22110 | 22029.37 | 62.97 | 22089 | 22014.5 | 59.81 |

Table A.690: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22136 | 21922.43 | 79.64 | 22016 | 21913.13 | 76.83 | 22113 | 21961.33 | 75.62 | 22050 | 21938.53 | 78.02 |
| | | 2op | 22120 | 22035.53 | 52.9 | 22164 | 22010.1 | 70.81 | 22123 | 21982.17 | 100.35 | 22132 | 22001.03 | 54.35 |
| | 50 | rnd | 22101 | 21935.73 | 74.68 | 22093 | 21926.87 | 139.42 | 22099 | 21938.3 | 93.36 | 22086 | 21926.33 | 102.29 |
| | | 2op | 22097 | 22006.83 | 54.45 | 22126 | 22006.93 | 72.24 | 22084 | 21965.87 | 95.44 | 22080 | 21976.7 | 89.16 |
| 51 | 20 | rnd | 22056 | 21943.33 | 59.28 | 22083 | 21947.93 | 71.16 | 22022 | 21916.63 | 86.4 | 22077 | 21912.6 | 89.12 |
| | | 2op | 22095 | 22039.4 | 32.56 | 22144 | 22015.97 | 60.01 | 22152 | 22046.47 | 61.28 | 22113 | 22008.8 | 48.55 |
| | 50 | rnd | 22058 | 21887.47 | 116.18 | 22037 | 21916.9 | 83.22 | 22077 | 21910.6 | 105.69 | 22037 | 21946.13 | 81.36 |
| | | 2op | 22155 | 22040.6 | 41.53 | 22146 | 22009.73 | 56.21 | 22108 | 22010.8 | 71.84 | 22108 | 21999.8 | 88.51 |

Table A.691: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22096 | 21906.87 | 93.08 | 22078 | 21901.4 | 89.68 | 22116 | 21946.5 | 90.93 | 22050 | 21908.53 | 99.55 |
| | | 2op | 22116 | 22049.13 | 16.7 | 22098 | 22047.2 | 28.54 | 22148 | 22040.9 | 46.81 | 22103 | 22030.5 | 61.07 |
| | 50 | rnd | 22096 | 21910.23 | 87.62 | 22059 | 21933.57 | 81.96 | 22079 | 21931.03 | 94.91 | 22044 | 21913.77 | 125.72 |
| | | 2op | 22110 | 22041.77 | 25.44 | 22124 | 22057.13 | 31.56 | 22150 | 22043.53 | 50.05 | 22104 | 22028.03 | 49.5 |
| 51 | 20 | rnd | 22037 | 21905.17 | 93.74 | 22091 | 21944.97 | 70.57 | 22052 | 21952.3 | 95.61 | 22080 | 21940.07 | 88.24 |
| | | 2op | 22051 | 22047.13 | 0.73 | 22094 | 22049 | 9.09 | 22084 | 22049.2 | 9.33 | 22136 | 22062.87 | 34.57 |
| | 50 | rnd | 22057 | 21930.87 | 73.42 | 22068 | 21919.73 | 102.33 | 22076 | 21921.97 | 90.13 | 22121 | 21923 | 86.6 |
| | | 2op | 22056 | 22046.47 | 4.9 | 22083 | 22046.8 | 10.14 | 22096 | 22049.23 | 10.69 | 22134 | 22059.07 | 36.93 |

Table A.692: $f635\_350$: basicRRGA+IM: 500 – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22047 | 21918.27 | 79.29 | 22080 | 21925.53 | 78.71 | 22070 | 21903.17 | 103.85 | 22060 | 21925.27 | 88.74 |
| | | 2op | 22087 | 22044.7 | 14.15 | 22099 | 22046.83 | 28.46 | 22145 | 22065.67 | 40.86 | 22135 | 22011.67 | 63.93 |
| | 50 | rnd | 22079 | 21919.73 | 85.15 | 22082 | 21907.17 | 120.11 | 22066 | 21937.87 | 83.87 | 22059 | 21925.17 | 85.65 |
| | | 2op | 22100 | 22046.57 | 16.13 | 22122 | 22041.4 | 40.57 | 22154 | 22050.53 | 55.92 | 22088 | 21974.4 | 69.43 |
| 51 | 20 | rnd | 22034 | 21916.67 | 67.93 | 22084 | 21925.27 | 112.33 | 22065 | 21952.9 | 69.97 | 22092 | 21928.33 | 72.91 |
| | | 2op | 22047 | 22047 | 0 | 22093 | 22049.47 | 9.98 | 22107 | 22057.7 | 29.8 | 22160 | 22027.17 | 61.34 |
| | 50 | rnd | 22053 | 21949.77 | 67.17 | 22125 | 21941.9 | 78.56 | 22075 | 21921.63 | 98.01 | 22078 | 21931.23 | 90.58 |
| | | 2op | 22051 | 22047.4 | 1.22 | 22083 | 22050.53 | 8.53 | 22115 | 22047.93 | 54.46 | 22128 | 22018.97 | 64.41 |

Table A.693: $f635\_350$: basicRRGA+IM: 5000 – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22038 | 21921.87 | 65.85 | 22076 | 21927.13 | 71.67 | 22092 | 21930.23 | 78.26 | 22076 | 21925.1 | 84.7 |
| | | 2op | 22047 | 22047 | 0 | 22083 | 22048.33 | 6.59 | 22047 | 22047 | 0 | 22064 | 22047.5 | 3.66 |
| | 50 | rnd | 22142 | 21928.03 | 87.56 | 22074 | 21943.77 | 75.86 | 22049 | 21909.53 | 88.06 | 22036 | 21929.13 | 56.56 |
| | | 2op | 22047 | 22047 | 0 | 22051 | 22047.13 | 0.73 | 22092 | 22048.07 | 8.63 | 22051 | 22046.93 | 1.34 |
| 51 | 20 | rnd | 22089 | 21955.27 | 79.71 | 22068 | 21941.9 | 61.51 | 22119 | 21923.4 | 72.49 | 22049 | 21939.23 | 61.81 |
| | | 2op | 22051 | 22047.13 | 0.73 | 22051 | 22047.27 | 1.01 | 22051 | 22047.13 | 0.73 | 22075 | 22047.77 | 5.78 |
| | 50 | rnd | 22061 | 21921.1 | 75.26 | 22056 | 21932.4 | 79.05 | 22040 | 21913.7 | 79.59 | 22068 | 21924.13 | 67.48 |
| | | 2op | 22051 | 22047.13 | 0.73 | 22047 | 22047 | 0 | 22051 | 22047.27 | 1.01 | 22047 | 22046.6 | 2.19 |

Table A.694: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22038 | 21918.67 | 66.43 | 22039 | 21916.1 | 64.83 | 22076 | 21900.17 | 100.98 | 22065 | 21932.43 | 77.67 |
| | | 2op | 22047 | 22047 | 0 | 22047 | 22047 | 0 | 22051 | 22047.4 | 1.22 | 22051 | 22047.67 | 1.52 |
| | 50 | rnd | 22056 | 21912.27 | 88.49 | 22079 | 21909.97 | 97.82 | 22077 | 21929.87 | 63.5 | 22038 | 21944.4 | 71.21 |
| | | 2op | 22047 | 22047 | 0 | 22051 | 22047.13 | 0.73 | 22051 | 22047.27 | 1.01 | 22060 | 22047.3 | 2.51 |
| 51 | 20 | rnd | 22080 | 21917.97 | 73.76 | 22069 | 21948.9 | 53.83 | 22041 | 21923.73 | 82.81 | 22042 | 21920.93 | 80.34 |
| | | 2op | 22047 | 22047 | 0 | 22051 | 22047.27 | 1.01 | 22055 | 22047.27 | 1.46 | 22051 | 22046.53 | 4.47 |
| | 50 | rnd | 22047 | 21929.23 | 67.23 | 22062 | 21925.07 | 69.82 | 22069 | 21940.6 | 83.39 | 22101 | 21912.1 | 95.6 |
| | | 2op | 22047 | 22047 | 0 | 22047 | 22047 | 0 | 22051 | 22047.13 | 0.73 | 22051 | 22047.13 | 0.73 |

Table A.695: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24628 | 24457.13 | 155.02 | 24645 | 24467.37 | 132.29 | 24659 | 24500.73 | 99.74 | 24679 | 24471.07 | 91.61 |
| | | 2op | 24681 | 24544.47 | 75.86 | 24705 | 24533.43 | 102.85 | 24690 | 24546.73 | 90.86 | 24702 | 24527.6 | 90.08 |
| | 50 | rnd | 24698 | 24535.67 | 97.66 | 24656 | 24472.13 | 128.95 | 24744 | 24477.9 | 154.86 | 24624 | 24500.8 | 67.81 |
| | | 2op | 24694 | 24548.37 | 67.1 | 24707 | 24513.57 | 106.44 | 24678 | 24539.07 | 100.09 | 24697 | 24496.63 | 127.17 |
| 51 | 20 | rnd | 24666 | 24458.63 | 158.39 | 24612 | 24466.97 | 108.1 | 24649 | 24459.6 | 95.45 | 24686 | 24524.87 | 99.44 |
| | | 2op | 24662 | 24555.7 | 54.71 | 24656 | 24548.03 | 74.87 | 24667 | 24513.07 | 90.13 | 24673 | 24534.7 | 105.98 |
| | 50 | rnd | 24697 | 24468.73 | 165.1 | 24651 | 24450.6 | 166.83 | 24646 | 24495.1 | 88.52 | 24654 | 24472.67 | 88.94 |
| | | 2op | 24645 | 24540.07 | 56.58 | 24618 | 24515.43 | 70.92 | 24690 | 24539.4 | 110.13 | 24700 | 24522.97 | 114.88 |

Table A.696: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24656 | 24485.4 | 90.39 | 24627 | 24482.87 | 111.29 | 24668 | 24525 | 85.56 | 24593 | 24473.93 | 84.91 |
| | | 2op | 24673 | 24532.27 | 75.53 | 24674 | 24530.53 | 120.41 | 24695 | 24528.73 | 114.42 | 24684 | 24534.93 | 114.54 |
| | 50 | rnd | 24684 | 24515.23 | 100.21 | 24662 | 24484.33 | 138.42 | 24675 | 24511.97 | 95.83 | 24663 | 24523.7 | 87.7 |
| | | 2op | 24685 | 24556.73 | 80.88 | 24656 | 24536.63 | 98.15 | 24691 | 24539.53 | 100.09 | 24671 | 24557.63 | 63.03 |
| 51 | 20 | rnd | 24656 | 24485.47 | 102.38 | 24664 | 24525.67 | 85.33 | 24703 | 24525.33 | 78.45 | 24638 | 24496.33 | 110.51 |
| | | 2op | 24686 | 24540.83 | 61.54 | 24657 | 24525.33 | 71.72 | 24691 | 24545.57 | 95.46 | 24679 | 24556.63 | 83.51 |
| | 50 | rnd | 24615 | 24474.1 | 82.88 | 24643 | 24504.2 | 85.72 | 24638 | 24452.6 | 139.08 | 24701 | 24477.97 | 109.06 |
| | | 2op | 24634 | 24541.67 | 52.45 | 24672 | 24547.23 | 80.1 | 24673 | 24520.07 | 95.79 | 24700 | 24546.53 | 94.28 |

Table A.697: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24635 | 24495.57 | 97.72 | 24670 | 24483.8 | 103.98 | 24630 | 24507.13 | 88.8 | 24657 | 24486 | 107.35 |
| | | 2op | 24640 | 24539.43 | 40.63 | 24659 | 24542.03 | 51.57 | 24683 | 24571.2 | 69.68 | 24665 | 24568.93 | 56.28 |
| | 50 | rnd | 24651 | 24469.77 | 91.63 | 24638 | 24489.17 | 91.08 | 24625 | 24466.27 | 97.38 | 24646 | 24514.5 | 91.84 |
| | | 2op | 24675 | 24550.97 | 49.5 | 24620 | 24548.73 | 48.38 | 24706 | 24564.33 | 65.34 | 24669 | 24559.47 | 44.11 |
| 51 | 20 | rnd | 24624 | 24503.57 | 82.43 | 24642 | 24509.37 | 93.95 | 24623 | 24442.4 | 178.82 | 24632 | 24472.4 | 125.08 |
| | | 2op | 24552 | 24521.07 | 8.55 | 24597 | 24530 | 21.65 | 24632 | 24550.97 | 40.13 | 24717 | 24563.43 | 66.53 |
| | 50 | rnd | 24643 | 24475 | 103.58 | 24622 | 24462.77 | 124.05 | 24702 | 24514.13 | 105.72 | 24630 | 24483.97 | 90.17 |
| | | 2op | 24598 | 24525.3 | 16.92 | 24617 | 24539.67 | 35.07 | 24604 | 24540.47 | 28.91 | 24648 | 24570.17 | 45.33 |

Table A.698: $f737\_355$: basicRRGA+IM: 500 – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24699 | 24514.2 | 95.92 | 24599 | 24472.23 | 84.86 | 24652 | 24496.3 | 109.4 | 24635 | 24459.37 | 94.95 |
| | | 2op | 24659 | 24550.27 | 43.15 | 24680 | 24568.03 | 64.97 | 24684 | 24560.57 | 76.82 | 24686 | 24541.73 | 61.92 |
| | 50 | rnd | 24653 | 24484.73 | 178.55 | 24615 | 24481.53 | 95.77 | 24712 | 24462.5 | 143.67 | 24613 | 24471.6 | 99.87 |
| | | 2op | 24654 | 24567.7 | 46.59 | 24652 | 24558.1 | 53.61 | 24656 | 24570.7 | 68.13 | 24678 | 24558.6 | 77.45 |
| 51 | 20 | rnd | 24645 | 24504.93 | 95.89 | 24664 | 24475.17 | 103.13 | 24707 | 24513.1 | 94.48 | 24606 | 24498.4 | 96.38 |
| | | 2op | 24598 | 24530.2 | 23.89 | 24636 | 24540.83 | 41.39 | 24667 | 24562 | 54 | 24685 | 24566.47 | 82.54 |
| | 50 | rnd | 24654 | 24532.13 | 80 | 24687 | 24490 | 102.87 | 24686 | 24488.43 | 106.24 | 24639 | 24512.8 | 91.9 |
| | | 2op | 24612 | 24533.2 | 25.77 | 24657 | 24559.8 | 43.51 | 24699 | 24559.17 | 61.91 | 24702 | 24566.6 | 62.28 |

Table A.699: $f737\_355$: basicRRGA+IM: 5000 – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24690 | 24525.07 | 84.04 | 24640 | 24504.2 | 86.28 | 24657 | 24508.5 | 113.45 | 24620 | 24513.37 | 101.96 |
| | | 2op | 24598 | 24525.37 | 14.51 | 24547 | 24521.17 | 7.64 | 24635 | 24528.2 | 25.23 | 24604 | 24526.57 | 21.55 |
| | 50 | rnd | 24615 | 24499.57 | 65.55 | 24704 | 24489.77 | 96.71 | 24637 | 24509.43 | 65.06 | 24657 | 24524.37 | 77.33 |
| | | 2op | 24635 | 24529.03 | 21.72 | 24635 | 24534.1 | 31.07 | 24598 | 24531.27 | 24.8 | 24614 | 24524.97 | 18.3 |
| 51 | 20 | rnd | 24643 | 24497.3 | 86.39 | 24593 | 24483.07 | 76.94 | 24682 | 24487.67 | 143.43 | 24682 | 24512.17 | 90.24 |
| | | 2op | 24598 | 24526.57 | 16.54 | 24598 | 24527.3 | 22.08 | 24585 | 24525.47 | 18.29 | 24598 | 24524.13 | 24.62 |
| | 50 | rnd | 24629 | 24501 | 82.48 | 24692 | 24508.8 | 89.41 | 24679 | 24501.9 | 93.78 | 24687 | 24517.4 | 121.25 |
| | | 2op | 24525 | 24523.07 | 2.79 | 24619 | 24526.9 | 25.12 | 24635 | 24525.97 | 23.38 | 24611 | 24536.2 | 32.22 |

Table A.700: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24683 | 24509 | 97.53 | 24686 | 24494.97 | 91.38 | 24689 | 24472.5 | 109.58 | 24725 | 24505 | 92.6 |
| | | 2op | 24598 | 24525.37 | 14.04 | 24598 | 24531.3 | 22.73 | 24598 | 24524.4 | 15.51 | 24581 | 24522.9 | 15.36 |
| | 50 | rnd | 24607 | 24480.9 | 81.89 | 24604 | 24478.7 | 97.06 | 24631 | 24502.73 | 76.74 | 24669 | 24505.73 | 107.13 |
| | | 2op | 24598 | 24527.63 | 16.14 | 24598 | 24527.1 | 19.15 | 24604 | 24529.2 | 21.68 | 24585 | 24531.7 | 19.04 |
| 51 | 20 | rnd | 24705 | 24517.57 | 87.3 | 24615 | 24522.1 | 84.83 | 24611 | 24498.27 | 78.08 | 24695 | 24464.5 | 115.08 |
| | | 2op | 24598 | 24524.93 | 14.73 | 24547 | 24522.63 | 8.4 | 24612 | 24526.23 | 22.16 | 24644 | 24525.83 | 26.7 |
| | 50 | rnd | 24627 | 24494 | 79.92 | 24692 | 24495.87 | 95.09 | 24658 | 24520.07 | 81.85 | 24675 | 24513.93 | 91.49 |
| | | 2op | 24598 | 24526.33 | 14.66 | 24635 | 24528.53 | 25.59 | 24598 | 24524.53 | 16.56 | 24579 | 24523.33 | 15.49 |

Table A.701: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47747 | 47362.63 | 178.22 | 47709 | 47382.13 | 215.14 | 47670 | 47431.2 | 180.19 | 47700 | 47504.5 | 189.55 |
| | | 2op | 47808 | 47564.27 | 100.29 | 47833 | 47627.97 | 158.06 | 47878 | 47576.23 | 197.3 | 47830 | 47569.83 | 145.97 |
| | 50 | rnd | 47689 | 47403.1 | 276.33 | 47793 | 47402.27 | 350.44 | 47764 | 47368.87 | 260.89 | 47849 | 47424.3 | 219.49 |
| | | 2op | 47817 | 47577.4 | 118.59 | 47826 | 47614.43 | 166.78 | 47877 | 47632.03 | 168.74 | 47802 | 47561.6 | 216.2 |
| 51 | 20 | rnd | 47722 | 47291.3 | 357.98 | 47804 | 47440.8 | 232.11 | 47795 | 47425.87 | 183.35 | 47789 | 47422.63 | 194.23 |
| | | 2op | 47695 | 47543.73 | 52.9 | 47783 | 47539.33 | 146.78 | 47862 | 47627.47 | 97.86 | 47928 | 47605.63 | 124.04 |
| | 50 | rnd | 47803 | 47363.73 | 312.6 | 47735 | 47383.2 | 258.77 | 47759 | 47357.43 | 247.32 | 47713 | 47407.43 | 251.84 |
| | | 2op | 47735 | 47576.03 | 84.28 | 47846 | 47547.57 | 140.4 | 47828 | 47565.3 | 150.73 | 47859 | 47580.53 | 152.57 |

Table A.702: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47664 | 47397.27 | 170.08 | 47760 | 47528.27 | 158.71 | 47837 | 47411.67 | 219.63 | 47836 | 47396.3 | 224.22 |
| | | 2op | 47804 | 47569.7 | 102.61 | 47893 | 47547.13 | 215.17 | 47848 | 47587.3 | 190.61 | 47922 | 47609.37 | 150.05 |
| | 50 | rnd | 47800 | 47262.83 | 442.87 | 47719 | 47384.7 | 270.15 | 47695 | 47353.7 | 329.48 | 47801 | 47466.53 | 265.74 |
| | | 2op | 47766 | 47575.57 | 102.48 | 47826 | 47550.37 | 158.64 | 47806 | 47582.97 | 179.28 | 47832 | 47591.73 | 164.69 |
| 51 | 20 | rnd | 47744 | 47358.53 | 196.6 | 47760 | 47467.63 | 154.52 | 47824 | 47429.63 | 313.9 | 47702 | 47406.47 | 339.66 |
| | | 2op | 47756 | 47582.8 | 89.19 | 47861 | 47609.63 | 145.18 | 47874 | 47632.8 | 134.52 | 47861 | 47580.03 | 167.42 |
| | 50 | rnd | 47739 | 47299.93 | 346.18 | 47786 | 47346.47 | 326.93 | 47710 | 47435.03 | 168.47 | 47777 | 47374.3 | 347.38 |
| | | 2op | 47703 | 47561.27 | 69.47 | 47814 | 47563.67 | 144.69 | 47804 | 47571.3 | 174.55 | 47884 | 47597.9 | 174.17 |

Table A.703: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47740 | 47422.33 | 257.46 | 47846 | 47401.83 | 222.61 | 47760 | 47367.37 | 333.31 | 47755 | 47431.87 | 207.11 |
| | | 2op | 47803 | 47578.9 | 82.52 | 47801 | 47613.67 | 92.75 | 47840 | 47639.7 | 148.97 | 47874 | 47601.43 | 94.61 |
| | 50 | rnd | 47707 | 47401.03 | 268.21 | 47770 | 47366.47 | 283.71 | 47711 | 47367.43 | 189.01 | 47837 | 47494.97 | 232.16 |
| | | 2op | 47791 | 47607.33 | 87.83 | 47818 | 47618.8 | 103.53 | 47862 | 47590.23 | 142.87 | 47777 | 47667.57 | 56.31 |
| 51 | 20 | rnd | 47713 | 47351.63 | 275.42 | 47791 | 47362.13 | 231.34 | 47753 | 47408.6 | 204.66 | 47677 | 47354.43 | 297.31 |
| | | 2op | 47768 | 47576.2 | 56.87 | 47776 | 47580.77 | 60.5 | 47734 | 47644 | 70.54 | 47819 | 47659.53 | 73.31 |
| | 50 | rnd | 47747 | 47336.17 | 310.75 | 47715 | 47423.07 | 215.21 | 47774 | 47383.9 | 212.2 | 47780 | 47444.47 | 191.21 |
| | | 2op | 47715 | 47579.2 | 50.14 | 47822 | 47606.03 | 78.08 | 47731 | 47614.43 | 66.93 | 47860 | 47649.63 | 101.75 |

Table A.704: $f1343\_354$: basicRRGA+IM: 500 – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47761 | 47368.8 | 198.99 | 47727 | 47438.6 | 172.46 | 47725 | 47417.73 | 223.85 | 47780 | 47465.77 | 155.87 |
| | | 2op | 47775 | 47570.6 | 73.62 | 47853 | 47607.27 | 117.85 | 47840 | 47617.3 | 128.96 | 47877 | 47641.43 | 135.31 |
| | 50 | rnd | 47711 | 47350.73 | 364.78 | 47683 | 47413.1 | 203.28 | 47792 | 47406.03 | 192.09 | 47764 | 47406 | 170.75 |
| | | 2op | 47755 | 47592.37 | 70.99 | 47851 | 47658.93 | 108.02 | 47789 | 47638 | 76.22 | 47875 | 47629.2 | 129.54 |
| 51 | 20 | rnd | 47677 | 47401.4 | 236.78 | 47680 | 47383.17 | 233.97 | 47774 | 47448.7 | 234.05 | 47856 | 47505.73 | 164.41 |
| | | 2op | 47715 | 47588.8 | 57.87 | 47671 | 47583.1 | 39.72 | 47776 | 47623.1 | 83.25 | 47851 | 47649.87 | 104.9 |
| | 50 | rnd | 47661 | 47380.43 | 329.4 | 47752 | 47432.2 | 181.15 | 47835 | 47369.93 | 200.86 | 47826 | 47383.43 | 185.47 |
| | | 2op | 47683 | 47570.37 | 34.86 | 47797 | 47628.4 | 74.45 | 47798 | 47656 | 98.93 | 47806 | 47595.77 | 151.62 |

Table A.705: $f1343\_354$: basicRRGA+IM: 5000 – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47774 | 47492.6 | 133.26 | 47771 | 47508.07 | 164.65 | 47775 | 47424.73 | 185.29 | 47705 | 47489.47 | 117.77 |
| | | 2op | 47789 | 47630.83 | 39.81 | 47748 | 47618.1 | 58.57 | 47748 | 47618.93 | 73.15 | 47713 | 47586.2 | 48.14 |
| | 50 | rnd | 47685 | 47409.1 | 184.75 | 47755 | 47462.33 | 171.73 | 47749 | 47478.5 | 182.62 | 47702 | 47405.2 | 234.34 |
| | | 2op | 47748 | 47638.13 | 52.69 | 47748 | 47622.5 | 59.31 | 47747 | 47598.63 | 60.32 | 47782 | 47591.03 | 72.38 |
| 51 | 20 | rnd | 47639 | 47442.2 | 138.1 | 47785 | 47476.53 | 190.62 | 47710 | 47464.47 | 137.02 | 47840 | 47452.6 | 181.22 |
| | | 2op | 47748 | 47610.53 | 51.73 | 47762 | 47612.07 | 78.31 | 47841 | 47629.97 | 84.21 | 47762 | 47612.9 | 72.08 |
| | 50 | rnd | 47763 | 47461.53 | 163.9 | 47785 | 47496.4 | 158.83 | 47764 | 47490.57 | 175.44 | 47790 | 47517.7 | 160.34 |
| | | 2op | 47747 | 47624.57 | 40.99 | 47722 | 47587.83 | 52.25 | 47704 | 47590.6 | 48.73 | 47762 | 47586.67 | 50.95 |

Table A.706: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47771 | 47464.03 | 174.85 | 47794 | 47450.33 | 154.6 | 47663 | 47405.33 | 162.45 | 47862 | 47467.1 | 162.19 |
| | | 2op | 47747 | 47619.43 | 39.11 | 47704 | 47608.5 | 44.95 | 47731 | 47588.87 | 47.54 | 47745 | 47588.73 | 57.91 |
| | 50 | rnd | 47767 | 47422.07 | 206.61 | 47736 | 47423.8 | 190.56 | 47599 | 47426.57 | 121.03 | 47709 | 47417.23 | 153.78 |
| | | 2op | 47704 | 47623.43 | 35 | 47748 | 47620.57 | 64.7 | 47747 | 47607.37 | 63.45 | 47724 | 47607.6 | 63.7 |
| 51 | 20 | rnd | 47712 | 47504.37 | 117.59 | 47850 | 47488.07 | 150.81 | 47778 | 47413.77 | 195.76 | 47746 | 47456.53 | 207.11 |
| | | 2op | 47748 | 47620.03 | 50.59 | 47748 | 47604.83 | 66.09 | 47752 | 47603.07 | 69.28 | 47767 | 47602.4 | 68.84 |
| | 50 | rnd | 47879 | 47516.77 | 130.92 | 47820 | 47514.23 | 157.88 | 47771 | 47509.3 | 144.68 | 47824 | 47498.63 | 149.13 |
| | | 2op | 47789 | 47636.6 | 68.53 | 47748 | 47603.13 | 59.24 | 47768 | 47611.3 | 70.64 | 47731 | 47609.53 | 61.21 |

Table A.707: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55855 | 55436.3 | 224.92 | 55683 | 55306.13 | 389.52 | 55891 | 55312.8 | 375.42 | 55744 | 55392.77 | 205.88 |
| | | 2op | 55825 | 55645.53 | 72.46 | 55889 | 55630.03 | 166.69 | 55833 | 55620.03 | 145.15 | 55998 | 55590.83 | 273.5 |
| | 50 | rnd | 55890 | 55372.63 | 344.21 | 55735 | 55460.33 | 166.99 | 55830 | 55273.23 | 362.21 | 55724 | 55353.63 | 323.6 |
| | | 2op | 55872 | 55631.27 | 78.02 | 55904 | 55607.87 | 177.75 | 55938 | 55663.03 | 184 | 55944 | 55616.27 | 196.41 |
| 51 | 20 | rnd | 55848 | 55471.07 | 232.17 | 55779 | 55325.83 | 460.04 | 55650 | 55279.27 | 371.87 | 55789 | 55438.6 | 231.43 |
| | | 2op | 55789 | 55667.4 | 44.37 | 55959 | 55654.8 | 144.88 | 55872 | 55563.93 | 233.33 | 55963 | 55617.73 | 163.01 |
| | 50 | rnd | 55712 | 55255.3 | 401.79 | 55801 | 55351.63 | 320.6 | 55781 | 55374.17 | 250.29 | 55849 | 55272.27 | 467.7 |
| | | 2op | 55823 | 55663.6 | 47.67 | 55884 | 55653.57 | 119.79 | 55981 | 55655.13 | 178.93 | 55882 | 55671 | 180.18 |

Table A.708: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55786 | 55338 | 339.65 | 55917 | 55319.4 | 310.02 | 55747 | 55233.07 | 412.58 | 55737 | 55441.03 | 226.59 |
| | | 2op | 55818 | 55633.67 | 84.15 | 55958 | 55625.5 | 181.89 | 55867 | 55623.23 | 180.9 | 55926 | 55655.47 | 173.77 |
| | 50 | rnd | 55695 | 55259.6 | 353.1 | 55778 | 55295.17 | 372.17 | 55715 | 55452.57 | 134.67 | 55801 | 55431.33 | 231.01 |
| | | 2op | 55863 | 55626.5 | 79.86 | 55906 | 55622.9 | 144.45 | 55864 | 55626.23 | 172.92 | 55907 | 55596.83 | 274.34 |
| 51 | 20 | rnd | 55736 | 55349 | 350.28 | 55820 | 55316.87 | 428.4 | 55872 | 55409.83 | 375.27 | 55788 | 55355.17 | 297.99 |
| | | 2op | 55848 | 55663.07 | 57.4 | 55810 | 55652.07 | 126.4 | 55831 | 55637.53 | 127.52 | 55833 | 55636.7 | 167.54 |
| | 50 | rnd | 55727 | 55339.5 | 328.45 | 55703 | 55216.03 | 358.92 | 55790 | 55457 | 204.26 | 55673 | 55354.57 | 342.89 |
| | | 2op | 55774 | 55665.73 | 42.98 | 55808 | 55629.8 | 111.21 | 55937 | 55639.4 | 158.81 | 55888 | 55661.43 | 150.72 |

Table A.709: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55806 | 55386.63 | 326.14 | 55721 | 55276.63 | 386.31 | 55907 | 55453.93 | 258.85 | 55753 | 55406.3 | 171.97 |
| | | 2op | 55859 | 55699.67 | 44.35 | 55796 | 55673.2 | 91.12 | 55888 | 55655.3 | 118.29 | 55868 | 55668.07 | 138.25 |
| | 50 | rnd | 55689 | 55309.27 | 340.01 | 55741 | 55242.57 | 428.47 | 55715 | 55368.5 | 418.68 | 55893 | 55388.37 | 366.83 |
| | | 2op | 55762 | 55684.17 | 25.6 | 55822 | 55649.37 | 95.16 | 55885 | 55699.57 | 89.21 | 55953 | 55660.93 | 142.64 |
| 51 | 20 | rnd | 55718 | 55248.5 | 359.34 | 55682 | 55357.6 | 306.4 | 55798 | 55368.83 | 373.87 | 55707 | 55386.97 | 203.9 |
| | | 2op | 55775 | 55707.7 | 23.44 | 55763 | 55696.8 | 26.03 | 55731 | 55686.37 | 19.39 | 55873 | 55707.9 | 68.87 |
| | 50 | rnd | 55838 | 55347.5 | 327.59 | 55823 | 55431.9 | 338.9 | 55608 | 55129.43 | 442.5 | 55676 | 55314.9 | 238.94 |
| | | 2op | 55764 | 55711.8 | 20.5 | 55765 | 55694.37 | 31.06 | 55844 | 55699.67 | 46.18 | 55800 | 55691.97 | 76.97 |

Table A.710: $f1577\_354$: basicRRGA+IM: 500 – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55917 | 55347.7 | 259.41 | 55851 | 55385.27 | 363.04 | 55733 | 55429.13 | 217.43 | 55800 | 55391.37 | 205.26 |
| | | 2op | 55833 | 55713.33 | 40.97 | 55780 | 55641.03 | 93.87 | 55942 | 55684.77 | 109.35 | 55830 | 55670.6 | 95.78 |
| | 50 | rnd | 55781 | 55384.3 | 243.34 | 55846 | 55472.37 | 189.5 | 55676 | 55388.77 | 190.57 | 55823 | 55410.07 | 209.06 |
| | | 2op | 55830 | 55685.47 | 43.97 | 55869 | 55668.83 | 108.13 | 55892 | 55671.43 | 121.98 | 55928 | 55631 | 203.74 |
| 51 | 20 | rnd | 55935 | 55357.33 | 251.67 | 55686 | 55335.73 | 224.55 | 55756 | 55412.13 | 235.59 | 55854 | 55481.17 | 220.6 |
| | | 2op | 55732 | 55703.87 | 21.49 | 55751 | 55689.33 | 23.25 | 55808 | 55700.3 | 68.55 | 55875 | 55644.67 | 154.02 |
| | 50 | rnd | 55654 | 55355.27 | 224.86 | 55825 | 55397.4 | 365.02 | 55843 | 55406.53 | 241.42 | 55716 | 55424.53 | 230.44 |
| | | 2op | 55732 | 55707.17 | 23.08 | 55837 | 55703.17 | 57.04 | 55831 | 55700.17 | 88.81 | 55882 | 55652.1 | 170.58 |

Table A.711: $f1577\_354$: basicRRGA+IM: 5000 – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55657 | 55374.97 | 203.19 | 55720 | 55369.7 | 233.8 | 55845 | 55456.33 | 234.81 | 55759 | 55374.3 | 246.28 |
| | | 2op | 55742 | 55653.33 | 18.04 | 55742 | 55671.83 | 28.25 | 55741 | 55675.33 | 27.67 | 55740 | 55697 | 22.71 |
| | 50 | rnd | 55894 | 55460.4 | 236.67 | 55728 | 55474.43 | 192.3 | 55840 | 55471.43 | 254.45 | 55823 | 55461.97 | 278.98 |
| | | 2op | 55660 | 55648.57 | 2.34 | 55748 | 55676 | 30.58 | 55775 | 55693.2 | 34.35 | 55740 | 55688.57 | 20.89 |
| 51 | 20 | rnd | 55720 | 55398.83 | 259.89 | 55758 | 55451.17 | 170.1 | 55745 | 55395.07 | 201.54 | 55658 | 55384.07 | 209.5 |
| | | 2op | 55741 | 55658.33 | 20.8 | 55770 | 55677.33 | 28.28 | 55788 | 55684.3 | 26.87 | 55741 | 55704.33 | 18.73 |
| | 50 | rnd | 55799 | 55419.73 | 222.01 | 55749 | 55481.63 | 198.85 | 55752 | 55489.1 | 177.94 | 55749 | 55498.27 | 148.41 |
| | | 2op | 55742 | 55655.43 | 19.86 | 55725 | 55669.77 | 25.87 | 55770 | 55685.63 | 27.52 | 55741 | 55699.27 | 21.01 |

Table A.712: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | 5 Restarts | | | 10 Restarts | | | 20 Restarts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55793 | 55473.13 | 192.78 | 55764 | 55448.23 | 195.29 | 55725 | 55425.5 | 194.06 | 55782 | 55440.8 | 223.76 |
| | | 2op | 55768 | 55659.9 | 29.27 | 55742 | 55667.67 | 24.79 | 55742 | 55683.6 | 30.55 | 55724 | 55688.7 | 19.23 |
| | 50 | rnd | 55696 | 55435.5 | 208.58 | 55835 | 55484.17 | 190.8 | 55900 | 55458.3 | 215.77 | 55782 | 55421.93 | 248.13 |
| | | 2op | 55737 | 55652.17 | 17.43 | 55720 | 55659.8 | 21.56 | 55775 | 55676.7 | 30.51 | 55781 | 55691.93 | 36.09 |
| 51 | 20 | rnd | 55754 | 55399.63 | 172.01 | 55710 | 55457.73 | 188.79 | 55883 | 55375.43 | 208.98 | 55712 | 55415.73 | 208.83 |
| | | 2op | 55742 | 55657.57 | 22.55 | 55743 | 55682.63 | 31.38 | 55749 | 55690.17 | 28.05 | 55743 | 55695.97 | 24.66 |
| | 50 | rnd | 55703 | 55391.3 | 189.18 | 55840 | 55408.53 | 216.07 | 55711 | 55449.47 | 193.32 | 55943 | 55487.4 | 161.97 |
| | | 2op | 55742 | 55663.8 | 29.5 | 55748 | 55674.77 | 27.8 | 55732 | 55685.47 | 25.85 | 55761 | 55703.77 | 24.37 |

Table A.713: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

### A.6.2 Second Set of Results

**Results With No Post Optimization and No Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46637 | 46316.97 | 250.01 | 46274 | 45406.8 | 565.78 | 43622 | 43622 | 0 | 43622 | 43622 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 46680 | 46321.1 | 174.79 | 46559 | 45932.87 | 347.81 | 43627 | 43622.17 | 0.91 | 43622 | 43622 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 46790 | 46515.33 | 149.75 | 46758 | 46441.4 | 144.39 | 45985 | 44882.87 | 485.79 | 43622 | 43622 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 46821 | 46505.63 | 183.94 | 46784 | 46443.57 | 180.18 | 46317 | 45669.83 | 361.7 | 43622 | 43622 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.714: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46499 | 46277.77 | 160.12 | 47075 | 46874.63 | 80.05 | 46306 | 45854.67 | 195.16 | 45254 | 44577.47 | 354.6 |
| | | 2op | 47343 | 47294.93 | 21.32 | 47290 | 47274.97 | 3.29 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 46527 | 46312.17 | 113 | 47262 | 47108.93 | 69.25 | 46546 | 46152.73 | 213.53 | 45809 | 45293.93 | 198.09 |
| | | 2op | 47354 | 47305.23 | 19.48 | 47363 | 47294 | 24.52 | 47287 | 47274.43 | 2.37 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 46624 | 46378.27 | 123.42 | 47312 | 47172.4 | 57.75 | 46846 | 46587.5 | 188.99 | 46039 | 45695.3 | 229.93 |
| | | 2op | 47385 | 47294.9 | 23.54 | 47364 | 47311.13 | 23.24 | 47285 | 47274.67 | 2.55 | 47274 | 47274 | 0 |
| | 50 | rnd | 46579 | 46282.23 | 145.51 | 47344 | 47226.27 | 56.86 | 47111 | 46795.97 | 144 | 46255 | 45854.87 | 162.33 |
| | | 2op | 47355 | 47303.73 | 22.05 | 47388 | 47341.07 | 24.77 | 47284 | 47274.33 | 1.83 | 47274 | 47274 | 0 |

Table A.715: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46494 | 46277.23 | 155.16 | 46075 | 45539.33 | 283.85 | 43622 | 43622 | 0 | 43622 | 43622 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 46723 | 46311.7 | 198.41 | 46450 | 45928.3 | 285.16 | 44226 | 43647.13 | 111.02 | 43622 | 43622 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 46995 | 46490.23 | 202.09 | 46995 | 46406.17 | 258.89 | 45752 | 44968.07 | 498.1 | 43622 | 43622 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 46887 | 46493.87 | 207.73 | 46850 | 46441.83 | 213.39 | 46238 | 45655.63 | 288.48 | 43659 | 43623.23 | 6.76 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.716: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46532 | 46282.33 | 149.01 | 47153 | 46880.57 | 134.36 | 46130 | 45835.77 | 152.16 | 45216 | 44700.7 | 358.07 |
| | | 2op | 47382 | 47301.63 | 26.11 | 47305 | 47277.23 | 8.66 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 46563 | 46299.77 | 145.28 | 47190 | 47070.9 | 68.19 | 46492 | 46033.77 | 190.87 | 45770 | 45121.27 | 372.8 |
| | | 2op | 47379 | 47308.87 | 26.88 | 47392 | 47294.33 | 30.32 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 46574 | 46297.53 | 134.86 | 47310 | 47170.87 | 74.42 | 47008 | 46619.03 | 140.68 | 46035 | 45638.9 | 206.17 |
| | | 2op | 47333 | 47294.8 | 20.27 | 47408 | 47317.7 | 30.75 | 47317 | 47275.43 | 7.85 | 47274 | 47274 | 0 |
| | 50 | rnd | 46507 | 46298.23 | 130.42 | 47351 | 47228.17 | 70.33 | 47057 | 46791.03 | 105.5 | 46169 | 45777.87 | 198.52 |
| | | 2op | 47356 | 47305.17 | 21.48 | 47426 | 47351.63 | 27.85 | 47340 | 47278.53 | 13.12 | 47274 | 47274 | 0 |

Table A.717: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46902 | 46631.5 | 148.53 | 46902 | 46609.3 | 151.49 | 43700 | 43624.6 | 14.24 | 43622 | 43622 | 0 |
| | | 2op | 47279 | 47274.17 | 0.91 | 47276 | 47274.07 | 0.37 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 46921 | 46684.67 | 128.9 | 46889 | 46675.9 | 129.13 | 44331 | 43696.6 | 187.36 | 43622 | 43622 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47139 | 46924.93 | 93.92 | 47139 | 46923.07 | 96.28 | 46455 | 45780.7 | 500 | 43622 | 43622 | 0 |
| | | 2op | 47349 | 47289.73 | 21.2 | 47349 | 47289.73 | 21.2 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47177 | 47039.63 | 82.98 | 47173 | 47032.17 | 82.79 | 46676 | 46101.23 | 392.24 | 43622 | 43622 | 0 |
| | | 2op | 47426 | 47296.77 | 39.04 | 47426 | 47296.7 | 38.92 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.718: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46636 | 46447.77 | 122.03 | 46595 | 46401.03 | 117.6 | 46234 | 45912.53 | 172.63 | 45010 | 44303.53 | 313.75 |
| | | 2op | 47347 | 47299.77 | 20.62 | 47342 | 47286.93 | 19.13 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 46697 | 46509.83 | 88.91 | 46983 | 46643 | 136.12 | 46325 | 46122.37 | 123.11 | 45628 | 45016.2 | 257.02 |
| | | 2op | 47353 | 47317.77 | 20.88 | 47331 | 47296.7 | 19.94 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 46713 | 46511.7 | 85.81 | 46932 | 46695.43 | 123.11 | 46477 | 46289.43 | 92.35 | 45819 | 45508.63 | 221.73 |
| | | 2op | 47364 | 47317.07 | 20.43 | 47353 | 47306.17 | 19.32 | 47284 | 47274.33 | 1.83 | 47274 | 47274 | 0 |
| | 50 | rnd | 46964 | 46551.53 | 133.6 | 47034 | 46801.1 | 84.89 | 46721 | 46271.37 | 169.1 | 46040 | 45671.43 | 175.01 |
| | | 2op | 47369 | 47320.13 | 21.14 | 47323 | 47288.8 | 13.78 | 47290 | 47274.53 | 2.92 | 47274 | 47274 | 0 |

Table A.719: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 146586 | 144292.9 | 1085.8 | 142950 | 142855.27 | 17.89 | 142852 | 142852 | 0 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 145504 | 143876.27 | 850.18 | 144805 | 143245.57 | 608.41 | 142852 | 142852 | 0 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| 51 | 20 | rnd | 147308 | 145387.5 | 1147.34 | 146967 | 144961.43 | 1156.83 | 143271 | 142865.97 | 76.5 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 147089 | 145236.67 | 1136.68 | 147044 | 145067.37 | 1124.19 | 145178 | 143303.53 | 749.64 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |

Table A.720: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147160 | 146408.87 | 588.7 | 146756 | 145064.43 | 849.72 | 145582 | 143527.1 | 814.37 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 147488 | 146688 | 514.07 | 147560 | 146660.97 | 610.72 | 146663 | 144387.73 | 1083.93 | 144238 | 142898.2 | 253.05 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| 51 | 20 | rnd | 147668 | 146305.17 | 685.75 | 147594 | 146712.1 | 467.46 | 147284 | 144583.27 | 1031.53 | 146612 | 143206.9 | 805.64 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 147607 | 146807.7 | 367.61 | 147880 | 147332.7 | 355.55 | 146646 | 145658.03 | 701.19 | 145639 | 143967.7 | 852.92 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |

Table A.721: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147110 | 144381.1 | 1027.64 | 144083 | 143063.13 | 439.49 | 142852 | 142852 | 0 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 145763 | 143727.77 | 872.53 | 145139 | 143168.13 | 589.67 | 142852 | 142852 | 0 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| 51 | 20 | rnd | 147259 | 145583 | 1170.25 | 147131 | 145311.87 | 1194.84 | 144275 | 142903.03 | 259.87 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 147002 | 145228.73 | 1002.84 | 146901 | 145044.9 | 1028.78 | 144865 | 143284.43 | 622.13 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |

Table A.722: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147374 | 146051.6 | 690.84 | 147319 | 145212.87 | 844.59 | 144637 | 143180.63 | 548.61 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 147525 | 146537.6 | 623.77 | 147527 | 146254.23 | 605.13 | 146813 | 144374.87 | 1116.79 | 142951 | 142855.3 | 18.07 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| 51 | 20 | rnd | 147304 | 146273.57 | 629.3 | 147436 | 146482.93 | 518.06 | 146603 | 144595.1 | 1065.66 | 145023 | 143242.13 | 684.64 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 147374 | 146472.27 | 501.58 | 147918 | 147195.67 | 463.72 | 146540 | 145604.93 | 523.65 | 146177 | 144330.9 | 1014.6 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |

Table A.723: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147466 | 145694.23 | 1032.82 | 147317 | 145555.03 | 1032.92 | 142852 | 142852 | 0 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 146725 | 145019.43 | 1022.25 | 146665 | 144920.23 | 956.43 | 142852 | 142852 | 0 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| 51 | 20 | rnd | 149003 | 147485.6 | 807.07 | 148985 | 147481.67 | 805.91 | 147915 | 145819.97 | 1265.53 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 148039 | 147039.3 | 783.64 | 148039 | 147023 | 787.29 | 147230 | 145661.4 | 923.73 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |

Table A.724: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147466 | 146718.07 | 496.1 | 147422 | 146334.83 | 716.4 | 146104 | 144157.63 | 1036.82 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 147661 | 146970.77 | 453.52 | 147633 | 146724.73 | 493.63 | 146714 | 145043.83 | 886.39 | 142852 | 142852 | 0 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| 51 | 20 | rnd | 147390 | 146926.93 | 311.03 | 147646 | 146905.5 | 312.28 | 147032 | 145701.57 | 943.64 | 143367 | 142869.17 | 94.03 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |
| | 50 | rnd | 147566 | 147168.07 | 221.95 | 147524 | 146972.07 | 273.2 | 147151 | 146230.23 | 613.14 | 145345 | 143285.93 | 779.82 |
| | | 2op | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 | 150949 | 150949 | 0 |

Table A.725: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161887 | 160419.63 | 874.61 | 159583 | 157228.13 | 1278.78 | 154518 | 154518 | 0 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 162414 | 160374.83 | 956.84 | 161393 | 159155.3 | 914.43 | 154518 | 154518 | 0 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| 51 | 20 | rnd | 162349 | 160742.3 | 979.39 | 162238 | 160232.5 | 1066.34 | 157539 | 155356.6 | 1151.88 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 163156 | 161224.17 | 852.64 | 163071 | 160990.6 | 874.96 | 160094 | 158144.27 | 1333.37 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |

Table A.726: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161050 | 159969.07 | 759.45 | 160338 | 158844.73 | 825.82 | 159183 | 156728.73 | 1555.96 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 161328 | 160027.97 | 585.44 | 161808 | 160440.4 | 663.49 | 160243 | 157628.53 | 1293.83 | 157316 | 154822.43 | 705.74 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| 51 | 20 | rnd | 161461 | 160220.07 | 792.49 | 161515 | 160447.23 | 565.45 | 160163 | 157915.87 | 1203.29 | 158041 | 155473.77 | 1126.74 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 160982 | 160010.37 | 576.6 | 161913 | 161175 | 484.73 | 160729 | 158802.67 | 1078.44 | 159797 | 157561.83 | 1469.64 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |

Table A.727: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161450 | 160171.5 | 921.5 | 159315 | 156786.33 | 1497.17 | 154518 | 154518 | 0 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 161423 | 160221.6 | 976.78 | 160703 | 158762.23 | 1137.55 | 154518 | 154518 | 0 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| 51 | 20 | rnd | 162374 | 161160.43 | 873.65 | 162124 | 160657.73 | 896.15 | 158167 | 155125.67 | 1018.83 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 163206 | 161279.83 | 968.69 | 163080 | 161066.83 | 975.21 | 160322 | 157975.87 | 1418.7 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |

Table A.728: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161156 | 159572.1 | 813.55 | 160811 | 158469.2 | 1162.99 | 158918 | 155753.33 | 1112.39 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 161054 | 159941.47 | 716.48 | 161207 | 160180.03 | 656.22 | 159663 | 157475.13 | 1219.2 | 155423 | 154581.5 | 181.54 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| 51 | 20 | rnd | 161339 | 159971.13 | 593.82 | 161348 | 160396.2 | 519.38 | 159513 | 157889.07 | 1263.35 | 158709 | 155887.33 | 1338.35 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 160923 | 160172.93 | 524.21 | 161769 | 161185.7 | 333.16 | 160620 | 158809.3 | 986.28 | 159825 | 157280.27 | 1284.85 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |

Table A.729: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162367 | 160860.9 | 807.83 | 161797 | 160622.27 | 776.28 | 158549 | 154699.97 | 756.91 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 162939 | 160881.2 | 845.83 | 162876 | 160780.03 | 838.34 | 158531 | 154797.2 | 818.68 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| 51 | 20 | rnd | 163447 | 162413.7 | 681.24 | 163446 | 162411.93 | 683.36 | 161622 | 160529.9 | 677.81 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 163648 | 162226.37 | 653.87 | 163648 | 162225.53 | 653.33 | 162363 | 160832.87 | 764.74 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |

Table A.730: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161068 | 160379.1 | 441.31 | 160914 | 159998.2 | 641.78 | 159883 | 158048.73 | 1193.72 | 154518 | 154518 | 0 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 161240 | 160556.27 | 466.9 | 161166 | 160217.87 | 578.78 | 160280 | 158757 | 1114.58 | 156606 | 154587.6 | 381.21 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| 51 | 20 | rnd | 161258 | 160493.5 | 498.2 | 161227 | 160419.37 | 504.9 | 160730 | 159757.67 | 607.15 | 157526 | 154627.53 | 549.78 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |
| | 50 | rnd | 161394 | 160757.1 | 385.04 | 161340 | 160617.87 | 410.44 | 160711 | 159878.03 | 557.35 | 159290 | 156504.13 | 1617.73 |
| | | 2op | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 | 166172 | 166172 | 0 |

Table A.731: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158651 | 157695.47 | 417.23 | 156619 | 155118.13 | 895.07 | 147200 | 147200 | 0 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 158649 | 157713.93 | 542.6 | 157492 | 156261.2 | 731.62 | 151695 | 148107.1 | 1171.09 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| 51 | 20 | rnd | 159003 | 157978.63 | 508.07 | 158380 | 157457.73 | 507.56 | 154893 | 152678.3 | 1513.21 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 159136 | 158008.2 | 498.91 | 158719 | 157661.33 | 534.94 | 157374 | 155091.27 | 1149.44 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |

Table A.732: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 153055 | 152448.23 | 494.12 | 154247 | 152273.93 | 732.51 | 152297 | 149032.07 | 1496.47 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 153342 | 152584.9 | 554.13 | 154075 | 153482.3 | 427.17 | 152362 | 150607 | 1008.83 | 150810 | 147973.9 | 990.6 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| 51 | 20 | rnd | 153212 | 152443.9 | 531.66 | 154378 | 153457.8 | 566.54 | 152444 | 150769.67 | 1042.89 | 150423 | 148542.7 | 1124.5 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 153337 | 152575.47 | 420.26 | 154198 | 153814.23 | 207.9 | 153312 | 152092.13 | 635.42 | 152190 | 150690.43 | 1012.25 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |

Table A.733: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158650 | 157525.5 | 556.75 | 157052 | 154595.23 | 908.48 | 147200 | 147200 | 0 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 158527 | 157742.27 | 510.09 | 157050 | 156218.97 | 601.33 | 151294 | 148099.27 | 1171.22 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| 51 | 20 | rnd | 158837 | 158027.8 | 444.97 | 158393 | 157376.9 | 512.22 | 154906 | 152319.63 | 1534.7 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 158806 | 157996.03 | 541.14 | 158535 | 157675.33 | 542.48 | 157042 | 155067.7 | 946.91 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |

Table A.734: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 153144 | 152353.33 | 641.41 | 153828 | 152173.67 | 945.34 | 151097 | 148653.13 | 1326.01 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 153433 | 152557.97 | 413.99 | 154068 | 153362.73 | 458.35 | 151784 | 150197.47 | 1239.39 | 148632 | 147376.07 | 384.82 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| 51 | 20 | rnd | 153407 | 152451.67 | 545.49 | 154307 | 153614.57 | 360.72 | 152763 | 150736.33 | 1292.97 | 151370 | 148460.23 | 1131.87 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 153327 | 152559.3 | 377.06 | 154308 | 153992 | 189.23 | 153044 | 151929.33 | 563.45 | 152345 | 150697.6 | 959.09 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |

Table A.735: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158538 | 157858.23 | 456.79 | 158508 | 157698.53 | 496.53 | 153790 | 151139.53 | 1945.98 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 158322 | 157637.6 | 562.01 | 158250 | 157521 | 554.21 | 155310 | 150629.97 | 2329.5 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| 51 | 20 | rnd | 158819 | 158195.07 | 399.01 | 158819 | 158195.07 | 399.01 | 157346 | 156142.07 | 563.74 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 158704 | 158133.03 | 362.66 | 158704 | 158133.03 | 362.66 | 157334 | 156437.5 | 504.01 | 147562 | 147217.5 | 71.54 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |

Table A.736: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 153413 | 152592.83 | 436.19 | 153263 | 152368 | 480.75 | 152207 | 150765.83 | 987.42 | 147200 | 147200 | 0 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 153360 | 152774.47 | 388.43 | 153268 | 152588.7 | 415.48 | 152362 | 151521.37 | 594.14 | 149208 | 147536.97 | 616.3 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| 51 | 20 | rnd | 153421 | 152955.4 | 310.29 | 153289 | 152901.3 | 303.54 | 153020 | 152424.07 | 387.18 | 150492 | 147526.67 | 895.7 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |
| | 50 | rnd | 153380 | 152981.5 | 258.83 | 153349 | 152923.23 | 264.01 | 153139 | 152530.27 | 335.32 | 151489 | 149559.77 | 1450.12 |
| | | 2op | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 | 162329 | 162329 | 0 |

Table A.737: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 174766 | 174390.3 | 312.74 | 173211 | 171774.43 | 913.35 | 162331 | 162331 | 0 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 175018 | 174570.5 | 304.31 | 173663 | 173043.83 | 446.99 | 168236 | 163659.77 | 1723.18 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| 51 | 20 | rnd | 174855 | 174374.33 | 289.58 | 174282 | 173868.67 | 308.86 | 172433 | 168898.33 | 1796.16 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 175032 | 174527 | 376.62 | 174615 | 173998.67 | 381.86 | 172661 | 171605.07 | 728.2 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |

Table A.738: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166952 | 166141.43 | 782.72 | 167655 | 166098.13 | 831.51 | 165364 | 162884.03 | 823.57 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 166817 | 166466.43 | 371.94 | 168181 | 167526.53 | 344.15 | 166350 | 164292.87 | 1229.57 | 164684 | 162437.8 | 436.25 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| 51 | 20 | rnd | 166791 | 166172.57 | 707.53 | 168501 | 167737.33 | 473.82 | 166758 | 164460.17 | 1289.16 | 165912 | 162866.27 | 972.53 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 166755 | 166477.8 | 159.26 | 168702 | 167793.93 | 306.78 | 166944 | 166085.07 | 428.83 | 166106 | 164487.67 | 1115.14 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |

Table A.739: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 174873 | 174314.77 | 388.49 | 173243 | 171302.2 | 1206.79 | 162331 | 162331 | 0 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 174999 | 174556.2 | 298.89 | 173700 | 173079.2 | 455.67 | 168767 | 163911.03 | 1906.36 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| 51 | 20 | rnd | 174893 | 174491.33 | 224.98 | 174517 | 173974.17 | 319.09 | 172170 | 169592.47 | 1472.49 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 174829 | 174487.1 | 306.2 | 174584 | 174005.87 | 317.76 | 172809 | 171572.43 | 865.13 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |

Table A.740: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166885 | 166098.17 | 590.53 | 167565 | 166460.77 | 832.53 | 165109 | 163038.23 | 900.59 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 166790 | 166443.33 | 299.06 | 167904 | 167257 | 370.65 | 166217 | 164186.13 | 1261.69 | 164678 | 162634.6 | 666.08 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| 51 | 20 | rnd | 166824 | 166090.6 | 690.68 | 168675 | 167456.77 | 581.25 | 166377 | 164860.33 | 1071.96 | 164703 | 162800.13 | 706.57 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 166774 | 166377.87 | 410.78 | 168562 | 167866.63 | 318.56 | 166681 | 165912.77 | 517.88 | 165944 | 164288.67 | 1261.52 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |

Table A.741: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 174466 | 174115.67 | 258.01 | 174431 | 174054.4 | 270.34 | 169375 | 167017.23 | 1706.28 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 174647 | 174317.27 | 264.14 | 174645 | 174243.87 | 294.26 | 170689 | 167793.73 | 2523.99 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| 51 | 20 | rnd | 174461 | 174057 | 256.69 | 174461 | 174057 | 256.69 | 172419 | 171845.43 | 427.65 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 174160 | 173847.63 | 319.46 | 174160 | 173847.63 | 319.46 | 172737 | 171991.73 | 426.79 | 164745 | 162470.73 | 538.29 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |

Table A.742: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166932 | 166349.23 | 504.66 | 166831 | 166134.83 | 576.57 | 166221 | 164590.03 | 802.62 | 162331 | 162331 | 0 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 166811 | 166612.7 | 104.85 | 166753 | 166398.9 | 291.66 | 166208 | 165122.37 | 848.36 | 162745 | 162344.8 | 75.59 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| 51 | 20 | rnd | 166833 | 166506.27 | 291.92 | 166833 | 166492.27 | 290.92 | 166407 | 165841.17 | 474.91 | 163668 | 162387.3 | 250.27 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |
| | 50 | rnd | 166754 | 166502.87 | 221.15 | 166817 | 166476.8 | 249.72 | 166408 | 166221.17 | 204.79 | 165592 | 163598.93 | 1226.93 |
| | | 2op | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 | 179373 | 179373 | 0 |

Table A.743: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 329514 | 325175.53 | 2237.16 | 321190 | 321190 | 0 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 330728 | 326317.83 | 2128.39 | 327467 | 321563.83 | 1231.42 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| 51 | 20 | rnd | 329991 | 326955.1 | 1470.57 | 329151 | 324984.77 | 1990.85 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 330098 | 327683.6 | 1707.05 | 329569 | 326823 | 1597.32 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |

Table A.744: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 330961 | 328746.3 | 1148.33 | 328811 | 326017.03 | 1470.27 | 325524 | 322166.33 | 1420.65 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 331115 | 329610.2 | 737.66 | 329473 | 326586.43 | 1644.02 | 328446 | 324382.17 | 1998.38 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| 51 | 20 | rnd | 330369 | 328778.33 | 1111.44 | 329662 | 327013.3 | 1436.7 | 328888 | 325121.83 | 1688.65 | 321653 | 321220.37 | 115.58 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 331070 | 329882.57 | 957.83 | 331658 | 329623.4 | 1096.07 | 330288 | 327102.43 | 1967.9 | 329385 | 323557 | 2459.35 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |

Table A.745: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 329842 | 324391.17 | 2074.63 | 321190 | 321190 | 0 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 329239 | 325079.5 | 1626.9 | 322700 | 321269.3 | 312.92 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| 51 | 20 | rnd | 330346 | 327130.77 | 1504.34 | 327794 | 325475.13 | 1648.29 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 330193 | 327411.73 | 1423.9 | 329894 | 326329.9 | 1825.95 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |

Table A.746: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 331505 | 328787.17 | 1154.26 | 329269 | 325460.27 | 1641.01 | 326608 | 321686.67 | 1107.6 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 331922 | 329501.57 | 1039.22 | 329769 | 326710.43 | 1634.91 | 327726 | 324379 | 1512.38 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| 51 | 20 | rnd | 331324 | 329022.9 | 992.17 | 330458 | 327638.13 | 1597.6 | 328066 | 325251.3 | 1895.31 | 324946 | 321478.37 | 891.94 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 331604 | 330048.83 | 893.78 | 331143 | 329598.8 | 920.16 | 329987 | 327117.77 | 1310.22 | 328507 | 323556.6 | 1922.34 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |

Table A.747: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 329572 | 326361.47 | 1757.88 | 329533 | 326360.17 | 1755.43 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 329483 | 326382.83 | 1407.27 | 329483 | 326379.93 | 1413.32 | 321190 | 321190 | 0 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| 51 | 20 | rnd | 330790 | 328474.73 | 1728.18 | 330790 | 328474.73 | 1728.18 | 326411 | 322738 | 1627.23 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 331406 | 328024.8 | 1886.31 | 331406 | 328024.8 | 1886.31 | 328595 | 324644.1 | 2050.57 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |

Table A.748: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 331533 | 329160.3 | 1098.06 | 330771 | 328595.9 | 1141.31 | 326519 | 323063.5 | 1419.57 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 331486 | 330087.53 | 870.67 | 331081 | 329373.6 | 1030.67 | 328950 | 325783.37 | 1760.35 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| 51 | 20 | rnd | 331237 | 330076.8 | 774.86 | 331224 | 329898.43 | 963.98 | 331032 | 328350.8 | 1352.3 | 321190 | 321190 | 0 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |
| | 50 | rnd | 331500 | 330393.17 | 597.41 | 331455 | 330208.23 | 626.62 | 330490 | 328989.5 | 852.08 | 324235 | 321432.7 | 723.67 |
| | | 2op | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 | 342134 | 342134 | 0 |

Table A.749: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 180129 | 174775.17 | 2603.54 | 171884 | 165190 | 3856.53 | 136972 | 127859.17 | 4398.63 | 84501 | 71974.33 | 7562.37 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| | 50 | rnd | 179468 | 175262.6 | 2581.52 | 174310 | 170020.53 | 2743.34 | 154974 | 143224.7 | 5265.89 | 98631 | 88538.6 | 5591.35 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| 51 | 20 | rnd | 180438 | 175321.63 | 2597.49 | 178905 | 173561.57 | 2789.45 | 165473 | 157832.47 | 4122.42 | 125408 | 109581.8 | 7072.22 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| | 50 | rnd | 177818 | 173642.93 | 2811.84 | 177378 | 172516.47 | 2877.65 | 170135 | 164561.7 | 3732.77 | 137843 | 127637.73 | 4899.05 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |

Table A.750: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 28971 | 26132.4 | 1554.73 | 66954 | 60462.17 | 2998.52 | 53089 | 46252.9 | 3109.91 | 38777 | 33472.9 | 3648.64 |
| | | 2op | 225113 | 224453.53 | 213.54 | 224636 | 224335.1 | 78.03 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| | 50 | rnd | 29677 | 26567.7 | 1502.43 | 70076 | 65577.67 | 2739.55 | 57195 | 51932.23 | 3306.48 | 48453 | 36348.83 | 5649.41 |
| | | 2op | 225191 | 224627.57 | 302.08 | 225100 | 224483.23 | 246.44 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| 51 | 20 | rnd | 30092 | 27263.43 | 1733.27 | 46469 | 42147.4 | 1870.54 | 61552 | 54076.27 | 2970.06 | 48575 | 39385.8 | 4952.66 |
| | | 2op | 225257 | 224610.77 | 279.86 | 225235 | 224773.7 | 300.36 | 224578 | 224335.8 | 67.52 | 224309 | 224309 | 0 |
| | 50 | rnd | 31036 | 26975.2 | 1453.86 | 45074 | 42221.03 | 2088.59 | 64892 | 58274.53 | 2659.4 | 53518 | 40197.97 | 4783.27 |
| | | 2op | 225004 | 224524.83 | 200.77 | 225263 | 225001.57 | 224.64 | 224824 | 224356.2 | 114.06 | 224309 | 224309 | 0 |

Table A.751: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 180316 | 174963.3 | 2587.93 | 172276 | 164734.17 | 3438.75 | 136714 | 127073.8 | 5319.35 | 80927 | 70251.87 | 6430.95 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| | 50 | rnd | 180231 | 174371.6 | 2750.34 | 174954 | 169418.9 | 3392.56 | 150379 | 142154.17 | 4746.93 | 100311 | 91207.03 | 5851.97 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| 51 | 20 | rnd | 180145 | 174133.97 | 2558.52 | 179295 | 172102.07 | 3196.22 | 165460 | 157038.43 | 4124.6 | 122449 | 108337.77 | 7580.64 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| | 50 | rnd | 180251 | 174992.1 | 2977.12 | 178846 | 173971 | 2880.75 | 170247 | 164998.03 | 2885.43 | 141668 | 128001.1 | 6736.26 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |

Table A.752: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 28971 | 26533.23 | 1396.65 | 63635 | 59771.6 | 2216.74 | 54775 | 45199.17 | 3645.35 | 37650 | 32181.47 | 3059.34 |
| | | 2op | 225222 | 224536.5 | 254.67 | 224603 | 224362.67 | 95.69 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| | 50 | rnd | 29201 | 26743.03 | 1080.22 | 68564 | 64715.47 | 2055.69 | 57580 | 51146.93 | 3570.71 | 41867 | 35942.37 | 4182.58 |
| | | 2op | 225040 | 224560.43 | 232.1 | 225006 | 224466.77 | 213.12 | 224491 | 224315.07 | 33.23 | 224309 | 224309 | 0 |
| 51 | 20 | rnd | 31150 | 26894.07 | 1228.62 | 45748 | 42775.57 | 1650.6 | 58737 | 54660.3 | 2168.6 | 48660 | 39350.9 | 5150.42 |
| | | 2op | 225060 | 224509.13 | 221.79 | 225257 | 224691.6 | 295.46 | 224349 | 224311.47 | 8.44 | 224309 | 224309 | 0 |
| | 50 | rnd | 29699 | 26825.5 | 1449.18 | 46415 | 42488.1 | 1754.67 | 62991 | 57421.8 | 2203.67 | 52765 | 42707.27 | 6510.16 |
| | | 2op | 225257 | 224595.37 | 266.95 | 225260 | 224943.97 | 274.72 | 224592 | 224357.4 | 89.84 | 224309 | 224309 | 0 |

Table A.753: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 181409 | 173935.77 | 2837.45 | 181014 | 173273.57 | 3124.07 | 142836 | 131938.6 | 6209.81 | 74111 | 64218.9 | 5312.53 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| | 50 | rnd | 181196 | 174937.83 | 2697.78 | 181196 | 174460.33 | 2871.01 | 150587 | 138711.77 | 8263.53 | 90909 | 84449.47 | 4161.65 |
| | | 2op | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| 51 | 20 | rnd | 182436 | 175882.13 | 2841.27 | 182407 | 175877.57 | 2840.96 | 168326 | 162658.83 | 3369.06 | 109960 | 95142.6 | 9270.67 |
| | | 2op | 225230 | 224473.07 | 293.98 | 225230 | 224473.07 | 293.98 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| | 50 | rnd | 183586 | 178516.67 | 2367.61 | 183586 | 178488.5 | 2373.16 | 175794 | 166435.07 | 4926.09 | 124436 | 110094.73 | 12099.91 |
| | | 2op | 225260 | 224454.5 | 305.19 | 225260 | 224454.5 | 305.19 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |

Table A.754: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 30735 | 27824.2 | 1081.44 | 44859 | 41653.47 | 1615.24 | 43838 | 41917.83 | 1676.53 | 27205 | 24072.33 | 1344.62 |
| | | 2op | 225239 | 224664.5 | 248.28 | 225235 | 224515.43 | 221.49 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| | 50 | rnd | 31393 | 28482.73 | 1090.33 | 50306 | 44998.5 | 2124.96 | 53378 | 49331.63 | 2157.16 | 31369 | 28256.13 | 2093.11 |
| | | 2op | 225257 | 224671 | 244.89 | 225257 | 224615.1 | 243.87 | 224309 | 224309 | 0 | 224309 | 224309 | 0 |
| 51 | 20 | rnd | 30227 | 28550.6 | 944.31 | 33584 | 29850.93 | 1588.47 | 55359 | 50664.57 | 1717.9 | 36645 | 32303.03 | 2530.47 |
| | | 2op | 225223 | 224771.6 | 203.37 | 225112 | 224763.17 | 207.77 | 224675 | 224362.23 | 110.29 | 224309 | 224309 | 0 |
| | 50 | rnd | 30998 | 28714.53 | 882.45 | 35803 | 32118.7 | 1684.55 | 59543 | 55412.07 | 2313.15 | 37826 | 33294.47 | 3169.64 |
| | | 2op | 225257 | 224828.97 | 204.82 | 225226 | 224712.7 | 219.44 | 224610 | 224338.47 | 70.02 | 224309 | 224309 | 0 |

Table A.755: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342618 | 334220.23 | 3853.83 | 318532 | 305746.3 | 7463.74 | 247191 | 223169.63 | 9908.39 | 138070 | 118563.6 | 9362.43 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 342958 | 336362.5 | 4230.1 | 331934 | 321376.7 | 5162.68 | 272182 | 257057.3 | 7837.88 | 177226 | 156656.8 | 12676.84 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 342206 | 334492.57 | 3666.96 | 340384 | 330824.8 | 4104.16 | 301015 | 284775.9 | 7663.73 | 208395 | 189460.23 | 13347.82 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 343012 | 335226.87 | 4358.04 | 340084 | 331703.53 | 4316 | 316397 | 305368.17 | 5472.08 | 238127 | 224132.23 | 8122.78 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.756: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47333 | 43616.63 | 1934.1 | 101536 | 94417.03 | 4281.47 | 85200 | 69096.53 | 7750.08 | 66141 | 49591.93 | 10212.65 |
| | | 2op | 437809 | 437537.37 | 143.04 | 437537 | 437413.9 | 41.87 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 47418 | 43853.93 | 1928.75 | 112473 | 102864.17 | 3816.95 | 88697 | 76196.3 | 7185.04 | 73132 | 60833.77 | 9739.81 |
| | | 2op | 437939 | 437544.03 | 154.26 | 437713 | 437431.3 | 84.63 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 48331 | 44610.93 | 1643.57 | 69852 | 65179.8 | 2233.75 | 96152 | 84895.87 | 6010.41 | 78951 | 61923.73 | 8650.39 |
| | | 2op | 437794 | 437530.2 | 147.01 | 437810 | 437451.83 | 107.49 | 437403 | 437398.17 | 0.91 | 437398 | 437398 | 0 |
| | 50 | rnd | 46919 | 44367.67 | 1382.53 | 68358 | 64518.17 | 2312.7 | 100111 | 89906.33 | 5664.07 | 83208 | 63896.87 | 10189.37 |
| | | 2op | 437908 | 437602 | 141.05 | 437868 | 437574.4 | 147.92 | 437548 | 437403.7 | 27.52 | 437398 | 437398 | 0 |

Table A.757: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342807 | 334538.33 | 3733.63 | 321737 | 307129 | 7410.58 | 253111 | 226338.83 | 9701.13 | 137913 | 120855.03 | 8407.45 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 344473 | 335355.43 | 4530.88 | 328879 | 319775.4 | 5657.38 | 269724 | 252368.97 | 7956.76 | 168018 | 155007.43 | 8906.43 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 339600 | 334079.37 | 2811.84 | 334589 | 328700.23 | 3419.42 | 304411 | 287196.97 | 8336.97 | 206311 | 190464.6 | 10422.94 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 341336 | 335210.1 | 3611.49 | 338498 | 331584.43 | 3458.52 | 319432 | 307184.5 | 5992.37 | 240668 | 226002.9 | 10517.91 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.758: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47324 | 43731.63 | 1584.12 | 100305 | 92848.73 | 4101.96 | 86768 | 73219.53 | 8568.47 | 65470 | 47325.27 | 10600.07 |
| | | 2op | 437852 | 437568.37 | 134.86 | 437570 | 437405.87 | 33.13 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 48655 | 43784.87 | 2127.35 | 109598 | 101849.33 | 3789.4 | 88872 | 77842.87 | 7653.76 | 75887 | 57285.9 | 11228.31 |
| | | 2op | 437826 | 437589.53 | 135.26 | 437471 | 437409.93 | 24.87 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 46726 | 44476.6 | 1374.2 | 68018 | 64299.1 | 2262.94 | 95725 | 84611.97 | 4832.84 | 74938 | 62823.77 | 8210.51 |
| | | 2op | 437897 | 437524.87 | 153.48 | 437856 | 437449.37 | 106.29 | 437668 | 437407 | 49.3 | 437398 | 437398 | 0 |
| | 50 | rnd | 46993 | 43999.77 | 1702.19 | 66846 | 63964.13 | 1514.37 | 99029 | 87650.8 | 5486.21 | 89618 | 65365.03 | 10720.31 |
| | | 2op | 437864 | 437569.67 | 126.99 | 437835 | 437470.7 | 124.74 | 437428 | 437399 | 5.48 | 437398 | 437398 | 0 |

Table A.759: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 338100 | 329591.4 | 3779.76 | 338100 | 329428.07 | 3902.54 | 253494 | 233698.1 | 11189.06 | 123254 | 106012.57 | 8080.31 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 338708 | 331901.97 | 2854.31 | 338708 | 331706.27 | 2987.01 | 264846 | 244929.3 | 15120.16 | 157937 | 146326.53 | 7840.94 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 336468 | 328685.1 | 3746.65 | 336468 | 328685.1 | 3746.65 | 308779 | 295192.1 | 8398.23 | 190333 | 156014.67 | 21879.12 |
| | | 2op | 437605 | 437413.37 | 48.87 | 437594 | 437413 | 47.41 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 336991 | 330584.97 | 3975.73 | 336991 | 330584.97 | 3975.73 | 318121 | 306592.1 | 7244.03 | 222252 | 176717.03 | 23981.78 |
| | | 2op | 438180 | 437444.4 | 159.13 | 438180 | 437442.6 | 156.58 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.760: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 51328 | 46253.73 | 1537.21 | 66139 | 61726.23 | 3198.68 | 67486 | 63613.63 | 2782.22 | 38681 | 36360.6 | 1189.47 |
| | | 2op | 437901 | 437609.33 | 131.18 | 437758 | 437508.27 | 116.61 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 47995 | 46586.63 | 1193.47 | 73138 | 66998.77 | 3212.01 | 79298 | 75071.77 | 2017.53 | 45080 | 40510.6 | 2094.31 |
| | | 2op | 437859 | 437670.33 | 108.41 | 437789 | 437557 | 108.99 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 50672 | 47000 | 1438.49 | 50672 | 47089.43 | 1411.58 | 85557 | 77988.57 | 2724.46 | 49584 | 45114.73 | 2527.76 |
| | | 2op | 438022 | 437648.13 | 135.58 | 437829 | 437614.87 | 131.61 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 49073 | 47004.73 | 1138.98 | 51997 | 48284.6 | 1593.36 | 91600 | 84536.23 | 3163.82 | 52237 | 46596.73 | 3529.72 |
| | | 2op | 437947 | 437685.97 | 113.49 | 437937 | 437608.8 | 131.7 | 437521 | 437403.6 | 23.64 | 437398 | 437398 | 0 |

Table A.761: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 92248 | 89672.77 | 1396.27 | 88900 | 86082.23 | 1722.94 | 73840 | 69529.13 | 2288.52 | 49825 | 40911.23 | 3331.28 |
| | | 2op | 114835 | 114818.57 | 3.1 | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| | 50 | rnd | 92087 | 89378.7 | 1435.97 | 89962 | 87298.6 | 1669.67 | 82059 | 77085.7 | 2076.88 | 55594 | 51268.27 | 2762.89 |
| | | 2op | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| 51 | 20 | rnd | 93314 | 89922.33 | 1671.32 | 92707 | 89240.03 | 1794.9 | 86940 | 82502.6 | 2538.72 | 66865 | 60768.57 | 3539.13 |
| | | 2op | 114926 | 114821.73 | 19.71 | 114854 | 114819.2 | 6.57 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| | 50 | rnd | 92370 | 89138.5 | 1473.31 | 91970 | 88459.33 | 1432.92 | 87956 | 85062.9 | 1424.77 | 74478 | 69736.83 | 2964.81 |
| | | 2op | 114827 | 114818.3 | 1.64 | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |

Table A.762: *j02459_7*: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22540 | 20583.7 | 975.74 | 42815 | 39903.63 | 1592.02 | 36698 | 32091.27 | 2869.77 | 28465 | 23914.17 | 2168.47 |
| | | 2op | 115182 | 114940.8 | 113.82 | 115049 | 114881.1 | 76.67 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| | 50 | rnd | 22182 | 20700.73 | 887.12 | 46668 | 43680.9 | 1669.14 | 38481 | 34848.03 | 2370.33 | 30737 | 25382.47 | 3101.36 |
| | | 2op | 115221 | 114958.2 | 134.4 | 115194 | 115071.1 | 66.84 | 115072 | 114831.27 | 48.14 | 114818 | 114818 | 0 |
| 51 | 20 | rnd | 22707 | 20811.43 | 1004.8 | 35562 | 32004.93 | 1616.15 | 42675 | 37298.87 | 2239.69 | 32584 | 27530.33 | 3088.88 |
| | | 2op | 115157 | 114977.27 | 106.97 | 115317 | 115182.07 | 71.44 | 115032 | 114869.8 | 63.66 | 114818 | 114818 | 0 |
| | 50 | rnd | 22290 | 20767.6 | 891.24 | 34697 | 31209.77 | 1211.33 | 43576 | 39513.87 | 2172.68 | 35788 | 28245.6 | 3837.11 |
| | | 2op | 115175 | 114954.53 | 116.63 | 115344 | 115259.23 | 57.54 | 115096 | 114890.63 | 91.33 | 114818 | 114818 | 0 |

Table A.763: *j02459_7*: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 93014 | 90086.73 | 1576.94 | 90182 | 86285.9 | 1981.96 | 74564 | 69447.43 | 3601.51 | 48599 | 42090.13 | 3405.37 |
| | | 2op | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| | 50 | rnd | 91877 | 89930.2 | 1254.94 | 90272 | 87598.13 | 1492.27 | 80831 | 76760.8 | 2172.67 | 56740 | 51064.83 | 2780.82 |
| | | 2op | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| 51 | 20 | rnd | 91632 | 89469.7 | 1388.88 | 91207 | 88776.77 | 1552.05 | 87519 | 82062.37 | 2614.91 | 67963 | 61441.83 | 3358.85 |
| | | 2op | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| | 50 | rnd | 91801 | 89313.93 | 1208.32 | 91682 | 88723.83 | 1345.7 | 88911 | 85518.03 | 1537.44 | 73413 | 69078.1 | 3047.24 |
| | | 2op | 114884 | 114820.2 | 12.05 | 114818 | 114818 | 0 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |

Table A.764: *j02459_7*: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22241 | 20455.77 | 816.86 | 43399 | 40398.37 | 1837.71 | 37691 | 32719.1 | 2674.4 | 28396 | 24362.33 | 1948.44 |
| | | 2op | 115121 | 114927.5 | 124.67 | 115079 | 114892.03 | 107.09 | 114822 | 114818.13 | 0.73 | 114818 | 114818 | 0 |
| | 50 | rnd | 22546 | 20589.2 | 906.21 | 46526 | 43160.13 | 1907.02 | 37597 | 33612.47 | 2338.49 | 30548 | 26769.7 | 2375.77 |
| | | 2op | 115120 | 114931.93 | 91.68 | 115203 | 115035.33 | 120.03 | 114860 | 114820.27 | 8.61 | 114818 | 114818 | 0 |
| 51 | 20 | rnd | 22265 | 20593.53 | 801.47 | 35256 | 32484.9 | 1501.23 | 40838 | 37183.7 | 2177.95 | 33623 | 26051.77 | 3953.67 |
| | | 2op | 115257 | 114962.5 | 123.3 | 115326 | 115179.17 | 61.02 | 115091 | 114875.63 | 92.41 | 114818 | 114818 | 0 |
| | 50 | rnd | 21880 | 20704.77 | 772.62 | 34851 | 31443.07 | 1478.1 | 43729 | 39530.7 | 1834.03 | 36516 | 27728.97 | 4546.46 |
| | | 2op | 115140 | 114917.67 | 91.09 | 115367 | 115271.4 | 55.31 | 115070 | 114855.43 | 77.47 | 114818 | 114818 | 0 |

Table A.765: *j*02459_7: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 92108 | 89454.63 | 1411.95 | 91657 | 89005.67 | 1438.07 | 75638 | 70665.77 | 3930.71 | 42971 | 39081.7 | 1958.81 |
| | | 2op | 115206 | 114907.57 | 141.82 | 115206 | 114895.63 | 130.02 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| | 50 | rnd | 93688 | 89979.43 | 1665.72 | 92924 | 89759.67 | 1604.03 | 80584 | 75012.2 | 3223.81 | 52111 | 47661.1 | 2426.9 |
| | | 2op | 115111 | 114839.4 | 71.02 | 115111 | 114835.33 | 63.93 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| 51 | 20 | rnd | 93133 | 90222.63 | 1439.71 | 93062 | 90194.2 | 1436.83 | 87374 | 84663.27 | 1700.71 | 58911 | 52801.77 | 4398.8 |
| | | 2op | 115245 | 115094.33 | 101.7 | 115245 | 115087.07 | 112.38 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| | 50 | rnd | 94820 | 91693.3 | 1680.44 | 94820 | 91603.63 | 1720.7 | 90760 | 87140.2 | 2037.25 | 69776 | 63294.9 | 6018.65 |
| | | 2op | 115305 | 115169.93 | 90.72 | 115305 | 115164.53 | 91.56 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |

Table A.766: *j*02459_7: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 23514 | 21774.57 | 618.82 | 33568 | 31142.57 | 1025.77 | 31192 | 28412.9 | 1240.24 | 19040 | 17785.53 | 713.1 |
| | | 2op | 115175 | 115006.13 | 122.44 | 115159 | 114981.17 | 118.68 | 114818 | 114818 | 0 | 114818 | 114818 | 0 |
| | 50 | rnd | 23492 | 21932.63 | 614.98 | 35945 | 33203.43 | 1488.52 | 34979 | 32487.1 | 1254.86 | 22190 | 19493.57 | 1116.73 |
| | | 2op | 115180 | 115020.6 | 115.22 | 115164 | 114996.37 | 111.51 | 114866 | 114820.9 | 11.1 | 114818 | 114818 | 0 |
| 51 | 20 | rnd | 23798 | 22179.93 | 738.31 | 25253 | 23411.23 | 920.38 | 36405 | 34334.17 | 1127.6 | 23669 | 22057.3 | 1280.4 |
| | | 2op | 115267 | 115095.3 | 92.51 | 115202 | 115098.97 | 78.73 | 115071 | 114898.5 | 72.49 | 114818 | 114818 | 0 |
| | 50 | rnd | 23548 | 22111.27 | 755.42 | 26473 | 24476.5 | 822.99 | 39592 | 37455.1 | 1095.38 | 25397 | 22777.23 | 1570.68 |
| | | 2op | 115265 | 115104 | 81.42 | 115204 | 115054.9 | 70.17 | 115052 | 114875.27 | 75.83 | 114818 | 114818 | 0 |

Table A.767: *j*02459_7: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 33263 | 32098.63 | 835.49 | 33344 | 31249.4 | 975.02 | 30889 | 27612.93 | 1506.73 | 21170 | 19009.73 | 1371.27 |
| | | 2op | 38405 | 38232.27 | 34.84 | 38368 | 38228.8 | 26.29 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 34213 | 33229.67 | 601.61 | 34772 | 33104.27 | 692.4 | 31407 | 29722.17 | 1067.37 | 25166 | 22479.07 | 1538.81 |
| | | 2op | 38355 | 38233.17 | 32.17 | 38270 | 38226.8 | 10.71 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 33208 | 32134.93 | 672.42 | 36012 | 34728.7 | 592.01 | 31675 | 30154.67 | 871.18 | 28040 | 25716.73 | 1263.4 |
| | | 2op | 38429 | 38263.37 | 69.69 | 38434 | 38299.93 | 76.44 | 38354 | 38228.33 | 23.73 | 38224 | 38224 | 0 |
| | 50 | rnd | 34559 | 33461.4 | 511.76 | 36577 | 35473.8 | 408.48 | 34373 | 31512.2 | 1045.92 | 30229 | 28190.3 | 1280.25 |
| | | 2op | 38430 | 38289.73 | 75.9 | 38420 | 38302.5 | 73.4 | 38347 | 38228.93 | 22.76 | 38224 | 38224 | 0 |

Table A.768: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12636 | 11124.7 | 646.67 | 24273 | 21591.97 | 927.31 | 19754 | 17905.1 | 850.76 | 16496 | 14197.43 | 995.65 |
| | | 2op | 38414 | 38354.33 | 71.85 | 38434 | 38405.77 | 8.68 | 38366 | 38255.5 | 48.74 | 38224 | 38224 | 0 |
| | 50 | rnd | 12711 | 11144.13 | 726.38 | 25837 | 23412.73 | 940.53 | 21751 | 19391.33 | 928.4 | 16469 | 15079.7 | 876.9 |
| | | 2op | 38409 | 38378.8 | 50.69 | 38439 | 38421.67 | 13.44 | 38397 | 38338.3 | 39.67 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 12621 | 11220.67 | 590.3 | 21311 | 18965.63 | 1150.87 | 22281 | 20741.07 | 776.06 | 18724 | 16439.2 | 1230.43 |
| | | 2op | 38414 | 38367.8 | 64.48 | 38439 | 38421.8 | 12.82 | 38409 | 38385.87 | 18.79 | 38304 | 38232.13 | 21.18 |
| | 50 | rnd | 12541 | 11329.07 | 636.04 | 21821 | 18552.57 | 1167.82 | 22878 | 21551.37 | 884.63 | 18419 | 16427.3 | 1097.14 |
| | | 2op | 38409 | 38371.83 | 54.27 | 38439 | 38428.27 | 12.78 | 38434 | 38399.57 | 11.08 | 38364 | 38264.2 | 42.86 |

Table A.769: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 33010 | 31949.3 | 560.09 | 34127 | 31312.07 | 1033.97 | 29237 | 27433.33 | 944.77 | 22898 | 19524.3 | 1726.83 |
| | | 2op | 38224 | 38224 | 0 | 38224 | 38224 | 0 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 34581 | 33025.7 | 634.75 | 33823 | 32515.4 | 558.21 | 31902 | 29872.7 | 977.96 | 24702 | 22349.23 | 1381.97 |
| | | 2op | 38224 | 38224 | 0 | 38234 | 38224.33 | 1.83 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 33823 | 32069.83 | 766.54 | 35688 | 34880.2 | 555.29 | 32085 | 30416.63 | 982.5 | 28222 | 25814.77 | 1122.16 |
| | | 2op | 38412 | 38279.87 | 66.01 | 38395 | 38283.13 | 58.79 | 38349 | 38228.17 | 22.82 | 38224 | 38224 | 0 |
| | 50 | rnd | 34825 | 33463.23 | 713.93 | 36110 | 35330.63 | 530.55 | 32303 | 31074.27 | 719.49 | 29435 | 27774.6 | 812.04 |
| | | 2op | 38434 | 38270.67 | 71.8 | 38425 | 38325.13 | 64.13 | 38286 | 38230.63 | 17.73 | 38224 | 38224 | 0 |

Table A.770: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12206 | 10880.87 | 591.19 | 23222 | 21866.7 | 872.58 | 19457 | 17901.37 | 818.4 | 15931 | 14256.53 | 797.7 |
| | | 2op | 38409 | 38357.83 | 70.48 | 38434 | 38401.6 | 15.23 | 38366 | 38250.23 | 49.11 | 38224 | 38224 | 0 |
| | 50 | rnd | 12311 | 11131.17 | 645.04 | 25690 | 23416.93 | 1107.52 | 21314 | 19619.7 | 791.27 | 17009 | 15253.9 | 1118.94 |
| | | 2op | 38409 | 38361.37 | 69.7 | 38439 | 38417.97 | 12.06 | 38397 | 38327.53 | 42.22 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 12505 | 11171.17 | 775.28 | 21069 | 19033.97 | 1238.17 | 22847 | 20802.93 | 938.14 | 18509 | 16631.47 | 966.8 |
| | | 2op | 38409 | 38363.97 | 65.07 | 38439 | 38418.8 | 11.94 | 38412 | 38382.73 | 14.57 | 38309 | 38233 | 22.83 |
| | 50 | rnd | 12551 | 11273.77 | 717.49 | 22848 | 18654.67 | 1338.66 | 23387 | 21886.33 | 936.28 | 18806 | 16561.77 | 1136.7 |
| | | 2op | 38414 | 38366.33 | 64.76 | 38439 | 38426.23 | 11.52 | 38431 | 38398.87 | 16.39 | 38384 | 38255.23 | 45.07 |

Table A.771: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 34012 | 32407.17 | 787.93 | 34238 | 32049.37 | 913.31 | 30284 | 28519.83 | 1020.75 | 19774 | 16962.3 | 1190.07 |
| | | 2op | 38427 | 38336.87 | 70.69 | 38427 | 38330.57 | 69.73 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 34713 | 33455.77 | 663.36 | 35280 | 32980.63 | 980.97 | 31844 | 29749.9 | 980.52 | 22992 | 20961.83 | 1103.68 |
| | | 2op | 38434 | 38324.53 | 76.02 | 38434 | 38319.6 | 79.38 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 34689 | 33254.73 | 767.72 | 36405 | 34895 | 644.39 | 33691 | 31903 | 720.92 | 25974 | 24169.07 | 924.6 |
| | | 2op | 38434 | 38411.57 | 13.17 | 38439 | 38433.3 | 6.72 | 38409 | 38297.7 | 68 | 38224 | 38224 | 0 |
| | 50 | rnd | 35238 | 33893.87 | 506.58 | 35700 | 34721.43 | 567.36 | 33488 | 31800.27 | 746.13 | 28535 | 26656.63 | 1107.22 |
| | | 2op | 38439 | 38421.43 | 13.1 | 38439 | 38424.3 | 12.3 | 38409 | 38279.03 | 66.54 | 38224 | 38224 | 0 |

Table A.772: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13342 | 11873.27 | 513.53 | 18721 | 17515.93 | 608.19 | 17478 | 16225.7 | 696.16 | 12506 | 11872.1 | 426.02 |
| | | 2op | 38409 | 38401.5 | 9.24 | 38409 | 38399.97 | 9.39 | 38353 | 38251.37 | 38.16 | 38224 | 38224 | 0 |
| | 50 | rnd | 13043 | 11936.77 | 558.73 | 19060 | 17998.53 | 428.75 | 19553 | 18276.43 | 571.78 | 14151 | 13082.43 | 668.09 |
| | | 2op | 38409 | 38403.8 | 7.36 | 38409 | 38402.3 | 9.29 | 38396 | 38287.67 | 62.1 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 13591 | 12217.23 | 519.29 | 15044 | 14133.97 | 428.34 | 19988 | 18907.93 | 661.14 | 16828 | 14182.3 | 743.96 |
| | | 2op | 38434 | 38406.9 | 9.44 | 38434 | 38407.2 | 9.09 | 38406 | 38350.53 | 41.59 | 38224 | 38224 | 0 |
| | 50 | rnd | 13016 | 12139.37 | 473.68 | 15140 | 14288.8 | 460.59 | 21158 | 19706.87 | 802.32 | 16094 | 14240.7 | 885.87 |
| | | 2op | 38429 | 38407.9 | 4.53 | 38409 | 38401.93 | 5.16 | 38407 | 38357.6 | 49.08 | 38292 | 38230.8 | 18.61 |

Table A.773: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38967 | 37407.7 | 749.63 | 38357 | 36415.6 | 926.87 | 33954 | 31864.33 | 1216.86 | 25108 | 21066.77 | 1780.94 |
| | | 2op | 47173 | 47173 | 0 | 47173 | 47173 | 0 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| | 50 | rnd | 39475 | 37895.63 | 778.85 | 38308 | 36554.57 | 816.51 | 35567 | 33735.23 | 1063.28 | 27447 | 24664.2 | 1438.75 |
| | | 2op | 47341 | 47179.77 | 31.11 | 47173 | 47173 | 0 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| 51 | 20 | rnd | 39660 | 37399.23 | 833.54 | 40842 | 39088.63 | 824.82 | 37078 | 35540.03 | 983.86 | 30479 | 28413.07 | 1411.12 |
| | | 2op | 47394 | 47228.57 | 77.26 | 47394 | 47219.73 | 68.95 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| | 50 | rnd | 40098 | 38231.1 | 728.32 | 42137 | 40804.97 | 652.61 | 37284 | 35973.2 | 814.52 | 33901 | 31517.5 | 1145.75 |
| | | 2op | 47387 | 47192.33 | 52.63 | 47383 | 47244.93 | 79.17 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |

Table A.774: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12134 | 11298.33 | 557.04 | 24460 | 22396.6 | 1086.11 | 20770 | 18031.2 | 1317.19 | 15182 | 13322.87 | 739.58 |
| | | 2op | 47386 | 47228.33 | 55.83 | 47391 | 47372.73 | 12.64 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| | 50 | rnd | 12841 | 11472 | 652.49 | 25677 | 23964.57 | 967.78 | 22044 | 19652.67 | 1420.55 | 16763 | 14241.13 | 1273.69 |
| | | 2op | 47387 | 47224.6 | 66.85 | 47403 | 47395.7 | 6.73 | 47278 | 47185.53 | 28.24 | 47173 | 47173 | 0 |
| 51 | 20 | rnd | 13429 | 11760.77 | 569.59 | 21865 | 19648.8 | 1116.6 | 22941 | 20769.53 | 1064.85 | 18622 | 15566.17 | 1368.96 |
| | | 2op | 47402 | 47252.8 | 67.73 | 47403 | 47400.37 | 4.9 | 47383 | 47258.83 | 70.07 | 47173 | 47173 | 0 |
| | 50 | rnd | 13138 | 11694.63 | 571.01 | 21352 | 18708.63 | 1283.25 | 24062 | 21985.9 | 1065.05 | 19911 | 16087.57 | 1480.48 |
| | | 2op | 47323 | 47215.9 | 43.55 | 47403 | 47402.1 | 2.89 | 47394 | 47344.67 | 56.29 | 47173 | 47173 | 0 |

Table A.775: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38666 | 37117.37 | 763.12 | 37433 | 36112.7 | 801.11 | 33759 | 31880.8 | 1129.14 | 24077 | 20926.4 | 1832.81 |
| | | 2op | 47173 | 47173 | 0 | 47173 | 47173 | 0 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| | 50 | rnd | 39147 | 37904.67 | 591.86 | 38065 | 36795.43 | 608.94 | 36817 | 33978.03 | 1082.74 | 28281 | 24353.27 | 1482.58 |
| | | 2op | 47173 | 47173 | 0 | 47173 | 47173 | 0 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| 51 | 20 | rnd | 38441 | 36819.47 | 816.72 | 40904 | 38799.73 | 837.21 | 37788 | 35063.1 | 972.29 | 30968 | 28541.93 | 1500.81 |
| | | 2op | 47378 | 47198.3 | 59.46 | 47378 | 47200.07 | 63.03 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| | 50 | rnd | 39904 | 38237 | 842.23 | 41651 | 40420.77 | 630.91 | 38109 | 35774.57 | 1059.7 | 33529 | 31131.23 | 1388.13 |
| | | 2op | 47387 | 47201.73 | 64.2 | 47403 | 47224.03 | 74.63 | 47295 | 47177.07 | 22.27 | 47173 | 47173 | 0 |

Table A.776: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12153 | 11187.67 | 602.21 | 24537 | 21985.47 | 1078.21 | 20210 | 18027.1 | 1111.8 | 16157 | 13046.13 | 1070.51 |
| | | 2op | 47402 | 47225.43 | 57.23 | 47402 | 47359.1 | 38.81 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| | 50 | rnd | 12698 | 11390.6 | 462.43 | 25282 | 23591.57 | 1019.37 | 21906 | 18765.93 | 1117.86 | 17114 | 14469.5 | 1258.5 |
| | | 2op | 47401 | 47227.47 | 70.08 | 47402 | 47394.07 | 7.03 | 47315 | 47182.53 | 29.37 | 47173 | 47173 | 0 |
| 51 | 20 | rnd | 13272 | 11687.03 | 598.92 | 22325 | 19607.6 | 1090.41 | 22767 | 21011.43 | 946.24 | 18226 | 15943.37 | 1193.8 |
| | | 2op | 47386 | 47226.93 | 56.7 | 47403 | 47401.53 | 2.86 | 47399 | 47252.83 | 77.48 | 47173 | 47173 | 0 |
| | 50 | rnd | 12535 | 11579.13 | 522.99 | 20945 | 18807.57 | 1205.84 | 25343 | 22094.57 | 1280.12 | 18734 | 16282.3 | 1440.72 |
| | | 2op | 47402 | 47234.6 | 69.03 | 47403 | 47402.8 | 0.48 | 47390 | 47352.3 | 46.32 | 47206 | 47174.97 | 7.54 |

Table A.777: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38798 | 37590.43 | 682.13 | 38651 | 37316.93 | 705.14 | 34426 | 32220.03 | 1161.36 | 21266 | 19015.13 | 1382.04 |
| | | 2op | 47387 | 47300.3 | 90.46 | 47387 | 47286.1 | 93.42 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| | 50 | rnd | 39265 | 38055.5 | 587.58 | 39025 | 37410.43 | 714.8 | 35747 | 33323.03 | 1162.66 | 25350 | 22803.73 | 1005.98 |
| | | 2op | 47403 | 47263.07 | 91.67 | 47387 | 47260.37 | 88.42 | 47173 | 47173 | 0 | 47173 | 47173 | 0 |
| 51 | 20 | rnd | 39755 | 38558.43 | 628.81 | 41446 | 40280.47 | 600.69 | 38335 | 37115.53 | 795.9 | 28412 | 26079.03 | 1014.25 |
| | | 2op | 47403 | 47368.27 | 47.78 | 47403 | 47397.67 | 7.67 | 47333 | 47190.47 | 46.72 | 47173 | 47173 | 0 |
| | 50 | rnd | 40120 | 38895.33 | 648.12 | 41491 | 39709.93 | 1041.69 | 37855 | 36927.9 | 539.47 | 31556 | 29656.53 | 930.05 |
| | | 2op | 47403 | 47383.57 | 32.18 | 47403 | 47382.27 | 41.35 | 47316 | 47201.3 | 43.16 | 47173 | 47173 | 0 |

Table A.778: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13662 | 12207.07 | 480.26 | 18479 | 17579.73 | 451.12 | 17225 | 16394.93 | 562.21 | 12711 | 11244.67 | 537.41 |
| | | 2op | 47402 | 47264.97 | 65.28 | 47386 | 47259.1 | 59.69 | 47212 | 47175 | 7.97 | 47173 | 47173 | 0 |
| | 50 | rnd | 13325 | 12277.6 | 395.71 | 20933 | 18629.37 | 757.21 | 21605 | 18534.53 | 938.69 | 13100 | 12197.07 | 549.65 |
| | | 2op | 47402 | 47311.27 | 67.68 | 47398 | 47310.3 | 67.36 | 47206 | 47174.1 | 6.02 | 47173 | 47173 | 0 |
| 51 | 20 | rnd | 12941 | 12397.33 | 383.96 | 15386 | 14106.93 | 445.03 | 20144 | 18995.63 | 565.63 | 15264 | 13760.03 | 818.17 |
| | | 2op | 47402 | 47320.97 | 63.67 | 47402 | 47373.73 | 35.07 | 47360 | 47220.97 | 56.17 | 47173 | 47173 | 0 |
| | 50 | rnd | 13175 | 12440.17 | 411.38 | 15251 | 14337.47 | 397.22 | 22986 | 20362.5 | 888.52 | 15369 | 13901.47 | 775.51 |
| | | 2op | 47387 | 47312.07 | 60.59 | 47387 | 47331.63 | 44.2 | 47304 | 47193.93 | 30.25 | 47173 | 47173 | 0 |

Table A.779: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 45588 | 43527.07 | 963.05 | 44234 | 42329.87 | 1085.33 | 39697 | 37689.9 | 1154.5 | 28489 | 24580.5 | 1967.05 |
| | | 2op | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| | 50 | rnd | 45807 | 44273.43 | 818.92 | 44796 | 42984.07 | 983.88 | 42379 | 39984.23 | 1473.44 | 31751 | 29050.77 | 1583.75 |
| | | 2op | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| 51 | 20 | rnd | 45588 | 43520.93 | 973.87 | 46548 | 45379.53 | 804.48 | 44755 | 41512.7 | 1358.1 | 36992 | 33800.87 | 1527.29 |
| | | 2op | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| | 50 | rnd | 46632 | 44801.53 | 954.05 | 49174 | 47256 | 893.15 | 44969 | 42686.4 | 1111.4 | 41013 | 37087.13 | 1861.08 |
| | | 2op | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |

Table A.780: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15329 | 13732.43 | 837.49 | 28824 | 26326.33 | 1265.38 | 23792 | 21469.27 | 987.18 | 18183 | 15919.03 | 1389.66 |
| | | 2op | 54750 | 54711.33 | 26.7 | 54742 | 54704.13 | 19.59 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| | 50 | rnd | 14853 | 13614.27 | 619.62 | 30505 | 28252.43 | 1236.75 | 25024 | 23072.4 | 941.64 | 19685 | 16592.43 | 1499.71 |
| | | 2op | 54742 | 54708.53 | 23.09 | 54751 | 54740.27 | 5.28 | 54702 | 54680.5 | 5.71 | 54679 | 54679 | 0 |
| 51 | 20 | rnd | 15982 | 13991.63 | 879.01 | 25718 | 23458.7 | 1202.06 | 26597 | 24393.7 | 1284.22 | 21307 | 18672.93 | 1342.49 |
| | | 2op | 54742 | 54710.43 | 21.72 | 54760 | 54743.77 | 7.29 | 54742 | 54690.77 | 17.66 | 54679 | 54679 | 0 |
| | 50 | rnd | 14860 | 13878.33 | 636.66 | 26305 | 23002.2 | 1561.7 | 28399 | 26050.1 | 1188.98 | 23412 | 19392.2 | 1768.1 |
| | | 2op | 54742 | 54724.4 | 21.61 | 54751 | 54748 | 4.86 | 54742 | 54711.2 | 22.45 | 54679 | 54679 | 0 |

Table A.781: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46181 | 43661.53 | 1044.84 | 44805 | 42464.83 | 960.53 | 40146 | 37496.57 | 1318.14 | 28538 | 24832.37 | 2161.33 |
| | | 2op | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| | 50 | rnd | 46530 | 44328.57 | 842.69 | 44557 | 42818.3 | 756.17 | 41428 | 39335.9 | 1107.59 | 32071 | 28210.8 | 2226.5 |
| | | 2op | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| 51 | 20 | rnd | 46248 | 43539.57 | 1198.24 | 47448 | 45715.8 | 1011.99 | 43896 | 41434.27 | 1219.47 | 36932 | 33526.5 | 1662.51 |
| | | 2op | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| | 50 | rnd | 46494 | 44755 | 848.27 | 50170 | 47505.07 | 933.34 | 44208 | 42487.5 | 1199.75 | 39897 | 37016.7 | 1351.02 |
| | | 2op | 54724 | 54680.5 | 8.22 | 54694 | 54679.5 | 2.74 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |

Table A.782: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15279 | 13826.37 | 736.52 | 29123 | 26211.73 | 1146.56 | 24128 | 20812.57 | 1243.98 | 18781 | 15696.47 | 1095.31 |
| | | 2op | 54742 | 54707.2 | 24.72 | 54741 | 54704.87 | 23.76 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| | 50 | rnd | 16165 | 13911.5 | 795.09 | 30203 | 28280.6 | 1253.9 | 25025 | 22565 | 1348.12 | 19721 | 16701.3 | 1248.45 |
| | | 2op | 54742 | 54709.03 | 21.62 | 54751 | 54738.53 | 7.71 | 54701 | 54680.3 | 4.99 | 54679 | 54679 | 0 |
| 51 | 20 | rnd | 15576 | 14088.8 | 766.38 | 27003 | 23572.53 | 1407.93 | 25981 | 24311.5 | 875.72 | 20917 | 18520.27 | 1566.44 |
| | | 2op | 54742 | 54709.4 | 25.68 | 54751 | 54742.13 | 8.49 | 54741 | 54696.7 | 21.79 | 54679 | 54679 | 0 |
| | 50 | rnd | 15497 | 13785.3 | 777.69 | 26007 | 22475.63 | 1601.52 | 27742 | 25624.57 | 1237.13 | 22818 | 18851 | 2014.03 |
| | | 2op | 54742 | 54713.73 | 19.85 | 54756 | 54747.23 | 4.81 | 54742 | 54709.73 | 19.96 | 54679 | 54679 | 0 |

Table A.783: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 45548 | 44001 | 896.14 | 45529 | 43580.27 | 1176.03 | 39710 | 37502.97 | 1388.52 | 24733 | 22730.63 | 1388.1 |
| | | 2op | 54742 | 54683.97 | 14.88 | 54742 | 54683.57 | 14.85 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| | 50 | rnd | 46075 | 44864.73 | 562.87 | 45996 | 44159.9 | 786.91 | 41600 | 39437.4 | 1315.28 | 29839 | 27269.87 | 1597.57 |
| | | 2op | 54717 | 54682.57 | 9.82 | 54717 | 54682.53 | 9.78 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| 51 | 20 | rnd | 46238 | 44543.27 | 726.13 | 47764 | 46602.97 | 681.45 | 44151 | 42744.6 | 847.85 | 33542 | 30822.93 | 1228.81 |
| | | 2op | 54751 | 54732 | 20.52 | 54766 | 54743.47 | 6.46 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| | 50 | rnd | 47374 | 45451.43 | 686.4 | 47986 | 46311.1 | 1136.35 | 45083 | 43322.77 | 893.2 | 37928 | 34911.67 | 1285.8 |
| | | 2op | 54751 | 54738.57 | 12.98 | 54751 | 54735.43 | 18.5 | 54698 | 54679.63 | 3.47 | 54679 | 54679 | 0 |

Table A.784: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15648 | 14731.73 | 451.9 | 22157 | 20892.17 | 609.04 | 21437 | 19345.13 | 989.77 | 15416 | 13155.7 | 635.06 |
| | | 2op | 54742 | 54728 | 17.81 | 54742 | 54722.33 | 20.54 | 54679 | 54679 | 0 | 54679 | 54679 | 0 |
| | 50 | rnd | 15599 | 14720.9 | 514.95 | 23695 | 22199.53 | 743.13 | 22850 | 21125.67 | 661.11 | 16845 | 14385 | 778.4 |
| | | 2op | 54751 | 54735.23 | 14.5 | 54751 | 54731.5 | 16.39 | 54686 | 54679.23 | 1.28 | 54679 | 54679 | 0 |
| 51 | 20 | rnd | 16164 | 15008.87 | 543.23 | 18375 | 17000.23 | 538.29 | 25382 | 22396 | 895.6 | 18252 | 16245.9 | 918.63 |
| | | 2op | 54751 | 54739.03 | 10.57 | 54751 | 54741.37 | 4.93 | 54715 | 54685.03 | 11.04 | 54679 | 54679 | 0 |
| | 50 | rnd | 16014 | 14974.7 | 457.99 | 18091 | 17353.43 | 449.74 | 26113 | 23589.3 | 810.03 | 17648 | 15848.9 | 1028.44 |
| | | 2op | 54751 | 54740.53 | 7.38 | 54742 | 54722.3 | 19.49 | 54740 | 54684.53 | 13.02 | 54679 | 54679 | 0 |

Table A.785: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10672 | 10272.17 | 270.39 | 11328 | 10974.37 | 164.53 | 10931 | 10301.77 | 237.94 | 9975 | 9202.2 | 377.96 |
| | | 2op | 11109 | 11019.7 | 34.21 | 11373 | 11195.57 | 82.09 | 11089 | 11009.63 | 16.42 | 11003 | 11003 | 0 |
| | 50 | rnd | 10904 | 10323.03 | 289.95 | 11308 | 11048.7 | 144.27 | 11093 | 10734.5 | 182.51 | 10391 | 9627.83 | 385.52 |
| | | 2op | 11256 | 11037.6 | 62.14 | 11373 | 11223.2 | 76.84 | 11373 | 11065.77 | 74.57 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 10863 | 10197.2 | 328.96 | 11122 | 10804.03 | 210.14 | 11198 | 10913.3 | 184.7 | 10679 | 10159.73 | 255.55 |
| | | 2op | 11109 | 11016.33 | 18.59 | 11256 | 11115.7 | 32.36 | 11305 | 11170.77 | 76.08 | 11109 | 11041.73 | 46.78 |
| | 50 | rnd | 11103 | 10521.1 | 257.88 | 11303 | 11001.8 | 186.61 | 11311 | 11054.63 | 150.2 | 10887 | 10241.07 | 299.65 |
| | | 2op | 11109 | 11069.03 | 44.53 | 11373 | 11195.67 | 81.34 | 11373 | 11263.53 | 58.25 | 11109 | 11029.33 | 39.72 |

Table A.786: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6901 | 6020.77 | 449.81 | 10677 | 10155.27 | 431.11 | 10574 | 9500.6 | 501.89 | 9406 | 8373.17 | 547.69 |
| | | 2op | 11101 | 11020 | 28.41 | 11305 | 11118.73 | 39.3 | 11109 | 11109 | 0 | 11009 | 11003.4 | 1.52 |
| | 50 | rnd | 7124 | 6031.77 | 423.28 | 10738 | 9590.57 | 727.02 | 11195 | 10163.43 | 597.71 | 9923 | 8721.77 | 464.09 |
| | | 2op | 11107 | 11023.67 | 32.19 | 11256 | 11123.4 | 40.67 | 11256 | 11120.3 | 35.34 | 11109 | 11039.27 | 38.8 |
| 51 | 20 | rnd | 7144 | 6145.27 | 408.85 | 9274 | 8254.53 | 431.82 | 11105 | 10058.47 | 663.54 | 10324 | 9111.1 | 538.14 |
| | | 2op | 11107 | 11017 | 24.19 | 11109 | 11105.93 | 16.8 | 11256 | 11120.2 | 37.7 | 11109 | 11108.73 | 1.46 |
| | 50 | rnd | 7383 | 6163.23 | 431.4 | 9725 | 8254.67 | 444.03 | 10949 | 9792.7 | 814.73 | 10319 | 9206.83 | 477.17 |
| | | 2op | 11101 | 11015.27 | 21.9 | 11109 | 11109 | 0 | 11256 | 11122.1 | 45.94 | 11109 | 11109 | 0 |

Table A.787: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10952 | 10295.87 | 335.25 | 11241 | 10946.23 | 182.16 | 10775 | 10346.17 | 222.32 | 9732 | 9167.07 | 243.69 |
| | | 2op | 11127 | 11016.73 | 31.2 | 11394 | 11221 | 81.43 | 11109 | 11013.4 | 27.26 | 11003 | 11003 | 0 |
| | 50 | rnd | 10977 | 10361.47 | 327.82 | 11478 | 11057.93 | 170.77 | 11197 | 10718.77 | 225.05 | 9892 | 9336.9 | 262.22 |
| | | 2op | 11213 | 11022.93 | 48.02 | 11373 | 11242.27 | 60.09 | 11213 | 11047.6 | 55.95 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 10837 | 10311.43 | 319.96 | 11136 | 10797.37 | 181.09 | 11259 | 10949.9 | 167.37 | 10925 | 10360.8 | 339.37 |
| | | 2op | 11109 | 11034 | 38.37 | 11305 | 11125.4 | 49.91 | 11305 | 11149.53 | 73.95 | 11109 | 11039 | 40.46 |
| | 50 | rnd | 11047 | 10547.17 | 276.97 | 11283 | 11017.33 | 152 | 11369 | 11084.67 | 150.89 | 11022 | 10362.87 | 295.11 |
| | | 2op | 11109 | 11048.17 | 46.94 | 11373 | 11189.67 | 92.98 | 11373 | 11250.93 | 60.33 | 11109 | 11026.67 | 39.88 |

Table A.788: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7096 | 5942.03 | 504.42 | 10653 | 10133.3 | 290.7 | 11072 | 9612.53 | 530.11 | 9506 | 8607.57 | 505.99 |
| | | 2op | 11063 | 11011 | 11.29 | 11256 | 11118.5 | 32.1 | 11109 | 11107.57 | 7.85 | 11015 | 11003.4 | 2.19 |
| | 50 | rnd | 6937 | 6054.03 | 414.3 | 10875 | 9780.87 | 778.2 | 10714 | 9993.87 | 435.37 | 9815 | 8889.07 | 543.88 |
| | | 2op | 11107 | 11015.13 | 23.97 | 11305 | 11140.3 | 60.35 | 11256 | 11113.9 | 26.84 | 11109 | 11021.7 | 31.62 |
| 51 | 20 | rnd | 6903 | 6160.93 | 326.78 | 9753 | 8283.5 | 540.06 | 10808 | 10083.07 | 555.55 | 10391 | 9277.3 | 698.3 |
| | | 2op | 11095 | 11017.2 | 22.46 | 11109 | 11109 | 0 | 11305 | 11126.83 | 48.75 | 11109 | 11108.47 | 1.89 |
| | 50 | rnd | 6893 | 6107.97 | 380.41 | 8885 | 8054.4 | 445.1 | 11205 | 9932.53 | 828.22 | 10333 | 9223.03 | 540.03 |
| | | 2op | 11095 | 11011.07 | 16.67 | 11109 | 11105.93 | 16.8 | 11256 | 11125.1 | 45.03 | 11109 | 11108.93 | 0.37 |

Table A.789: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10864 | 10440.53 | 255.71 | 11348 | 11034.97 | 123.68 | 10100 | 9596.33 | 252.32 | 9007 | 8425.6 | 288.81 |
| | | 2op | 11109 | 11069.87 | 48.95 | 11305 | 11252.2 | 69.01 | 11088 | 11009.23 | 18.8 | 11003 | 11003 | 0 |
| | 50 | rnd | 11092 | 10496.53 | 220.49 | 11341 | 11040.2 | 175.86 | 10032 | 9710.37 | 188.98 | 8715 | 8374.7 | 208.39 |
| | | 2op | 11256 | 11082.53 | 54.35 | 11394 | 11207.33 | 80.04 | 11109 | 11014.33 | 29.12 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 10968 | 10546.23 | 216.78 | 11326 | 10866.13 | 208.77 | 11002 | 10537.53 | 237.02 | 10369 | 9834.77 | 314.6 |
| | | 2op | 11109 | 11078.33 | 44.11 | 11305 | 11122.07 | 49.73 | 11109 | 11039.33 | 35.39 | 11003 | 11003 | 0 |
| | 50 | rnd | 11157 | 10643.2 | 223.05 | 11233 | 10886.73 | 187.1 | 11094 | 10474.67 | 194.05 | 10134 | 9401.77 | 247.14 |
| | | 2op | 11213 | 11094.07 | 43.51 | 11305 | 11145.83 | 69.77 | 11109 | 11027.87 | 29.09 | 11017 | 11004.13 | 3.66 |

Table A.790: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7001 | 6436.83 | 321.39 | 9743 | 8813.57 | 290.7 | 9891 | 9101.7 | 410.11 | 8433 | 7920 | 258.95 |
| | | 2op | 11107 | 11039.93 | 39.47 | 11109 | 11076 | 37.4 | 11047 | 11006.67 | 8.74 | 11003 | 11003 | 0 |
| | 50 | rnd | 7286 | 6518.33 | 330.57 | 9396 | 8889.23 | 226.18 | 10175 | 9460 | 357.55 | 9824 | 8317.57 | 379.92 |
| | | 2op | 11107 | 11044.4 | 39.15 | 11184 | 11111.97 | 15.94 | 11095 | 11018.47 | 24.18 | 11095 | 11006.07 | 16.8 |
| 51 | 20 | rnd | 7286 | 6576.23 | 328.69 | 7983 | 7584.97 | 186.77 | 10197 | 9582.5 | 365.5 | 9695 | 8601.87 | 418.55 |
| | | 2op | 11107 | 11056.47 | 43.47 | 11109 | 11101.6 | 18.79 | 11101 | 11031.37 | 27.88 | 11015 | 11004 | 3.18 |
| | 50 | rnd | 7453 | 6730.43 | 285.31 | 7947 | 7683.8 | 147.99 | 10371 | 9665.43 | 387.11 | 9094 | 8362.4 | 382.41 |
| | | 2op | 11107 | 11051 | 43.74 | 11109 | 11082 | 39.32 | 11109 | 11071.17 | 37.99 | 11043 | 11005.33 | 7.63 |

Table A.791: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13611 | 12826.27 | 308.27 | 14055 | 13636.5 | 189.12 | 13293 | 12746 | 312.77 | 12423 | 11342.63 | 449.55 |
| | | 2op | 13967 | 13786.6 | 78.88 | 14064 | 13892.97 | 69.87 | 13868 | 13729.23 | 29.25 | 13721 | 13721 | 0 |
| | 50 | rnd | 13573 | 13045.53 | 294.64 | 13858 | 13670.97 | 99.82 | 13644 | 13205.27 | 232.24 | 12651 | 11677.87 | 448.06 |
| | | 2op | 13916 | 13785 | 65.88 | 14071 | 13925.7 | 60.03 | 13825 | 13742.47 | 31.02 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 13880 | 12822.77 | 363.41 | 13917 | 13466.7 | 224.2 | 13858 | 13435 | 187.32 | 13648 | 12649 | 351.47 |
| | | 2op | 13873 | 13769.2 | 50 | 13984 | 13880.7 | 41.02 | 13967 | 13875.6 | 43.14 | 13769 | 13722.6 | 8.76 |
| | 50 | rnd | 13377 | 12979.87 | 193.55 | 13832 | 13572.27 | 164.28 | 13918 | 13645.63 | 181.69 | 13105 | 12573.4 | 337.68 |
| | | 2op | 13899 | 13797.63 | 62.88 | 14064 | 13921.73 | 71.62 | 14038 | 13900.1 | 52.59 | 13743 | 13721.73 | 4.02 |

Table A.792: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8306 | 7528.3 | 483.01 | 13120 | 12001.27 | 547.82 | 12857 | 11246.33 | 616.43 | 11534 | 10026.4 | 632.59 |
| | | 2op | 13764 | 13732.6 | 13.91 | 13990 | 13889.2 | 33.8 | 13874 | 13837.57 | 53.75 | 13721 | 13721 | 0 |
| | 50 | rnd | 8241 | 7350.1 | 394.03 | 13411 | 11944.03 | 693.07 | 13351 | 11786.63 | 513.56 | 11384 | 10242.03 | 543.27 |
| | | 2op | 13815 | 13737.17 | 19.13 | 14064 | 13905.73 | 56.06 | 13878 | 13872.9 | 2.86 | 13749 | 13723.8 | 8.23 |
| 51 | 20 | rnd | 8385 | 7619.9 | 457.63 | 12005 | 10125.33 | 521.55 | 13016 | 11917.73 | 600.61 | 11606 | 10737.2 | 539.74 |
| | | 2op | 13751 | 13735.2 | 13.03 | 13964 | 13877.93 | 31.36 | 13968 | 13876.63 | 18.17 | 13863 | 13745.93 | 42.59 |
| | 50 | rnd | 8649 | 7718.5 | 458.54 | 10774 | 9922.87 | 471.68 | 13128 | 12035.17 | 772.15 | 11530 | 10764.23 | 368.08 |
| | | 2op | 13747 | 13727.8 | 10.97 | 13885 | 13859.8 | 38.59 | 14064 | 13901.57 | 53.02 | 13869 | 13766.4 | 58.6 |

Table A.793: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13260 | 12847.87 | 223.87 | 13923 | 13622.43 | 157.3 | 13347 | 12762.47 | 347.94 | 12093 | 11145.97 | 527.92 |
| | | 2op | 13873 | 13780.07 | 57.52 | 14030 | 13905.27 | 62.45 | 13818 | 13724.9 | 17.96 | 13721 | 13721 | 0 |
| | 50 | rnd | 13397 | 12873.4 | 286.71 | 14060 | 13661.03 | 187.13 | 13674 | 13023.87 | 249.39 | 12541 | 11482.27 | 484.03 |
| | | 2op | 13916 | 13797.03 | 64.92 | 14049 | 13916.4 | 71.45 | 13818 | 13735.23 | 27.15 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 13654 | 12832.8 | 306.68 | 13988 | 13457.93 | 231.95 | 13964 | 13441.57 | 235.91 | 13622 | 12689.2 | 402.8 |
| | | 2op | 13873 | 13764.53 | 49.16 | 13970 | 13883.87 | 43.92 | 13967 | 13877.6 | 35.76 | 13740 | 13722.27 | 4.82 |
| | 50 | rnd | 13688 | 13074.53 | 273.17 | 13956 | 13607.33 | 167.3 | 14001 | 13652.33 | 173.65 | 13330 | 12725.03 | 269.43 |
| | | 2op | 13878 | 13791.3 | 59.98 | 14064 | 13908.93 | 60.34 | 14064 | 13909.2 | 58.79 | 13843 | 13725.47 | 22.31 |

Table A.794: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8397 | 7580.33 | 542.99 | 13464 | 12150.7 | 567.58 | 12822 | 11252.9 | 619.84 | 11597 | 10094.17 | 557.88 |
| | | 2op | 13764 | 13731.97 | 13.61 | 13968 | 13876.07 | 17.73 | 13874 | 13820.07 | 62.08 | 13721 | 13721 | 0 |
| | 50 | rnd | 8502 | 7488.03 | 470.12 | 13664 | 12170.63 | 623.42 | 12756 | 11602.9 | 587.06 | 11090 | 10289.87 | 488.23 |
| | | 2op | 13751 | 13730.37 | 11.66 | 13968 | 13891.8 | 34.94 | 13878 | 13871.77 | 3.46 | 13747 | 13721.87 | 4.75 |
| 51 | 20 | rnd | 8401 | 7592.93 | 407.75 | 11713 | 10195.87 | 490.35 | 13140 | 11899.5 | 726.53 | 12040 | 10669.53 | 584.52 |
| | | 2op | 13815 | 13734.63 | 19.61 | 13967 | 13890.2 | 34.56 | 13968 | 13880.1 | 24.03 | 13858 | 13746.4 | 41.76 |
| | 50 | rnd | 8090 | 7498.23 | 381.27 | 10628 | 9671.9 | 425.96 | 13349 | 12041.73 | 707 | 11711 | 10686.03 | 454.41 |
| | | 2op | 13747 | 13731.23 | 11.95 | 13968 | 13854.97 | 59.26 | 13967 | 13876.9 | 17.54 | 13874 | 13741.03 | 35.33 |

Table A.795: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13475 | 12913.97 | 293.02 | 13995 | 13651.77 | 179.98 | 12684 | 12153.53 | 270.77 | 11054 | 10375.87 | 348.58 |
| | | 2op | 13878 | 13811.9 | 57.64 | 14064 | 13930.47 | 53.49 | 13867 | 13726.63 | 26.84 | 13721 | 13721 | 0 |
| | 50 | rnd | 13471 | 13078.4 | 181.58 | 13954 | 13679.97 | 152.72 | 12996 | 12375.67 | 263.87 | 11137 | 10582.1 | 312.17 |
| | | 2op | 13967 | 13843.4 | 46.56 | 14037 | 13886.8 | 52.09 | 13840 | 13732 | 29.87 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 13768 | 13165.23 | 243.96 | 13768 | 13418.27 | 171.28 | 13603 | 13078.83 | 242.82 | 12839 | 12118.07 | 356.37 |
| | | 2op | 13873 | 13817 | 56.13 | 13967 | 13892.67 | 37.86 | 13820 | 13751.13 | 35.26 | 13721 | 13721 | 0 |
| | 50 | rnd | 13814 | 13228.27 | 238.53 | 13978 | 13498.33 | 175.93 | 13700 | 13076.93 | 251.18 | 12531 | 11862.73 | 327.37 |
| | | 2op | 13967 | 13858.3 | 32.5 | 13967 | 13899.9 | 45.53 | 13817 | 13738.9 | 29.9 | 13721 | 13721 | 0 |

Table A.796: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8535 | 8023.37 | 285.47 | 11335 | 10486.47 | 307.46 | 11886 | 10661.67 | 417.37 | 10133 | 9290.47 | 328.46 |
| | | 2op | 13869 | 13750.67 | 32.1 | 13874 | 13772.6 | 39.99 | 13747 | 13722.53 | 5.27 | 13721 | 13721 | 0 |
| | 50 | rnd | 8726 | 8105.3 | 292.67 | 11593 | 10620.9 | 310 | 12134 | 11089.83 | 425.13 | 10612 | 9829.27 | 340.19 |
| | | 2op | 13817 | 13746.5 | 15.5 | 13872 | 13815.67 | 46.55 | 13747 | 13723.07 | 6.76 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 8918 | 8210.93 | 294.06 | 9813 | 9412.97 | 222.38 | 11796 | 11240.77 | 316.82 | 11418 | 10064.6 | 559.6 |
| | | 2op | 13817 | 13748.77 | 20.56 | 13872 | 13775.77 | 38.19 | 13749 | 13725.97 | 8.75 | 13721 | 13721 | 0 |
| | 50 | rnd | 8784 | 8343.17 | 246.53 | 9736 | 9312.23 | 216.78 | 12270 | 11539.07 | 335.44 | 11154 | 10074.6 | 506.46 |
| | | 2op | 13864 | 13754.3 | 24.42 | 13868 | 13764.23 | 28.89 | 13812 | 13735.53 | 18.83 | 13721 | 13721 | 0 |

Table A.797: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16965 | 16028.7 | 404.86 | 17423 | 16892.63 | 266.59 | 15825 | 14757.1 | 361.75 | 13412 | 12500.03 | 574.96 |
| | | 2op | 18017 | 18002.6 | 11.18 | 18017 | 17998.67 | 8.54 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 17097 | 16277.33 | 372.87 | 17654 | 17324.8 | 223.58 | 16547 | 15613.57 | 456.46 | 14130 | 13026.77 | 602.56 |
| | | 2op | 18017 | 18003.37 | 11.36 | 18017 | 18014 | 7.19 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 16620 | 15895.33 | 411.27 | 17680 | 17028.3 | 291.67 | 17141 | 16354.13 | 314.31 | 15840 | 14748.9 | 493.76 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 17999.53 | 9.84 | 17994 | 17994 | 0 |
| | 50 | rnd | 17090 | 16382.73 | 389.92 | 17538 | 17037.47 | 200.56 | 17337 | 16825.33 | 267.53 | 15654 | 14782.3 | 445.73 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18017 | 0 | 18017 | 18007.43 | 11.19 | 17994 | 17994 | 0 |

Table A.798: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10299 | 9499.87 | 391.72 | 15770 | 14333.5 | 608.28 | 14217 | 13261.63 | 528.49 | 12527 | 11580.9 | 494.48 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18005.93 | 8.5 | 17994 | 17994 | 0 |
| | 50 | rnd | 10463 | 9429.83 | 546.91 | 15576 | 14531.93 | 547.88 | 14472 | 13679.93 | 399.53 | 12756 | 11964.8 | 472.1 |
| | | 2op | 18017 | 18006.27 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17994.77 | 4.2 |
| 51 | 20 | rnd | 10309 | 9538.7 | 429.86 | 14330 | 12998.63 | 606.88 | 15251 | 13935.93 | 540.34 | 13486 | 12526.57 | 552.38 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17997.2 | 6.16 |
| | 50 | rnd | 10364 | 9747.9 | 344.13 | 13694 | 12612.83 | 540.21 | 15145 | 14378.1 | 505.45 | 13903 | 12651.77 | 598.01 |
| | | 2op | 18017 | 18004.73 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18016 | 17997.07 | 6.73 |

Table A.799: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16837 | 16131.63 | 316.26 | 17385 | 16788.5 | 320.94 | 15444 | 14734.7 | 370.66 | 13984 | 12651.93 | 631.1 |
| | | 2op | 18017 | 17996.47 | 7.02 | 18017 | 17998.83 | 8.5 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 16931 | 16151.1 | 378.7 | 17682 | 17179.2 | 274.37 | 16504 | 15499.37 | 533.95 | 13945 | 12929.57 | 441.13 |
| | | 2op | 18017 | 18001.67 | 11.03 | 18017 | 18011.07 | 9.54 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 17000 | 16061.1 | 377.98 | 17536 | 16868.17 | 265.7 | 16981 | 16316.4 | 317.07 | 15634 | 14557.67 | 536.6 |
| | | 2op | 18017 | 18006.6 | 11.37 | 18017 | 18017 | 0 | 18017 | 17997.73 | 7.79 | 17994 | 17994 | 0 |
| | 50 | rnd | 17519 | 16342.93 | 401.85 | 17603 | 17056.27 | 233.79 | 17595 | 16913.3 | 349.49 | 15981 | 14704.3 | 560.17 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18015.8 | 4.57 | 18017 | 18011.6 | 9.19 | 17994 | 17994 | 0 |

Table A.800: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10189 | 9319.9 | 358.36 | 15458 | 14362.03 | 679.96 | 13992 | 12985.27 | 604.02 | 12695 | 11713 | 556.6 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18017 | 0 | 18017 | 18002.07 | 8.69 | 17994 | 17994 | 0 |
| | 50 | rnd | 10019 | 9407.3 | 365.76 | 16037 | 14610.97 | 561.47 | 14809 | 13520.03 | 542.37 | 13200 | 12124.8 | 501.79 |
| | | 2op | 18017 | 18003.97 | 11.59 | 18017 | 18017 | 0 | 18017 | 18016.6 | 1.83 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 10264 | 9514.97 | 424.21 | 14817 | 13292.93 | 769.38 | 15072 | 14089.97 | 570.72 | 13238 | 12294.57 | 527.48 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18014 | 17997.17 | 6.38 |
| | 50 | rnd | 10644 | 9747.1 | 413.59 | 13859 | 12626.33 | 558.11 | 15867 | 14429.8 | 661.43 | 13779 | 12710.1 | 554.4 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18014 | 17998.33 | 6.91 |

Table A.801: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16640 | 16139.7 | 247.11 | 17657 | 16951.07 | 297.33 | 15468 | 14746.5 | 423.72 | 12386 | 11406 | 545.18 |
| | | 2op | 18017 | 18016.4 | 3.29 | 18017 | 18017 | 0 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 16933 | 16342.73 | 338.17 | 17581 | 16991.7 | 313.54 | 15737 | 14895.87 | 377.01 | 13277 | 11866.23 | 489.19 |
| | | 2op | 18017 | 18015.47 | 5.84 | 18017 | 18015.3 | 5.47 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 16984 | 16335.57 | 252.03 | 17187 | 16749.2 | 259.94 | 16571 | 15745.23 | 331.1 | 15170 | 14072.97 | 512.88 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18006.2 | 10.53 | 17994 | 17994 | 0 |
| | 50 | rnd | 17104 | 16549.43 | 313.91 | 17483 | 16977.37 | 214.13 | 16591 | 15934.93 | 335.73 | 15408 | 14070.33 | 495.05 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.47 | 10.22 | 17994 | 17994 | 0 |

Table A.802: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10782 | 9985.37 | 405.91 | 13264 | 12601.27 | 277.07 | 13746 | 12279.87 | 569.54 | 11260 | 10371.63 | 349.7 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18008 | 17994.7 | 2.61 | 17994 | 17994 | 0 |
| | 50 | rnd | 10756 | 10207.6 | 300.12 | 14508 | 13018.63 | 377.81 | 13764 | 13026.67 | 370.96 | 11956 | 10827.93 | 429.96 |
| | | 2op | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 17997.47 | 7.28 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 10807 | 10093.8 | 282.53 | 12350 | 11600.5 | 320.75 | 13974 | 13196.03 | 433.77 | 12353 | 11452.6 | 503.85 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18005.57 | 9.87 | 17994 | 17994 | 0 |
| | 50 | rnd | 10890 | 10245.33 | 271.75 | 12130 | 11549.73 | 285.96 | 14734 | 13711.87 | 528.65 | 12161 | 11309.2 | 466.91 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18008.77 | 10.14 | 17994 | 17994 | 0 |

Table A.803: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19788 | 18962.63 | 493.28 | 20367 | 19746.33 | 321.99 | 18536 | 17484.83 | 558.67 | 16034 | 14951.13 | 598.88 |
| | | 2op | 20829 | 20829 | 0 | 20944 | 20836.6 | 23.82 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 19876 | 19258.63 | 330.25 | 20740 | 20265.57 | 278.31 | 19454 | 18459.03 | 494.59 | 17099 | 15838.63 | 753.06 |
| | | 2op | 20945 | 20833.63 | 21.45 | 21041 | 20886.53 | 69.37 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 19724 | 18924.17 | 378.34 | 20492 | 19931.53 | 315.99 | 20011 | 19337.77 | 334.39 | 18698 | 17500.97 | 530.87 |
| | | 2op | 20829 | 20829 | 0 | 21057 | 20885.93 | 77.22 | 20864 | 20830.17 | 6.39 | 20829 | 20829 | 0 |
| | 50 | rnd | 19709 | 19196.63 | 339.97 | 20829 | 20087.13 | 364.91 | 20579 | 19780.07 | 320.63 | 18290 | 17374.1 | 471.22 |
| | | 2op | 20843 | 20829.47 | 2.56 | 21051 | 20908.07 | 75.19 | 20889 | 20838.53 | 21.81 | 20829 | 20829 | 0 |

Table A.804: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12785 | 11705.33 | 468.52 | 17707 | 16810.3 | 480.84 | 16547 | 15571.9 | 433.98 | 14703 | 13682.43 | 594.33 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 12889 | 11761.6 | 551.47 | 18836 | 17039.13 | 693.56 | 17417 | 15979.73 | 649.37 | 15833 | 14354.9 | 619.96 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 12756 | 11799.23 | 502.46 | 17679 | 15779 | 907.61 | 17653 | 16300 | 670.42 | 16408 | 14888.13 | 790.26 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 12661 | 11844.63 | 522.46 | 16900 | 15057.77 | 697.78 | 18016 | 16705.17 | 671.05 | 16776 | 14715.77 | 629.41 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.805: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19682 | 18949.8 | 345.68 | 20728 | 19742.37 | 336.73 | 18680 | 17578.13 | 552.58 | 15962 | 14678.8 | 649.28 |
| | | 2op | 20997 | 20836.6 | 32.21 | 20926 | 20835.13 | 20.58 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 20068 | 19139.8 | 451.68 | 20567 | 20103.6 | 257.77 | 19487 | 18328.33 | 525.25 | 16255 | 15409.23 | 482.6 |
| | | 2op | 20880 | 20830.73 | 9.31 | 20981 | 20849.1 | 41.22 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 19588 | 18860.97 | 307.73 | 20385 | 19735.93 | 263.68 | 19616 | 19235.77 | 269.64 | 18522 | 17271.13 | 640.67 |
| | | 2op | 20889 | 20831 | 10.95 | 21006 | 20878.73 | 59.22 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 19943 | 19217.5 | 342.15 | 20542 | 20081.57 | 245.59 | 20313 | 19714.23 | 338.77 | 18249 | 17332.13 | 497.35 |
| | | 2op | 20922 | 20832.83 | 17.31 | 21059 | 20899.43 | 75.67 | 20922 | 20832.33 | 16.98 | 20829 | 20829 | 0 |

Table A.806: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12825 | 11577.2 | 564.28 | 18127 | 16823.6 | 572.83 | 16724 | 15424.37 | 502.58 | 14840 | 13600.13 | 792.47 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 12772 | 11569.7 | 501.25 | 18145 | 17216.53 | 587.51 | 16893 | 15869.03 | 508.8 | 15345 | 13980.37 | 636.15 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 12665 | 11937.53 | 458.55 | 17827 | 15989.13 | 1072.48 | 17238 | 16046.8 | 595.46 | 15562 | 14572.07 | 541.72 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 12723 | 11818.4 | 571.48 | 16857 | 15109.97 | 808.07 | 17908 | 16858.37 | 585.09 | 16004 | 14702 | 613.22 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.807: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19806 | 19113.13 | 355.25 | 20506 | 19936.07 | 294.36 | 18514 | 17610.5 | 510.68 | 14593 | 13627.5 | 587.02 |
| | | 2op | 20829 | 20829 | 0 | 21057 | 20857.9 | 57.94 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 19934 | 19410.77 | 342.08 | 20813 | 20003.2 | 311.69 | 18626 | 17922.3 | 356.22 | 15465 | 14226.87 | 517.97 |
| | | 2op | 20911 | 20835.53 | 20.31 | 21051 | 20859.23 | 52.41 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 20106 | 19252.13 | 411.43 | 20389 | 19749.53 | 350.38 | 19409 | 18648.37 | 334.64 | 17532 | 16564.77 | 454.05 |
| | | 2op | 20889 | 20831 | 10.95 | 20997 | 20876.77 | 58.89 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 20071 | 19486.97 | 275.87 | 20402 | 19986.03 | 232.86 | 19489 | 18719.37 | 417.22 | 17655 | 16758.43 | 454.86 |
| | | 2op | 20997 | 20844.3 | 42.09 | 21051 | 20882.77 | 66.9 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |

Table A.808: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13318 | 12112.6 | 401.65 | 15440 | 14864.03 | 275.46 | 15376 | 14551.77 | 412.22 | 13259 | 12216.83 | 439.05 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 13035 | 12302.43 | 412.54 | 16198 | 15350.33 | 308.81 | 16637 | 15403.5 | 515.34 | 14505 | 12912.03 | 509.01 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 13778 | 12364.47 | 505.34 | 14424 | 13757.03 | 261.09 | 17072 | 15632.2 | 618.08 | 14570 | 13443.53 | 523.74 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 13727 | 12481.3 | 468.14 | 14360 | 13883.87 | 249.53 | 16828 | 15885.07 | 428.62 | 14337 | 13542.4 | 509.72 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.809: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 586.1 | 5.43 | 594 | 592.13 | 1.7 | 595 | 591.07 | 2.24 | 586 | 577.07 | 4.64 |
| | | 2op | 596 | 591.47 | 2.56 | 596 | 594.07 | 1.53 | 595 | 594.07 | 1.39 | 594 | 589.87 | 1.76 |
| | 50 | rnd | 594 | 586.83 | 4.42 | 596 | 593.6 | 1.5 | 596 | 593.77 | 1.17 | 590 | 580.53 | 3.99 |
| | | 2op | 595 | 591.57 | 2.06 | 595 | 593.97 | 1.5 | 596 | 594.5 | 1.04 | 595 | 589.83 | 1.66 |
| 51 | 20 | rnd | 593 | 585.63 | 4.37 | 595 | 592.3 | 1.66 | 596 | 593.4 | 1.67 | 595 | 591.03 | 2.61 |
| | | 2op | 595 | 593.07 | 1.95 | 596 | 594.57 | 0.63 | 596 | 595.07 | 0.52 | 595 | 594.7 | 0.53 |
| | 50 | rnd | 594 | 588.37 | 4.57 | 595 | 593.43 | 1.19 | 596 | 593.9 | 1.35 | 595 | 591.2 | 2.73 |
| | | 2op | 595 | 592.73 | 2.32 | 596 | 594.87 | 0.9 | 596 | 595 | 0.87 | 595 | 594.1 | 1.3 |

Table A.810: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 485 | 441.93 | 36.03 | 593 | 576.43 | 22.73 | 596 | 587.47 | 5.42 | 594 | 580.17 | 7.33 |
| | | 2op | 592 | 589.67 | 1.12 | 595 | 594.83 | 0.38 | 595 | 594.2 | 0.48 | 594 | 592.93 | 1.36 |
| | 50 | rnd | 488 | 443.17 | 29.61 | 593 | 552.33 | 31.58 | 596 | 587.03 | 10.68 | 594 | 584.7 | 5.63 |
| | | 2op | 592 | 589.97 | 1.3 | 595 | 594.9 | 0.31 | 595 | 594.83 | 0.38 | 595 | 594.1 | 0.31 |
| 51 | 20 | rnd | 513 | 463 | 28.06 | 586 | 549.6 | 31.08 | 594 | 582.77 | 17.19 | 594 | 585.87 | 4.01 |
| | | 2op | 592 | 589.97 | 1.22 | 595 | 594.27 | 0.94 | 595 | 594.7 | 0.47 | 595 | 594.13 | 0.43 |
| | 50 | rnd | 530 | 473.4 | 28.17 | 588 | 537.2 | 31.67 | 593 | 567 | 29.06 | 593 | 583.2 | 10.3 |
| | | 2op | 592 | 589.9 | 1.16 | 595 | 594.4 | 0.5 | 595 | 594.9 | 0.31 | 595 | 594.17 | 0.46 |

Table A.811: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 594 | 583.53 | 3.93 | 595 | 592.1 | 1.73 | 596 | 590.6 | 2.43 | 589 | 576.43 | 4.9 |
| | | 2op | 594 | 590.6 | 2.06 | 596 | 594 | 1.44 | 596 | 593.37 | 1.3 | 594 | 589.17 | 0.91 |
| | 50 | rnd | 593 | 587.8 | 3.45 | 596 | 593.03 | 1.88 | 596 | 593.03 | 1.63 | 586 | 580.47 | 3.19 |
| | | 2op | 596 | 591.57 | 2.22 | 596 | 594.27 | 1.31 | 596 | 594.27 | 1.05 | 594 | 589.33 | 1.15 |
| 51 | 20 | rnd | 592 | 585.37 | 4.89 | 595 | 591.57 | 2.39 | 596 | 593.43 | 1.68 | 594 | 591 | 2.67 |
| | | 2op | 595 | 592.43 | 2.19 | 595 | 594.43 | 0.82 | 596 | 595.03 | 0.41 | 596 | 594.63 | 0.85 |
| | 50 | rnd | 595 | 586.93 | 4.02 | 595 | 593.8 | 0.96 | 596 | 593.77 | 1.41 | 595 | 591.4 | 2.22 |
| | | 2op | 595 | 593.1 | 1.95 | 596 | 595 | 0.79 | 596 | 595.1 | 0.8 | 596 | 594.23 | 1.28 |

Table A.812: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 483 | 435.97 | 28.97 | 594 | 574 | 22.77 | 593 | 587.17 | 2.78 | 588 | 578.47 | 5.76 |
| | | 2op | 592 | 590.13 | 1.25 | 595 | 594.8 | 0.55 | 595 | 594.1 | 0.31 | 594 | 592.3 | 1.56 |
| | 50 | rnd | 493 | 438.57 | 30.2 | 593 | 568.13 | 25.34 | 595 | 582.33 | 14.81 | 593 | 582.63 | 6.22 |
| | | 2op | 592 | 590.3 | 1.44 | 595 | 594.83 | 0.38 | 595 | 594.67 | 0.48 | 594 | 593.97 | 0.18 |
| 51 | 20 | rnd | 518 | 453.63 | 29.96 | 587 | 553.97 | 23.6 | 595 | 585.4 | 16.32 | 592 | 584.73 | 4.15 |
| | | 2op | 592 | 589.93 | 1.23 | 595 | 594.53 | 0.51 | 595 | 594.67 | 0.48 | 595 | 594.13 | 0.35 |
| | 50 | rnd | 561 | 467.6 | 31.66 | 588 | 547.23 | 26.53 | 593 | 563.33 | 27.29 | 593 | 582.67 | 7.17 |
| | | 2op | 592 | 590.03 | 1.27 | 595 | 594.3 | 0.47 | 595 | 594.9 | 0.31 | 595 | 594.1 | 0.4 |

Table A.813: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 593 | 587.23 | 3.2 | 595 | 592.83 | 1.37 | 579 | 573.33 | 3.39 | 568 | 550.73 | 5.64 |
| | | 2op | 596 | 594.23 | 0.94 | 596 | 595.1 | 0.55 | 594 | 589.17 | 0.91 | 589 | 589 | 0 |
| | 50 | rnd | 594 | 588.97 | 2.95 | 595 | 592.17 | 1.72 | 582 | 577.5 | 2.75 | 575 | 552.57 | 6.66 |
| | | 2op | 595 | 593.83 | 1.46 | 596 | 594.8 | 0.48 | 592 | 589.27 | 0.78 | 589 | 589 | 0 |
| 51 | 20 | rnd | 595 | 588.7 | 2.97 | 595 | 592.97 | 1.35 | 593 | 588.57 | 2.5 | 587 | 578.13 | 4.11 |
| | | 2op | 595 | 594.13 | 0.35 | 596 | 595.07 | 0.25 | 595 | 594.27 | 0.45 | 594 | 590.87 | 2.03 |
| | 50 | rnd | 594 | 591.13 | 2.46 | 595 | 591.8 | 1.79 | 591 | 587.03 | 2.28 | 580 | 568.63 | 5.87 |
| | | 2op | 596 | 594.67 | 0.55 | 596 | 595.07 | 0.58 | 595 | 593.07 | 1.53 | 592 | 589.1 | 0.55 |

Table A.814: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 498 | 477.93 | 12.87 | 582 | 572.83 | 5.56 | 584 | 573.33 | 4.51 | 563 | 552.3 | 5.26 |
| | | 2op | 592 | 591.3 | 1.12 | 594 | 593.6 | 0.97 | 592 | 589.67 | 1.12 | 589 | 589 | 0 |
| | 50 | rnd | 523 | 485.1 | 13.42 | 585 | 577.27 | 4.62 | 587 | 580.7 | 2.94 | 576 | 559.57 | 6.13 |
| | | 2op | 592 | 591.2 | 1.1 | 595 | 594.07 | 0.25 | 594 | 592.37 | 1.59 | 590 | 589.07 | 0.25 |
| 51 | 20 | rnd | 540 | 489.77 | 13.6 | 581 | 551.87 | 12.09 | 590 | 579.33 | 3.6 | 575 | 561.97 | 6.59 |
| | | 2op | 594 | 591.53 | 1.01 | 594 | 594 | 0 | 594 | 593.8 | 0.61 | 594 | 589.2 | 0.92 |
| | 50 | rnd | 550 | 496.23 | 16.5 | 565 | 545.2 | 13.72 | 585 | 580.17 | 3.45 | 573 | 561.27 | 5.67 |
| | | 2op | 592 | 591.43 | 0.97 | 594 | 594 | 0 | 595 | 593.97 | 0.41 | 592 | 589.27 | 0.78 |

Table A.815: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 774 | 760.67 | 9.81 | 776 | 772.63 | 2.14 | 776 | 772.27 | 2.05 | 772 | 754.63 | 8.74 |
| | | 2op | 772 | 766.8 | 2.34 | 776 | 772.33 | 2.04 | 775 | 772.2 | 1.61 | 765 | 765 | 0 |
| | 50 | rnd | 774 | 768.03 | 5.49 | 776 | 774.27 | 1.17 | 777 | 774.47 | 1.74 | 772 | 762.5 | 4.18 |
| | | 2op | 774 | 767.93 | 2.5 | 776 | 773.7 | 1.62 | 777 | 774.33 | 1.65 | 769 | 765.47 | 0.86 |
| 51 | 20 | rnd | 774 | 761.33 | 10.68 | 775 | 771.33 | 2.96 | 777 | 773.27 | 2.24 | 777 | 769.57 | 3.09 |
| | | 2op | 770 | 767.17 | 1.78 | 775 | 771.63 | 1.59 | 775 | 772.47 | 0.97 | 772 | 770.93 | 1.36 |
| | 50 | rnd | 775 | 768.4 | 6.46 | 777 | 773.77 | 1.61 | 777 | 774.8 | 1.54 | 777 | 772.9 | 2.29 |
| | | 2op | 771 | 768 | 1.53 | 775 | 773.1 | 1.32 | 777 | 773.83 | 1.68 | 774 | 771.33 | 1.3 |

Table A.816: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 609 | 482.17 | 43.8 | 774 | 764.47 | 8.14 | 775 | 764.8 | 6.71 | 769 | 752.8 | 12.94 |
| | | 2op | 769 | 766.23 | 1.61 | 771 | 769.07 | 0.37 | 769 | 768.87 | 0.51 | 769 | 768.8 | 0.76 |
| | 50 | rnd | 567 | 482.2 | 40.29 | 775 | 739.7 | 38.56 | 777 | 769.43 | 3.32 | 777 | 756.37 | 12.41 |
| | | 2op | 769 | 765.43 | 1.07 | 769 | 768.93 | 0.37 | 771 | 769 | 0.53 | 769 | 769 | 0 |
| 51 | 20 | rnd | 557 | 499.07 | 26.77 | 761 | 705.9 | 50.68 | 777 | 767.4 | 4.99 | 770 | 760.4 | 10.25 |
| | | 2op | 769 | 766.87 | 1.87 | 769 | 769 | 0 | 769 | 769 | 0 | 771 | 769 | 0.53 |
| | 50 | rnd | 586 | 523.63 | 34.71 | 738 | 652.97 | 54.95 | 777 | 748 | 21.79 | 777 | 763.7 | 10.38 |
| | | 2op | 769 | 765.97 | 1.59 | 769 | 769 | 0 | 769 | 769 | 0 | 769 | 769 | 0 |

Table A.817: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 774 | 765.53 | 5.05 | 777 | 773.17 | 1.88 | 777 | 771.77 | 2.87 | 767 | 754.5 | 7.03 |
| | | 2op | 771 | 767.03 | 2.19 | 777 | 772.6 | 2.18 | 775 | 771.2 | 1.83 | 769 | 765.2 | 0.76 |
| | 50 | rnd | 777 | 768.2 | 4.84 | 777 | 773.63 | 1.65 | 777 | 773.8 | 1.75 | 767 | 759.23 | 4.99 |
| | | 2op | 774 | 768.17 | 2.46 | 777 | 773.9 | 1.83 | 777 | 774 | 1.64 | 769 | 765.47 | 1.22 |
| 51 | 20 | rnd | 776 | 761.7 | 12.04 | 777 | 771.63 | 2.74 | 777 | 773.4 | 1.92 | 777 | 770.8 | 3.9 |
| | | 2op | 769 | 767.27 | 1.66 | 775 | 772.1 | 1.32 | 776 | 772.87 | 1.38 | 772 | 770.93 | 1.26 |
| | 50 | rnd | 775 | 769.2 | 3.75 | 777 | 773.97 | 1.71 | 777 | 775.1 | 1.18 | 775 | 771.43 | 3.15 |
| | | 2op | 775 | 768.67 | 2.58 | 775 | 772.9 | 1.27 | 777 | 773.93 | 1.72 | 775 | 771.43 | 1.91 |

Table A.818: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 574 | 491.7 | 48.07 | 772 | 763.5 | 7.66 | 773 | 765.7 | 6.14 | 770 | 752.43 | 15.25 |
| | | 2op | 769 | 765.8 | 1.45 | 769 | 768.6 | 0.97 | 772 | 769.1 | 0.55 | 769 | 768.17 | 1.49 |
| | 50 | rnd | 598 | 488.67 | 41.81 | 771 | 751.03 | 19 | 776 | 768.37 | 3.63 | 773 | 757.27 | 11.06 |
| | | 2op | 769 | 765.77 | 1.52 | 769 | 768.8 | 0.61 | 772 | 769.17 | 0.65 | 769 | 769 | 0 |
| 51 | 20 | rnd | 594 | 516.03 | 33.69 | 767 | 704.23 | 46.78 | 775 | 765.43 | 11.78 | 771 | 761.67 | 9.2 |
| | | 2op | 769 | 766.07 | 1.55 | 769 | 769 | 0 | 771 | 769.07 | 0.37 | 769 | 768.87 | 0.51 |
| | 50 | rnd | 571 | 512.4 | 32.92 | 763 | 688.33 | 51.65 | 771 | 738.37 | 30.78 | 777 | 765.13 | 6.66 |
| | | 2op | 769 | 765.9 | 1.47 | 769 | 769 | 0 | 769 | 769 | 0 | 769 | 769 | 0 |

Table A.819: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 772 | 765.97 | 4 | 775 | 772.63 | 1.96 | 768 | 753.33 | 6.94 | 734 | 717.97 | 7.33 |
| | | 2op | 772 | 768.1 | 1.86 | 775 | 772.1 | 0.88 | 769 | 765.27 | 1.01 | 765 | 765 | 0 |
| | 50 | rnd | 776 | 769.6 | 3.33 | 777 | 773.53 | 1.91 | 763 | 757.2 | 3.45 | 739 | 717.23 | 8.84 |
| | | 2op | 775 | 768.87 | 2.64 | 775 | 772.13 | 1.48 | 770 | 765.6 | 1.4 | 765 | 765 | 0 |
| 51 | 20 | rnd | 772 | 768.07 | 2.32 | 777 | 772.3 | 2.45 | 777 | 768.97 | 3.01 | 767 | 757.2 | 4.45 |
| | | 2op | 771 | 768.67 | 1.27 | 775 | 771.23 | 1.1 | 772 | 769.93 | 1.34 | 769 | 765.7 | 1.29 |
| | 50 | rnd | 775 | 770.7 | 3.05 | 775 | 771.67 | 2.48 | 772 | 768.07 | 1.95 | 760 | 746.1 | 6.48 |
| | | 2op | 772 | 769.7 | 1.24 | 775 | 771.57 | 1.22 | 772 | 769.1 | 0.96 | 765 | 765 | 0 |

Table A.820: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 620 | 530.33 | 26.78 | 762 | 748.5 | 9.74 | 765 | 751.87 | 6.91 | 738 | 725.13 | 7.78 |
| | | 2op | 769 | 767.4 | 1.77 | 769 | 768.8 | 0.66 | 766 | 765.33 | 0.48 | 765 | 765 | 0 |
| | 50 | rnd | 593 | 541.9 | 24.58 | 769 | 739.37 | 19.97 | 766 | 758.6 | 4.12 | 746 | 730.9 | 8.09 |
| | | 2op | 769 | 767.83 | 1.58 | 769 | 769 | 0 | 769 | 767.37 | 1.33 | 765 | 765 | 0 |
| 51 | 20 | rnd | 616 | 550.03 | 22.6 | 707 | 644.83 | 28.13 | 769 | 757.47 | 5.71 | 753 | 738.07 | 9.45 |
| | | 2op | 769 | 768.57 | 1.14 | 769 | 769 | 0 | 769 | 768.9 | 0.55 | 769 | 765.37 | 1.03 |
| | 50 | rnd | 632 | 568.93 | 26.69 | 699 | 647.6 | 25.28 | 771 | 759.7 | 4.65 | 755 | 738.83 | 8.89 |
| | | 2op | 769 | 768.63 | 0.93 | 769 | 768.9 | 0.55 | 769 | 769 | 0 | 768 | 765.13 | 0.57 |

Table A.821: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 916 | 905 | 4.91 | 919 | 914.77 | 2.57 | 921 | 912.7 | 3.64 | 904 | 897.07 | 4.83 |
| | | 2op | 917 | 911.03 | 4.21 | 921 | 916.87 | 1.7 | 918 | 915.53 | 2 | 916 | 907.8 | 2.64 |
| | 50 | rnd | 916 | 909.4 | 3.6 | 919 | 916.37 | 2.31 | 921 | 917.13 | 2.13 | 913 | 901.87 | 5.29 |
| | | 2op | 918 | 912.73 | 3.73 | 921 | 917.23 | 1.65 | 921 | 917.53 | 1.57 | 914 | 908.57 | 2.51 |
| 51 | 20 | rnd | 915 | 904.27 | 6.09 | 918 | 913.13 | 2.13 | 919 | 915.63 | 2.24 | 918 | 912 | 2.78 |
| | | 2op | 916 | 913.47 | 2.9 | 919 | 916.1 | 1.18 | 918 | 916.83 | 1.34 | 917 | 915.63 | 1.47 |
| | 50 | rnd | 916 | 907.53 | 3.95 | 919 | 914.57 | 2.56 | 919 | 916.53 | 1.59 | 918 | 911.93 | 2.98 |
| | | 2op | 916 | 914.17 | 2.76 | 921 | 917.17 | 1.18 | 921 | 917.9 | 1.42 | 918 | 915.97 | 1.3 |

Table A.822: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 703 | 587.97 | 64.06 | 918 | 888.8 | 26.07 | 915 | 907.67 | 4.38 | 916 | 899.33 | 10.86 |
| | | 2op | 916 | 910.27 | 3.43 | 916 | 915.83 | 0.75 | 916 | 916 | 0 | 916 | 915.9 | 0.55 |
| | 50 | rnd | 678 | 597.2 | 55.91 | 917 | 850.37 | 46.01 | 915 | 909.23 | 3.28 | 917 | 903.27 | 11.02 |
| | | 2op | 916 | 910.9 | 3.79 | 916 | 915.97 | 0.18 | 918 | 916.07 | 0.37 | 916 | 915.97 | 0.18 |
| 51 | 20 | rnd | 692 | 630.53 | 37.53 | 900 | 792.37 | 56.62 | 916 | 901.33 | 15.68 | 913 | 905.3 | 5.68 |
| | | 2op | 916 | 910.13 | 3.53 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 915.97 | 0.18 |
| | 50 | rnd | 737 | 638.2 | 38.74 | 896 | 784.77 | 52.5 | 908 | 834.1 | 42.73 | 913 | 906.27 | 4.15 |
| | | 2op | 916 | 909.33 | 3.09 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 915.97 | 0.18 |

Table A.823: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 912 | 905.27 | 4.38 | 919 | 915.2 | 2.61 | 919 | 913.3 | 3.15 | 908 | 897.03 | 6.01 |
| | | 2op | 917 | 911.83 | 3.78 | 921 | 916.6 | 1.59 | 919 | 915.23 | 1.59 | 916 | 906.97 | 2.28 |
| | 50 | rnd | 914 | 906.8 | 3.28 | 919 | 915.93 | 1.55 | 921 | 915.77 | 2.3 | 912 | 898.5 | 4.88 |
| | | 2op | 917 | 912.9 | 3.58 | 919 | 917 | 1.44 | 921 | 917.1 | 1.27 | 916 | 908.6 | 2.8 |
| 51 | 20 | rnd | 915 | 906.33 | 4.71 | 917 | 913.17 | 2.44 | 919 | 914.8 | 2.47 | 919 | 911.6 | 3.51 |
| | | 2op | 917 | 913.87 | 3.33 | 919 | 915.87 | 1.87 | 921 | 917.07 | 1.26 | 918 | 915.9 | 0.88 |
| | 50 | rnd | 918 | 909.83 | 3.34 | 919 | 915.5 | 2.26 | 919 | 917.4 | 1.69 | 918 | 912.1 | 3.75 |
| | | 2op | 918 | 913.97 | 2.92 | 921 | 917.2 | 1.56 | 921 | 917.97 | 1.56 | 916 | 915.67 | 0.92 |

Table A.824: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 650 | 575.67 | 47.99 | 916 | 890.47 | 24.86 | 917 | 907.67 | 4.22 | 914 | 893.67 | 18.66 |
| | | 2op | 916 | 910.93 | 3.8 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |
| | 50 | rnd | 695 | 583.97 | 58.68 | 909 | 867.23 | 36.43 | 918 | 911 | 3.28 | 917 | 903.53 | 7.77 |
| | | 2op | 916 | 910 | 3.11 | 916 | 915.97 | 0.18 | 918 | 916 | 0.69 | 916 | 915.83 | 0.91 |
| 51 | 20 | rnd | 718 | 631.63 | 45.52 | 889 | 800.93 | 56.42 | 914 | 897.83 | 22.99 | 914 | 906 | 6.5 |
| | | 2op | 916 | 910.2 | 3.2 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |
| | 50 | rnd | 705 | 632.13 | 43.41 | 898 | 789.57 | 45.96 | 908 | 825.67 | 47.8 | 919 | 906.7 | 4.99 |
| | | 2op | 916 | 910.07 | 3.69 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.825: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 916 | 907.27 | 4.29 | 919 | 915.2 | 1.94 | 909 | 892.7 | 7.02 | 871 | 853.97 | 8.2 |
| | | 2op | 917 | 914.03 | 2.72 | 918 | 916.63 | 0.72 | 911 | 907 | 1.74 | 906 | 906 | 0 |
| | 50 | rnd | 914 | 908.77 | 3.02 | 919 | 915.93 | 1.8 | 913 | 898.53 | 4.67 | 874 | 856.13 | 9.71 |
| | | 2op | 916 | 914.5 | 2.22 | 921 | 916.77 | 1.14 | 916 | 907.2 | 2.3 | 906 | 906 | 0 |
| 51 | 20 | rnd | 917 | 910.1 | 3.71 | 919 | 914.9 | 2.7 | 916 | 910.67 | 2.89 | 906 | 899 | 3.84 |
| | | 2op | 916 | 915.83 | 0.91 | 917 | 916.07 | 0.25 | 916 | 916 | 0 | 916 | 911.4 | 1.81 |
| | 50 | rnd | 918 | 911.7 | 2.84 | 918 | 913.8 | 2.3 | 915 | 909.57 | 2.45 | 907 | 888.83 | 7.86 |
| | | 2op | 916 | 915.97 | 0.18 | 918 | 916.17 | 0.46 | 916 | 914.47 | 1.76 | 912 | 906.6 | 1.43 |

Table A.826: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 707 | 657.37 | 28.07 | 906 | 872.9 | 20.93 | 911 | 893.77 | 7.76 | 882 | 859.03 | 16.67 |
| | | 2op | 916 | 913.1 | 2.43 | 916 | 916 | 0 | 916 | 912.23 | 2.03 | 907 | 906.03 | 0.18 |
| | 50 | rnd | 728 | 677.87 | 26.42 | 904 | 865.07 | 29.61 | 914 | 901.87 | 5.39 | 895 | 871.63 | 10.68 |
| | | 2op | 916 | 913.5 | 2.4 | 916 | 916 | 0 | 916 | 916 | 0 | 908 | 906.27 | 0.52 |
| 51 | 20 | rnd | 774 | 688.97 | 34.22 | 847 | 779.77 | 24.54 | 909 | 897.93 | 6.84 | 892 | 877.57 | 7.86 |
| | | 2op | 916 | 915.87 | 0.73 | 916 | 916 | 0 | 916 | 916 | 0 | 912 | 908.3 | 2.1 |
| | 50 | rnd | 771 | 702.23 | 26.25 | 842 | 778.6 | 26.2 | 915 | 900.33 | 5.98 | 894 | 865.23 | 16.7 |
| | | 2op | 916 | 915.3 | 1.6 | 916 | 916 | 0 | 916 | 916 | 0 | 912 | 908 | 2.18 |

Table A.827: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1541 | 1506.77 | 21.61 | 1532 | 1514.83 | 10.15 | 1485 | 1447.47 | 20.31 | 1354 | 1293.67 | 30.66 |
| | | 2op | 1553 | 1553 | 0 | 1553 | 1553 | 0 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1543 | 1515.93 | 18.41 | 1540 | 1521.27 | 8.4 | 1513 | 1483.63 | 14.3 | 1424 | 1348.73 | 37.46 |
| | | 2op | 1558 | 1553.23 | 0.97 | 1561 | 1553.27 | 1.46 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1545 | 1513.57 | 16.45 | 1543 | 1518.3 | 11.17 | 1545 | 1513.53 | 14.3 | 1477 | 1434.93 | 28.06 |
| | | 2op | 1558 | 1553.63 | 1.38 | 1558 | 1553.77 | 1.61 | 1562 | 1553.83 | 1.78 | 1553 | 1553 | 0 |
| | 50 | rnd | 1549 | 1517.77 | 17.61 | 1546 | 1531.17 | 9.2 | 1550 | 1524.7 | 8.66 | 1480 | 1429.87 | 26.75 |
| | | 2op | 1562 | 1554.17 | 2.17 | 1561 | 1553.77 | 1.87 | 1559 | 1553.73 | 1.44 | 1553 | 1553 | 0 |

Table A.828: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1036 | 944.67 | 48.73 | 1519 | 1428.63 | 64.84 | 1488 | 1361.6 | 57.53 | 1346 | 1209.13 | 55.29 |
| | | 2op | 1564 | 1554.3 | 2.12 | 1565 | 1557.73 | 3.96 | 1554 | 1553.03 | 0.18 | 1553 | 1553 | 0 |
| | 50 | rnd | 1048 | 948.53 | 49.43 | 1535 | 1461.77 | 62.57 | 1525 | 1415.8 | 55.55 | 1364 | 1251.2 | 62.37 |
| | | 2op | 1555 | 1553.6 | 0.93 | 1565 | 1561.3 | 3.92 | 1564 | 1555.4 | 2.92 | 1555 | 1553.07 | 0.37 |
| 51 | 20 | rnd | 1046 | 955.93 | 42.42 | 1491 | 1285.77 | 107.87 | 1494 | 1409.4 | 48.33 | 1420 | 1280.93 | 61.47 |
| | | 2op | 1556 | 1553.6 | 0.97 | 1565 | 1559.47 | 4.25 | 1565 | 1556.8 | 3.87 | 1553 | 1553 | 0 |
| | 50 | rnd | 1071 | 947.63 | 48.05 | 1368 | 1200.23 | 72.88 | 1527 | 1450.03 | 42.37 | 1430 | 1301.4 | 62.79 |
| | | 2op | 1556 | 1554.07 | 1.08 | 1565 | 1559.37 | 4.37 | 1565 | 1560.23 | 4.19 | 1555 | 1553.13 | 0.51 |

Table A.829: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1543 | 1509.57 | 18.27 | 1528 | 1510.83 | 8.95 | 1502 | 1446.97 | 24.63 | 1346 | 1279.83 | 32.49 |
| | | 2op | 1554 | 1553.03 | 0.18 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1534 | 1508.33 | 18.2 | 1532 | 1517.37 | 7.1 | 1506 | 1476.13 | 14.95 | 1405 | 1332.03 | 33.96 |
| | | 2op | 1560 | 1553.4 | 1.45 | 1553 | 1553 | 0 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1541 | 1506.53 | 24.55 | 1539 | 1519.1 | 13.05 | 1539 | 1514.87 | 11.35 | 1476 | 1425.27 | 28.44 |
| | | 2op | 1562 | 1554.6 | 2.88 | 1556 | 1553.37 | 0.89 | 1563 | 1554.33 | 2.52 | 1553 | 1553 | 0 |
| | 50 | rnd | 1558 | 1514.83 | 25.31 | 1546 | 1530.13 | 9.64 | 1543 | 1526.57 | 10.13 | 1460 | 1423.37 | 22.76 |
| | | 2op | 1559 | 1553.4 | 1.33 | 1564 | 1553.57 | 2.08 | 1562 | 1553.53 | 1.7 | 1553 | 1553 | 0 |

Table A.830: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1021 | 951.4 | 39.31 | 1522 | 1428.73 | 47.05 | 1435 | 1334.13 | 63.5 | 1333 | 1197.2 | 50.56 |
| | | 2op | 1556 | 1553.7 | 1.06 | 1565 | 1557.5 | 3.98 | 1560 | 1553.37 | 1.35 | 1553 | 1553 | 0 |
| | 50 | rnd | 1063 | 958.1 | 41.72 | 1530 | 1434.4 | 94.32 | 1491 | 1419.97 | 53.12 | 1307 | 1230.2 | 40.3 |
| | | 2op | 1556 | 1553.53 | 0.97 | 1566 | 1560.4 | 4.34 | 1556 | 1553.87 | 1.04 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1038 | 960.13 | 38.28 | 1474 | 1333.53 | 113.95 | 1494 | 1420.6 | 56.67 | 1433 | 1299.83 | 65.87 |
| | | 2op | 1555 | 1553.57 | 0.86 | 1565 | 1560.2 | 4.37 | 1564 | 1556.63 | 3.31 | 1553 | 1553 | 0 |
| | 50 | rnd | 1061 | 960.4 | 50.2 | 1402 | 1209.93 | 91.12 | 1526 | 1449.43 | 42.43 | 1436 | 1296.67 | 54.08 |
| | | 2op | 1555 | 1553.8 | 0.96 | 1565 | 1560.57 | 4.15 | 1565 | 1559.7 | 4.37 | 1553 | 1553 | 0 |

Table A.831: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1549 | 1511.8 | 23.41 | 1536 | 1517.57 | 12.9 | 1459 | 1393.6 | 30.52 | 1238 | 1164.67 | 29.06 |
| | | 2op | 1565 | 1554.03 | 2.91 | 1564 | 1554.73 | 3.34 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1551 | 1518.57 | 14.39 | 1533 | 1513.7 | 10.37 | 1456 | 1411.9 | 23.35 | 1312 | 1222.23 | 38.02 |
| | | 2op | 1557 | 1553.7 | 1.29 | 1562 | 1553.43 | 1.72 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1545 | 1519.7 | 14.11 | 1554 | 1533.17 | 12.19 | 1490 | 1458.2 | 15.88 | 1393 | 1345 | 15.92 |
| | | 2op | 1564 | 1556.03 | 2.24 | 1566 | 1562.6 | 3.15 | 1554 | 1553.13 | 0.35 | 1553 | 1553 | 0 |
| | 50 | rnd | 1547 | 1530.4 | 10.43 | 1546 | 1527 | 9.35 | 1484 | 1456.3 | 13.18 | 1411 | 1356.03 | 23.81 |
| | | 2op | 1566 | 1556.57 | 3.32 | 1566 | 1556.4 | 3.44 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |

Table A.832: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1064 | 996.7 | 39.06 | 1297 | 1238.23 | 23.45 | 1330 | 1255.5 | 31.07 | 1223 | 1106.03 | 44.07 |
| | | 2op | 1556 | 1553.93 | 1.05 | 1555 | 1553.97 | 0.96 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1037 | 993.27 | 25.61 | 1328 | 1274.37 | 26.78 | 1357 | 1309.2 | 28.84 | 1205 | 1145.87 | 31.86 |
| | | 2op | 1556 | 1554.4 | 0.97 | 1555 | 1554.2 | 0.92 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1086 | 1029.43 | 30.31 | 1155 | 1113.6 | 19.2 | 1379 | 1318.53 | 33.53 | 1279 | 1186.83 | 41.51 |
| | | 2op | 1556 | 1554.27 | 1.01 | 1555 | 1554.73 | 0.58 | 1555 | 1553.13 | 0.51 | 1553 | 1553 | 0 |
| | 50 | rnd | 1106 | 1030.33 | 34.4 | 1151 | 1116.43 | 20.39 | 1406 | 1336.03 | 31.04 | 1287 | 1146.4 | 49.79 |
| | | 2op | 1563 | 1555.37 | 1.9 | 1564 | 1555.5 | 2.35 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |

Table A.833: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1527 | 1488.17 | 19.65 | 1535 | 1510.43 | 10.9 | 1473 | 1424.27 | 24.4 | 1342 | 1282.53 | 28.69 |
| | | 2op | 1557 | 1532.83 | 5.17 | 1541 | 1532.13 | 2.45 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1526 | 1494.07 | 15.29 | 1532 | 1511.8 | 11.24 | 1505 | 1474.17 | 21.37 | 1369 | 1317.4 | 30.99 |
| | | 2op | 1539 | 1531.7 | 2.12 | 1549 | 1533.37 | 4.35 | 1540 | 1531.47 | 1.78 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1524 | 1488.47 | 21 | 1538 | 1511.07 | 13.44 | 1529 | 1502.6 | 12.73 | 1478 | 1425.57 | 23.84 |
| | | 2op | 1556 | 1534.63 | 6.36 | 1548 | 1534.5 | 4.94 | 1544 | 1534.23 | 3.63 | 1531 | 1531 | 0 |
| | 50 | rnd | 1531 | 1498.43 | 18.26 | 1548 | 1521.3 | 10.63 | 1539 | 1521.53 | 11.65 | 1477 | 1421.37 | 24.48 |
| | | 2op | 1556 | 1535.67 | 8.11 | 1552 | 1538.47 | 7.16 | 1546 | 1536.83 | 5.13 | 1531 | 1531 | 0 |

Table A.834: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 993 | 850.53 | 62.1 | 1485 | 1414.3 | 47.31 | 1405 | 1300.97 | 65.41 | 1283 | 1173.2 | 58.46 |
| | | 2op | 1531 | 1531 | 0 | 1555 | 1533.9 | 6.69 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 977 | 853 | 57.17 | 1485 | 1435.9 | 36.8 | 1450 | 1369.13 | 52.74 | 1352 | 1201.53 | 67.92 |
| | | 2op | 1531 | 1531 | 0 | 1555 | 1537.87 | 8.81 | 1532 | 1531.03 | 0.18 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1018 | 863.83 | 49.85 | 1428 | 1228.47 | 85.19 | 1492 | 1382.17 | 55.57 | 1388 | 1268.3 | 50.8 |
| | | 2op | 1531 | 1531 | 0 | 1555 | 1534.8 | 7.01 | 1542 | 1531.63 | 2.44 | 1531 | 1531 | 0 |
| | 50 | rnd | 955 | 849.03 | 47.55 | 1361 | 1134.6 | 92.56 | 1492 | 1419.93 | 41.7 | 1372 | 1275.63 | 64.45 |
| | | 2op | 1531 | 1531 | 0 | 1548 | 1532.77 | 4.57 | 1555 | 1533.87 | 7.07 | 1531 | 1531 | 0 |

Table A.835: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1522 | 1485.77 | 21.88 | 1533 | 1510.47 | 10.07 | 1470 | 1429.47 | 21.45 | 1332 | 1268.67 | 25.6 |
| | | 2op | 1548 | 1532.3 | 4.33 | 1546 | 1532.4 | 3.64 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1534 | 1491.8 | 21.09 | 1533 | 1513.27 | 12.67 | 1510 | 1468.57 | 15.67 | 1375 | 1312 | 30.61 |
| | | 2op | 1549 | 1532.3 | 4.47 | 1541 | 1531.93 | 2.32 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1539 | 1487.33 | 26.02 | 1536 | 1511.9 | 15.66 | 1530 | 1502.87 | 14.35 | 1511 | 1422.33 | 29.33 |
| | | 2op | 1556 | 1533.4 | 5.6 | 1548 | 1535.9 | 5.67 | 1549 | 1534.13 | 5.46 | 1531 | 1531 | 0 |
| | 50 | rnd | 1539 | 1500.37 | 21.75 | 1543 | 1519.8 | 13.31 | 1541 | 1519 | 11.72 | 1499 | 1424.97 | 27.7 |
| | | 2op | 1552 | 1533.87 | 5.04 | 1552 | 1536.5 | 6.11 | 1551 | 1536.83 | 6.2 | 1531 | 1531 | 0 |

Table A.836: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 961 | 857.97 | 52.56 | 1492 | 1403.93 | 51.76 | 1406 | 1311.23 | 51.73 | 1304 | 1178.23 | 58.79 |
| | | 2op | 1531 | 1531 | 0 | 1555 | 1533.23 | 5.64 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 946 | 850.17 | 54.71 | 1504 | 1433.27 | 37.34 | 1426 | 1350.47 | 54.71 | 1357 | 1218.73 | 56.85 |
| | | 2op | 1531 | 1531 | 0 | 1555 | 1540.03 | 8.85 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 960 | 863.67 | 45.84 | 1443 | 1289.27 | 95.14 | 1493 | 1393.13 | 49.71 | 1359 | 1254.23 | 56.25 |
| | | 2op | 1531 | 1531 | 0 | 1555 | 1536.37 | 8.3 | 1546 | 1531.83 | 3.24 | 1531 | 1531 | 0 |
| | 50 | rnd | 1006 | 871.9 | 53.92 | 1315 | 1169.23 | 85.59 | 1477 | 1405.3 | 55.63 | 1421 | 1278.27 | 73.93 |
| | | 2op | 1531 | 1531 | 0 | 1555 | 1533.47 | 5.68 | 1550 | 1535.13 | 6.88 | 1531 | 1531 | 0 |

Table A.837: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1520 | 1490.37 | 19.75 | 1543 | 1511.47 | 14.5 | 1446 | 1387.6 | 24.27 | 1205 | 1144.37 | 24.57 |
| | | 2op | 1552 | 1533.07 | 4.58 | 1548 | 1536.33 | 4.82 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1530 | 1506.87 | 15.38 | 1538 | 1515.1 | 13.99 | 1476 | 1395.1 | 33.3 | 1321 | 1221.33 | 44.34 |
| | | 2op | 1552 | 1535 | 7.01 | 1551 | 1534.47 | 5.46 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1536 | 1503.03 | 14.35 | 1544 | 1526.07 | 9.94 | 1474 | 1439.7 | 15.16 | 1375 | 1335.93 | 18.62 |
| | | 2op | 1556 | 1539.97 | 7.5 | 1557 | 1552 | 4.79 | 1537 | 1531.43 | 1.38 | 1531 | 1531 | 0 |
| | 50 | rnd | 1538 | 1511.3 | 16.87 | 1538 | 1517.03 | 13.01 | 1480 | 1443.83 | 14.76 | 1414 | 1351.7 | 28.95 |
| | | 2op | 1556 | 1544.03 | 9.08 | 1556 | 1545.07 | 8.37 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.838: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 986 | 907.57 | 37.21 | 1264 | 1199.77 | 28.31 | 1322 | 1240.37 | 33.18 | 1183 | 1098.23 | 33.44 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1043 | 909.63 | 43.25 | 1281 | 1214.17 | 33.16 | 1350 | 1290.17 | 31.09 | 1185 | 1127.9 | 32.68 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1015 | 940.5 | 38.05 | 1144 | 1035.2 | 38.22 | 1341 | 1292.5 | 27.85 | 1303 | 1160.1 | 45 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1009 | 923.9 | 29.87 | 1118 | 1047.67 | 29.11 | 1383 | 1319.17 | 28.89 | 1223 | 1122.53 | 38.18 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.839: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1524 | 1485.73 | 17.93 | 1518 | 1501.97 | 9.28 | 1475 | 1432.53 | 19.07 | 1384 | 1301.6 | 38.8 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1515 | 1491.27 | 15.27 | 1532 | 1506.6 | 9.42 | 1488 | 1462.07 | 13.44 | 1397 | 1336.83 | 34.21 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1523 | 1492.83 | 14.57 | 1523 | 1506.93 | 9.67 | 1520 | 1501 | 9.56 | 1479 | 1442.17 | 17.48 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1528 | 1499.57 | 13.37 | 1537 | 1511.83 | 9.17 | 1542 | 1512.57 | 11.66 | 1469 | 1435.1 | 19.66 |
| | | 2op | 1549 | 1548.03 | 0.18 | 1549 | 1548.07 | 0.25 | 1549 | 1548.03 | 0.18 | 1548 | 1548 | 0 |

Table A.840: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1073 | 895.53 | 55.38 | 1477 | 1413.1 | 44.09 | 1408 | 1328.33 | 52.66 | 1359 | 1223.87 | 58.18 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 991 | 891.53 | 51.27 | 1507 | 1439.9 | 35.25 | 1470 | 1370.3 | 50.85 | 1328 | 1247.3 | 41.12 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1036 | 927.43 | 53.51 | 1468 | 1290.57 | 81.78 | 1502 | 1406.27 | 48.9 | 1384 | 1281.57 | 49.4 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 993 | 919.2 | 32.25 | 1393 | 1204.97 | 63.5 | 1486 | 1423.3 | 30.71 | 1339 | 1276.6 | 41.83 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.841: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1517 | 1488.37 | 14.79 | 1520 | 1499.73 | 8.6 | 1468 | 1429.97 | 22.16 | 1332 | 1286.53 | 24.72 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1527 | 1487.67 | 20.22 | 1529 | 1508.63 | 10.55 | 1477 | 1455.57 | 12.25 | 1393 | 1326.37 | 35.16 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1516 | 1490.1 | 14.55 | 1522 | 1504.03 | 9.69 | 1520 | 1499.93 | 11.74 | 1464 | 1434.33 | 16.39 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1523 | 1494.77 | 13.58 | 1526 | 1512.33 | 7.13 | 1530 | 1512 | 8.49 | 1479 | 1428.97 | 21.26 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.842: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 997 | 897.67 | 47.55 | 1479 | 1415.03 | 48.09 | 1419 | 1344.27 | 38.09 | 1301 | 1203.8 | 48.49 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 993 | 885.97 | 47.94 | 1509 | 1457.67 | 28.77 | 1436 | 1355.37 | 45.05 | 1346 | 1232.2 | 63.2 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1019 | 916.43 | 47.74 | 1428 | 1265.7 | 84.23 | 1464 | 1398.43 | 41.73 | 1363 | 1286.17 | 50.37 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1015 | 923.8 | 55.16 | 1435 | 1205.2 | 74.45 | 1495 | 1428.67 | 43.27 | 1373 | 1288.83 | 47.74 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1549 | 1548.07 | 0.25 | 1548 | 1548 | 0 |

Table A.843: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1521 | 1492.63 | 12.65 | 1546 | 1504.73 | 13.42 | 1464 | 1401.4 | 33.42 | 1228 | 1147.4 | 27.56 |
| | | 2op | 1548 | 1548 | 0 | 1549 | 1548.03 | 0.18 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1514 | 1494.73 | 12.77 | 1511 | 1498.53 | 7.81 | 1456 | 1413.93 | 24.35 | 1287 | 1225.53 | 34.97 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1526 | 1501.3 | 12.83 | 1539 | 1520.57 | 8.67 | 1483 | 1451.03 | 13.94 | 1380 | 1342.5 | 18.72 |
| | | 2op | 1549 | 1548.03 | 0.18 | 1549 | 1548.43 | 0.5 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1528 | 1508.3 | 9.07 | 1528 | 1508.47 | 10.46 | 1469 | 1446.13 | 10.93 | 1423 | 1356.57 | 30.76 |
| | | 2op | 1549 | 1548.07 | 0.25 | 1549 | 1548.07 | 0.25 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.844: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1045 | 959.1 | 35.95 | 1288 | 1235.53 | 26.27 | 1292 | 1241.27 | 25.73 | 1156 | 1100.53 | 30.42 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1050 | 961.7 | 40.19 | 1307 | 1250.67 | 24.2 | 1378 | 1297.43 | 31.52 | 1229 | 1150.8 | 29.08 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1079 | 984.3 | 44.14 | 1184 | 1114.1 | 31.12 | 1352 | 1295.07 | 24.93 | 1254 | 1171.57 | 38.06 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1058 | 996.53 | 28.87 | 1149 | 1112.67 | 20.27 | 1390 | 1326.57 | 35.51 | 1232 | 1157.37 | 36.81 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.845: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2606 | 2550.7 | 26.01 | 2563 | 2511.07 | 26.63 | 2452 | 2363.2 | 47.06 | 2255 | 1965.67 | 92.19 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2632 | 2588.1 | 23.76 | 2623 | 2557.1 | 21.44 | 2517 | 2428 | 42.19 | 2280 | 2091.5 | 85.03 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2605 | 2562.47 | 25.86 | 2598 | 2577.67 | 12.82 | 2528 | 2477.17 | 30.22 | 2391 | 2285.97 | 39.23 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2644 | 2606.57 | 17.29 | 2614 | 2585.87 | 13.57 | 2561 | 2518.87 | 22.46 | 2486 | 2362.97 | 55.36 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.846: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1456 | 1393.97 | 46.6 | 2040 | 1928.63 | 57.79 | 1858 | 1760.47 | 44.03 | 1687 | 1621.53 | 41.46 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 1513 | 1414.87 | 54.22 | 2188 | 2012.23 | 86.83 | 1967 | 1864.5 | 54.56 | 1756 | 1644.73 | 53.4 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 1534 | 1456.8 | 38.62 | 2069 | 1935.53 | 61.91 | 2039 | 1884.07 | 61.63 | 1887 | 1699.7 | 61.65 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 1506 | 1440.7 | 38.37 | 2046 | 1887.47 | 86.49 | 2100 | 1935.07 | 69.23 | 1826 | 1710.1 | 58.8 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.847: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2608 | 2554.4 | 21.99 | 2565 | 2512.23 | 24.87 | 2463 | 2376.4 | 49.42 | 2134 | 1935.83 | 99.69 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2617 | 2583.2 | 18.69 | 2588 | 2551.6 | 16.94 | 2532 | 2416.03 | 47.15 | 2242 | 2097.9 | 73.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2617 | 2563.77 | 30.25 | 2612 | 2577.73 | 14.65 | 2552 | 2475.5 | 33.81 | 2391 | 2298.53 | 55.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2645 | 2604.33 | 21.11 | 2617 | 2583.77 | 15.48 | 2587 | 2515.83 | 26.46 | 2476 | 2364.27 | 53.18 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.848: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1507 | 1406.63 | 54.7 | 2067 | 1939.97 | 72.34 | 1951 | 1770.97 | 62.76 | 1782 | 1612.73 | 54.72 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 1542 | 1411.37 | 45.88 | 2189 | 2014.2 | 81.07 | 1982 | 1842.97 | 62.66 | 1739 | 1641.13 | 56.31 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 1517 | 1440.4 | 49.4 | 2121 | 1945.33 | 83.11 | 2033 | 1879.73 | 69.78 | 1868 | 1713.57 | 63.14 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 1517 | 1446.2 | 57.93 | 2074 | 1915.47 | 96.89 | 2036 | 1941.83 | 57.76 | 1861 | 1729.33 | 56.44 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.849: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2609 | 2565.5 | 19.2 | 2593 | 2531.17 | 26.85 | 2486 | 2383.03 | 63.66 | 1942 | 1764.8 | 66.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2659 | 2606.03 | 19.87 | 2598 | 2543.87 | 22.88 | 2538 | 2419.53 | 48.35 | 2153 | 1968.53 | 85.68 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2625 | 2589.53 | 21.02 | 2648 | 2602.43 | 16.21 | 2570 | 2492.77 | 40.58 | 2261 | 2164.47 | 50.32 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2658 | 2613.33 | 20.06 | 2651 | 2584.97 | 20.28 | 2551 | 2488.83 | 29 | 2411 | 2281.83 | 54.99 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.850: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1524 | 1470.17 | 34.2 | 1784 | 1715.53 | 31.85 | 1809 | 1718.57 | 35.77 | 1556 | 1495.63 | 32.3 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 1543 | 1494.17 | 29.6 | 1856 | 1755.77 | 32.28 | 1948 | 1811.07 | 61.57 | 1603 | 1533.27 | 37.28 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 1555 | 1511.47 | 23.13 | 1631 | 1579.7 | 20.79 | 1918 | 1811.3 | 48.3 | 1691 | 1586.53 | 40.62 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 1544 | 1496.67 | 23.48 | 1646 | 1586.47 | 24.15 | 1917 | 1837.3 | 47.1 | 1683 | 1564.67 | 47.52 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.851: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2665 | 2618.33 | 26.06 | 2620 | 2576.6 | 27.33 | 2496 | 2408.03 | 63.33 | 2166 | 1963 | 95.42 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2706 | 2657.3 | 22.25 | 2666 | 2628.3 | 21.16 | 2590 | 2499.67 | 49.85 | 2315 | 2141.93 | 80.96 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2654 | 2607.93 | 26.14 | 2700 | 2653.23 | 21.16 | 2604 | 2526.07 | 34.14 | 2447 | 2321 | 76.41 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2706 | 2664.13 | 22.44 | 2692 | 2658.13 | 15.71 | 2666 | 2588 | 36.45 | 2518 | 2406.47 | 59.31 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.852: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1451 | 1332.4 | 46.95 | 2114 | 2003.2 | 63.64 | 1975 | 1815.2 | 77.35 | 1723 | 1574.7 | 81.73 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 1447 | 1351.2 | 36.94 | 2257 | 2078.6 | 101.6 | 1984 | 1871.7 | 63.25 | 1753 | 1621.23 | 74.64 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 1424 | 1352.83 | 38.07 | 2192 | 1976.43 | 107.72 | 2141 | 1943.97 | 81.41 | 1803 | 1691.9 | 78.79 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 1477 | 1356.63 | 40.08 | 2092 | 1910.8 | 98.61 | 2160 | 1992.07 | 89.07 | 1857 | 1704.17 | 70.2 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.853: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2679 | 2617.57 | 35.26 | 2632 | 2574.97 | 29.02 | 2489 | 2389.63 | 68.98 | 2119 | 1941.63 | 77.04 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2679 | 2649.63 | 18.93 | 2664 | 2625.4 | 19.67 | 2590 | 2466.43 | 53.95 | 2264 | 2114.43 | 79.75 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2674 | 2625 | 22.42 | 2690 | 2649.03 | 15.46 | 2611 | 2530.87 | 38.33 | 2467 | 2321 | 59.65 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2686 | 2659.33 | 18.04 | 2722 | 2660.93 | 16 | 2652 | 2578.3 | 29.01 | 2504 | 2394.07 | 62.75 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.854: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1430 | 1335.07 | 41.68 | 2101 | 1976.9 | 104.57 | 1894 | 1789.53 | 61.81 | 1719 | 1584.77 | 73.93 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 1484 | 1345.07 | 56.61 | 2264 | 2058.43 | 81.07 | 2000 | 1868.93 | 84.44 | 1773 | 1623.57 | 78.47 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 1414 | 1343.53 | 34.6 | 2228 | 1956 | 114.35 | 2056 | 1935.97 | 82.61 | 1783 | 1671 | 67.4 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 1419 | 1355.77 | 31.47 | 2161 | 1911.63 | 149.21 | 2085 | 1980.93 | 75.08 | 1943 | 1702 | 82.72 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.855: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2698 | 2629.7 | 29.24 | 2678 | 2602.83 | 32.47 | 2491 | 2420.4 | 38.7 | 1919 | 1748.43 | 76.31 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2716 | 2665.47 | 26.56 | 2665 | 2614.87 | 26.14 | 2583 | 2463.57 | 49.47 | 2112 | 1981 | 68.96 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2699 | 2645.57 | 24.63 | 2744 | 2677.9 | 22.71 | 2640 | 2565.2 | 35.3 | 2272 | 2167.93 | 57.58 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2741 | 2676.23 | 22.6 | 2689 | 2654.7 | 21.72 | 2619 | 2556.2 | 40.18 | 2454 | 2314.57 | 69.3 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.856: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1452 | 1386.83 | 29.61 | 1786 | 1685.73 | 40.83 | 1796 | 1723.3 | 34.51 | 1554 | 1488.5 | 35.02 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 1451 | 1397.13 | 24.58 | 1819 | 1723.57 | 39.19 | 1921 | 1818.43 | 50.35 | 1668 | 1542.9 | 47.27 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 1463 | 1400.77 | 30 | 1539 | 1498.83 | 23.03 | 1931 | 1830.4 | 51.91 | 1709 | 1602.6 | 48.97 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 1496 | 1408.23 | 28.47 | 1577 | 1506.87 | 27.65 | 2026 | 1887.9 | 69.76 | 1747 | 1580.03 | 69.82 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.857: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2541 | 2492.4 | 23.97 | 2533 | 2468.43 | 29.87 | 2433 | 2285.77 | 68.19 | 1975 | 1882.7 | 58.17 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2580 | 2530.07 | 23.32 | 2552 | 2503.1 | 23.09 | 2473 | 2354.87 | 48.55 | 2145 | 2033.93 | 66.57 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2569 | 2495.37 | 28.07 | 2553 | 2524 | 14.17 | 2510 | 2424.9 | 38.48 | 2363 | 2207.37 | 55.63 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2588 | 2536.9 | 22.18 | 2548 | 2530.97 | 12.21 | 2507 | 2463.47 | 26.25 | 2424 | 2296.37 | 53.15 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.858: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1490 | 1375.3 | 50.46 | 2213 | 2006.43 | 82.58 | 1947 | 1815.1 | 69.19 | 1813 | 1600.73 | 75.64 |
| | | 2op | 2696 | 2689.9 | 3.9 | 2695 | 2689.47 | 3.43 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 1448 | 1371.87 | 42.69 | 2197 | 2057.93 | 68.05 | 1978 | 1903.27 | 51.19 | 1792 | 1667.33 | 76.33 |
| | | 2op | 2695 | 2690.03 | 3.83 | 2700 | 2693.47 | 3.32 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 1461 | 1383.6 | 40.83 | 2185 | 1977.53 | 98.45 | 2067 | 1931.8 | 74.3 | 1826 | 1724.5 | 62.71 |
| | | 2op | 2695 | 2691.03 | 3.93 | 2696 | 2692.47 | 3.08 | 2695 | 2688.27 | 2.52 | 2687 | 2687 | 0 |
| | 50 | rnd | 1456 | 1374.1 | 34.94 | 2141 | 1961.43 | 111.65 | 2161 | 1994.73 | 75.99 | 1960 | 1731.57 | 84.1 |
| | | 2op | 2695 | 2691.73 | 3.81 | 2696 | 2694.57 | 1.3 | 2696 | 2692.23 | 2.94 | 2687 | 2687 | 0 |

Table A.859: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2539 | 2492.87 | 24.16 | 2527 | 2468.9 | 32.65 | 2421 | 2313.73 | 62.52 | 2073 | 1866.1 | 80.54 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2578 | 2516.2 | 25.44 | 2547 | 2497.97 | 18.32 | 2411 | 2348.53 | 44.59 | 2168 | 2042.57 | 80.05 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2548 | 2492 | 24.87 | 2559 | 2520.67 | 17.28 | 2490 | 2415.43 | 32.45 | 2312 | 2225.4 | 50.75 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2585 | 2538.9 | 25.63 | 2567 | 2528.87 | 13.96 | 2510 | 2457.83 | 29.89 | 2378 | 2299.1 | 37.85 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.860: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1468 | 1366 | 40.97 | 2110 | 1990.47 | 65.91 | 1954 | 1828 | 70.72 | 1721 | 1610.9 | 59.62 |
| | | 2op | 2695 | 2689.63 | 3.39 | 2695 | 2689.07 | 3.07 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 1524 | 1383.73 | 45.2 | 2248 | 2049.2 | 74.79 | 2030 | 1870.47 | 59.96 | 1757 | 1647.93 | 62.28 |
| | | 2op | 2695 | 2690.33 | 3.81 | 2696 | 2692.53 | 3 | 2693 | 2687.2 | 1.1 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 1476 | 1392.23 | 49.58 | 2159 | 2008.6 | 76.24 | 2085 | 1936.27 | 76.26 | 1908 | 1723.37 | 68.26 |
| | | 2op | 2695 | 2690.47 | 3.85 | 2695 | 2692.8 | 2.85 | 2695 | 2688.57 | 2.99 | 2687 | 2687 | 0 |
| | 50 | rnd | 1462 | 1381.9 | 32.74 | 2193 | 1959.13 | 112.78 | 2098 | 1994.37 | 65.44 | 1857 | 1713.3 | 66.62 |
| | | 2op | 2695 | 2691.53 | 3.85 | 2695 | 2694.37 | 1.69 | 2696 | 2691.27 | 3.56 | 2687 | 2687 | 0 |

Table A.861: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2546 | 2505.83 | 21.67 | 2543 | 2477.4 | 30.09 | 2400 | 2316.03 | 56.3 | 1881 | 1718.4 | 71.87 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2579 | 2536.87 | 16.46 | 2528 | 2487.93 | 20.25 | 2486 | 2343.37 | 60.45 | 2055 | 1925.93 | 65.55 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2549 | 2521.13 | 15.57 | 2588 | 2546.07 | 16.37 | 2513 | 2449.37 | 26.66 | 2267 | 2098.63 | 52.91 |
| | | 2op | 2696 | 2689.77 | 3.57 | 2696 | 2690.2 | 3.4 | 2692 | 2687.17 | 0.91 | 2687 | 2687 | 0 |
| | 50 | rnd | 2567 | 2540.8 | 16.19 | 2574 | 2524.9 | 22.13 | 2491 | 2431.7 | 31.06 | 2331 | 2236.7 | 52.97 |
| | | 2op | 2696 | 2687.57 | 2.16 | 2696 | 2687.57 | 2.16 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.862: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1480 | 1427.8 | 31.29 | 1835 | 1736.53 | 36.75 | 1867 | 1710.1 | 49.18 | 1555 | 1478.47 | 32.55 |
| | | 2op | 2695 | 2691.43 | 3.8 | 2695 | 2689.57 | 3.37 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 1494 | 1430.33 | 33.69 | 1910 | 1780.5 | 47.19 | 1910 | 1816.47 | 46.71 | 1595 | 1538.33 | 32.99 |
| | | 2op | 2695 | 2694.13 | 2.45 | 2695 | 2691 | 3.86 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 1506 | 1442.1 | 26.82 | 1671 | 1568.87 | 41.08 | 1874 | 1800.33 | 35.64 | 1703 | 1595.63 | 56.88 |
| | | 2op | 2696 | 2692.83 | 3.34 | 2696 | 2693.4 | 2.8 | 2692 | 2687.27 | 1.05 | 2687 | 2687 | 0 |
| | 50 | rnd | 1503 | 1444.8 | 33.99 | 1621 | 1560.73 | 31.93 | 1955 | 1864.37 | 46 | 1688 | 1578.97 | 50.88 |
| | | 2op | 2696 | 2695.07 | 0.25 | 2695 | 2692.6 | 3.33 | 2695 | 2687.63 | 2.04 | 2687 | 2687 | 0 |

Table A.863: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15604 | 15361.03 | 118.29 | 14872 | 14619.97 | 138.68 | 12498 | 11753.3 | 416.88 | 8534 | 7764.53 | 497.13 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 15611 | 15355.6 | 155.49 | 15327 | 14978.53 | 173.81 | 13767 | 13115.53 | 359.54 | 10044 | 9171.97 | 463.61 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| 51 | 20 | rnd | 15591 | 15342.7 | 141.37 | 15474 | 15181.3 | 141.6 | 14610 | 14005.47 | 222.92 | 11380 | 10515.6 | 433.36 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 15568 | 15294.53 | 142.89 | 15560 | 15216.9 | 152.3 | 15071 | 14546.57 | 292.09 | 12909 | 12053.8 | 444.16 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |

Table A.864: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5541 | 5458.6 | 45.13 | 6943 | 6515.27 | 196.13 | 6369 | 5888.8 | 192.32 | 5609 | 5027.1 | 202.03 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 5546 | 5459.23 | 45.51 | 7152 | 6780.13 | 158.15 | 6739 | 6170.27 | 290.21 | 5939 | 5268.47 | 318.72 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| 51 | 20 | rnd | 5553 | 5468.3 | 42.03 | 7194 | 6775.83 | 187.12 | 6729 | 6279.8 | 221.1 | 6189 | 5391.33 | 365.98 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 5580 | 5454.97 | 54.36 | 7132 | 6854.27 | 159.66 | 6869 | 6519.13 | 213.85 | 6383 | 5673.97 | 520.81 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |

Table A.865: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15730 | 15341.97 | 140.21 | 15232 | 14590.97 | 228.28 | 12813 | 11903.97 | 488.64 | 8393 | 7744.47 | 347.05 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 15754 | 15372.63 | 153.46 | 15383 | 14959.3 | 183.56 | 13618 | 13067.9 | 371.42 | 9870 | 9233.47 | 412.41 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| 51 | 20 | rnd | 15580 | 15338.23 | 108.02 | 15416 | 15185.27 | 117.39 | 14631 | 14052.13 | 273.6 | 11396 | 10520.73 | 451.86 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 15673 | 15373.37 | 142.94 | 15523 | 15285.67 | 140.46 | 15189 | 14550.27 | 238.5 | 12855 | 11932.93 | 476.56 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |

Table A.866: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5569 | 5459.8 | 50.58 | 6999 | 6469.77 | 217.28 | 6247 | 5871.63 | 169.26 | 5702 | 5057.97 | 234.9 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 5542 | 5466.77 | 42.47 | 7166 | 6749.23 | 205.72 | 6505 | 6020.77 | 309.37 | 5904 | 5273.43 | 319.51 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| 51 | 20 | rnd | 5557 | 5471.83 | 44.39 | 7086 | 6783.67 | 147.76 | 6647 | 6254.63 | 172.61 | 6219 | 5490.07 | 403.08 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 5540 | 5446.47 | 51.06 | 7131 | 6837.67 | 139.44 | 6953 | 6444.93 | 306.19 | 6325 | 5525.33 | 424 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |

Table A.867: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15635 | 15297.73 | 129.21 | 15617 | 15227.37 | 136.32 | 13175 | 12353.4 | 441.71 | 7945 | 7230.33 | 348.5 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 15629 | 15399.53 | 144.69 | 15568 | 15371.23 | 140.37 | 13772 | 13066.93 | 460 | 9240 | 8659.9 | 418.36 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| 51 | 20 | rnd | 15639 | 15341.9 | 131.05 | 15639 | 15336.03 | 135.07 | 14775 | 14411.63 | 250.48 | 10413 | 9454.03 | 676.28 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 15713 | 15457.73 | 110.45 | 15713 | 15453.67 | 113.33 | 15120 | 14698.93 | 189.59 | 11885 | 10831.6 | 794.38 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |

Table A.868: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5608 | 5516.77 | 45.7 | 6158 | 5978.1 | 72.97 | 6020 | 5752.63 | 136.65 | 5089 | 4944.97 | 69.67 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 5632 | 5518.63 | 46.58 | 6373 | 6139.7 | 82.01 | 6459 | 6042.13 | 142.44 | 5455 | 5159.33 | 97.59 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| 51 | 20 | rnd | 5626 | 5532.67 | 42.23 | 5693 | 5576.77 | 56.55 | 6499 | 6251.07 | 145.4 | 5497 | 5227.8 | 134.07 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |
| | 50 | rnd | 5598 | 5513.97 | 32.97 | 5734 | 5662.83 | 52.68 | 6577 | 6325.13 | 155.52 | 5512 | 5259.47 | 116.35 |
| | | 2op | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 | 17766 | 17766 | 0 |

Table A.869: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19225 | 19050.37 | 132.01 | 18427 | 17982.2 | 274.37 | 15036 | 14232.83 | 574.53 | 10025 | 9136.87 | 355.72 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 19369 | 19058.6 | 167.67 | 18655 | 18366.77 | 184.04 | 16594 | 15729.3 | 491.7 | 12472 | 11004.07 | 621.15 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| 51 | 20 | rnd | 19349 | 19040.03 | 158.13 | 19079 | 18790.47 | 171.54 | 17613 | 17090.47 | 345.28 | 13887 | 12694.43 | 506.01 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 19274 | 19042.63 | 124.11 | 19191 | 18895.1 | 142.8 | 18412 | 17986.53 | 229.29 | 15298 | 14366.83 | 542.44 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |

Table A.870: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6802 | 6710 | 37.97 | 8333 | 7824.63 | 304.84 | 7626 | 7288.23 | 150.25 | 6478 | 6029.97 | 112.54 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 6822 | 6712.73 | 47.03 | 8540 | 8162.13 | 206.11 | 7628 | 7314.07 | 219.98 | 6373 | 6164.27 | 81.18 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| 51 | 20 | rnd | 6795 | 6713.93 | 47.05 | 8513 | 8160.6 | 221.06 | 8150 | 7645.23 | 363.18 | 6439 | 6327.33 | 56.34 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 6827 | 6716.07 | 56.59 | 8782 | 8283.47 | 185.01 | 8308 | 7776.03 | 234.15 | 6512 | 6374.93 | 60.86 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |

Table A.871: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19325 | 19012 | 135.53 | 18726 | 17918.2 | 316.82 | 15079 | 14100.5 | 616.93 | 9751 | 9198.77 | 343.57 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 19483 | 19076.5 | 161.7 | 18720 | 18461.13 | 164.33 | 16726 | 15808.57 | 408.08 | 11669 | 10866.37 | 537.93 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| 51 | 20 | rnd | 19240 | 18961 | 127.6 | 18907 | 18724.17 | 119.56 | 17790 | 17195.5 | 331.82 | 13366 | 12484.17 | 446.25 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 19306 | 19054.73 | 152.25 | 19186 | 18919.7 | 137.18 | 18506 | 17908.9 | 281.37 | 15701 | 14481.53 | 524.71 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |

Table A.872: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6799 | 6718.57 | 43.26 | 8281 | 7767.63 | 318.9 | 7563 | 7252.87 | 241.87 | 6137 | 6033.67 | 68.53 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 6800 | 6709.3 | 47.78 | 8583 | 8071.57 | 259.96 | 7765 | 7321.27 | 217.65 | 6342 | 6159.6 | 76.04 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| 51 | 20 | rnd | 6825 | 6716.53 | 46.55 | 8489 | 8187.73 | 210.49 | 8043 | 7612.8 | 346.19 | 6496 | 6334.6 | 66.4 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 6816 | 6711.93 | 45.42 | 8504 | 8295.03 | 131.35 | 8234 | 7796.63 | 264.26 | 6511 | 6382.03 | 62 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |

Table A.873: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19287 | 18994.33 | 159.67 | 19192 | 18900.3 | 157.52 | 16093 | 15095.53 | 533.39 | 9329 | 8744.7 | 298.84 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 19289 | 19052.03 | 133.05 | 19190 | 18981.23 | 153.35 | 16294 | 15459.6 | 686.99 | 11213 | 10427.73 | 492.95 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| 51 | 20 | rnd | 19343 | 19054.63 | 121.07 | 19343 | 19054.63 | 121.07 | 18159 | 17668.4 | 402.61 | 12353 | 11173.17 | 725.61 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 19348 | 19058.5 | 122.69 | 19348 | 19058.4 | 122.79 | 18466 | 18014.4 | 315.08 | 14070 | 12827.37 | 1016.38 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |

Table A.874: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6859 | 6765.27 | 34.56 | 7527 | 7198.7 | 119.84 | 7110 | 6928.8 | 102.08 | 6218 | 6048.97 | 82.97 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 6893 | 6775.27 | 41.97 | 7614 | 7391.77 | 90.67 | 7695 | 7316.9 | 143.7 | 6471 | 6226.7 | 109.96 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| 51 | 20 | rnd | 6876 | 6778.8 | 49.03 | 6898 | 6803.1 | 55.26 | 7918 | 7500.7 | 161.73 | 6665 | 6383.97 | 132.07 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |
| | 50 | rnd | 6821 | 6765.53 | 33.81 | 7102 | 6873.7 | 77.31 | 7929 | 7653.47 | 180.94 | 6899 | 6468.63 | 167.94 |
| | | 2op | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 | 22021 | 22021 | 0 |

Table A.875: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21621 | 21271.03 | 139.37 | 20414 | 19785.43 | 314.37 | 16387 | 15338.03 | 588.45 | 11229 | 10278.73 | 491.34 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 21706 | 21343.17 | 147.31 | 21028 | 20488.6 | 272.63 | 18420 | 17254.9 | 540.44 | 13030 | 11884.27 | 466.99 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| 51 | 20 | rnd | 21510 | 21248.8 | 129.22 | 21238 | 20925.07 | 210.57 | 19542 | 18863.4 | 338.66 | 14781 | 13766.57 | 599.73 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 21605 | 21333.87 | 130.81 | 21489 | 21126.27 | 148 | 20456 | 19812 | 328.26 | 16661 | 15709 | 490.84 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |

Table A.876: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7904 | 7844.47 | 34.08 | 9135 | 8716 | 241.64 | 8658 | 7804.97 | 429.63 | 7239 | 7065.67 | 90.97 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 7959 | 7853.6 | 45.35 | 9476 | 9077.13 | 233.02 | 9032 | 8561.27 | 338.03 | 7361 | 7236.47 | 98.49 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| 51 | 20 | rnd | 8014 | 7865.83 | 63.39 | 9547 | 9126.5 | 221.39 | 8771 | 8380.2 | 233.48 | 7591 | 7414.53 | 72.78 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 7934 | 7852.5 | 49.49 | 9732 | 9262.73 | 197.15 | 9346 | 8565.5 | 370.68 | 7567 | 7473.4 | 47.3 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |

Table A.877: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21474 | 21223.23 | 131.17 | 20407 | 19818.17 | 336.72 | 16704 | 15509 | 500.82 | 10855 | 10148.17 | 427.54 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 21739 | 21412.13 | 134.05 | 20903 | 20516.7 | 196.56 | 18135 | 17136.17 | 493.11 | 13038 | 11884.57 | 496.11 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| 51 | 20 | rnd | 21492 | 21211.57 | 155.4 | 21334 | 20919.37 | 191.73 | 19457 | 18936.03 | 376.96 | 14916 | 13695.47 | 663.42 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 21484 | 21325.9 | 118.51 | 21339 | 21100.63 | 109.45 | 20345 | 19712.63 | 384.61 | 17037 | 15611.43 | 637.05 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |

Table A.878: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7926 | 7846.5 | 41.6 | 9188 | 8785.53 | 239.03 | 8601 | 7728.43 | 408.67 | 7223 | 7105.1 | 81.96 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 7954 | 7864.7 | 49.98 | 9431 | 9044.03 | 217.77 | 8844 | 8353.73 | 478.09 | 7411 | 7237.03 | 89.5 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| 51 | 20 | rnd | 7982 | 7864.9 | 60.28 | 9586 | 9129.03 | 232.9 | 8824 | 8440.07 | 235.08 | 7560 | 7419.6 | 79 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 7960 | 7836.4 | 61.68 | 9711 | 9312.53 | 205.78 | 9230 | 8563.53 | 330.42 | 7598 | 7471.37 | 66.31 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |

Table A.879: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21405 | 21168.43 | 135.11 | 21314 | 21079.63 | 155.09 | 17359 | 16453.4 | 573.21 | 10351 | 9561.87 | 408.94 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 21563 | 21275.17 | 140.69 | 21538 | 21198.1 | 161.95 | 18244 | 17319.1 | 569.64 | 12513 | 11473.13 | 406.78 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| 51 | 20 | rnd | 21425 | 21129.87 | 135.87 | 21425 | 21129.87 | 135.87 | 20118 | 19500.1 | 336.73 | 13589 | 12322.97 | 811.73 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 21517 | 21229.03 | 159.69 | 21517 | 21229.03 | 159.69 | 20555 | 19900.4 | 298.08 | 15873 | 13693.47 | 1255.91 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |

Table A.880: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7985 | 7909 | 37.13 | 8418 | 8218.6 | 100.71 | 8061 | 7735.33 | 152.31 | 7087 | 6973.4 | 72.1 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 8005 | 7919 | 44.95 | 8720 | 8419.47 | 99.29 | 8321 | 8012.93 | 192.73 | 7299 | 7177.67 | 53.89 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| 51 | 20 | rnd | 8017 | 7922.7 | 40.49 | 8024 | 7921.3 | 44.32 | 8509 | 8127.9 | 186.43 | 7392 | 7302.17 | 34.92 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |
| | 50 | rnd | 7993 | 7898.63 | 35.79 | 8161 | 7974.47 | 71.14 | 8725 | 8307.9 | 243.93 | 7468 | 7341.1 | 71.46 |
| | | 2op | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 | 24425 | 24425 | 0 |

Table A.881: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 40398 | 39788.93 | 175.1 | 37286 | 36355.03 | 622.02 | 27791 | 26132.3 | 975.49 | 18345 | 17443.53 | 504.26 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 40943 | 40571.6 | 168.75 | 38875 | 38019.93 | 535.64 | 31771 | 29913.63 | 1195.69 | 21821 | 20129.43 | 740.22 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| 51 | 20 | rnd | 40256 | 39869 | 199.31 | 40186 | 39553.4 | 296.84 | 35274 | 33714.17 | 957.19 | 24542 | 22901.3 | 994.42 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 40783 | 40495.13 | 193.53 | 40544 | 40093.47 | 246.59 | 37612 | 36446.43 | 664.21 | 28919 | 26707.77 | 1122.24 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |

Table A.882: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14411 | 14306.63 | 64.81 | 16319 | 15051.93 | 321.53 | 13835 | 13692.5 | 90.24 | 13054 | 12864.4 | 121.05 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 14419 | 14285.2 | 68.36 | 16668 | 16064.03 | 316.25 | 14006 | 13822.93 | 90.97 | 13392 | 13119.23 | 138.93 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| 51 | 20 | rnd | 14534 | 14317.53 | 82.42 | 17102 | 16186.73 | 399.15 | 16272 | 14650.8 | 916.39 | 13643 | 13489.27 | 106.7 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 14413 | 14273.63 | 70.67 | 17074 | 16445.87 | 366.94 | 16673 | 16163.17 | 580.1 | 13755 | 13533.6 | 133.51 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |

Table A.883: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 40044 | 39689.77 | 197.82 | 37486 | 36276.73 | 861.57 | 28312 | 26064.1 | 1082.8 | 18461 | 17159.87 | 597.61 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 40930 | 40536.1 | 222.81 | 38685 | 38038.3 | 519 | 31903 | 29662.53 | 1193.7 | 21471 | 20076.3 | 683.5 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| 51 | 20 | rnd | 40269 | 39828 | 243.55 | 40266 | 39577.77 | 263 | 34979 | 33488.5 | 886.99 | 24555 | 23179.83 | 1039.96 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 40954 | 40539.5 | 194.68 | 40757 | 40165.2 | 240.29 | 37340 | 36102.7 | 819.71 | 28603 | 26763.47 | 769.74 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |

Table A.884: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14477 | 14316.23 | 86.57 | 16349 | 15101.43 | 343.23 | 13884 | 13688.5 | 85.49 | 13202 | 12864.5 | 119.09 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 14449 | 14320.3 | 72.09 | 17001 | 16119.13 | 453.18 | 13931 | 13807.47 | 69.07 | 13387 | 13141.73 | 138.03 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| 51 | 20 | rnd | 14462 | 14318.9 | 72.84 | 16774 | 16175.7 | 385.83 | 16240 | 14553.03 | 921.25 | 13648 | 13479.17 | 100.84 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 14455 | 14253.23 | 74.04 | 17238 | 16468.17 | 318.42 | 16594 | 16141.53 | 446.95 | 13765 | 13526.87 | 116.26 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |

Table A.885: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 39458 | 38982.83 | 195.36 | 39458 | 38982.83 | 195.36 | 30046 | 28152.13 | 1116.03 | 17719 | 16646.93 | 571.97 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 39954 | 39550.03 | 189.74 | 39954 | 39550.03 | 189.74 | 33064 | 30061.47 | 1615.68 | 20542 | 19466.63 | 549.69 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| 51 | 20 | rnd | 38729 | 38425.7 | 138.14 | 38729 | 38425.7 | 138.14 | 37210 | 35688.7 | 779.51 | 23494 | 20052.73 | 2046.09 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 38995 | 38573.63 | 209.58 | 38995 | 38573.63 | 209.58 | 37974 | 36891.2 | 475.7 | 26487 | 22339.9 | 2436.53 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |

Table A.886: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14526 | 14356.7 | 71.36 | 14603 | 14347.93 | 102.32 | 13821 | 13679.23 | 62.58 | 12911 | 12688.23 | 95.91 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 14592 | 14389.43 | 66.78 | 15589 | 15015.03 | 315.52 | 13979 | 13833.47 | 85.35 | 13244 | 13055.03 | 100.19 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| 51 | 20 | rnd | 14453 | 14358.8 | 46.61 | 14453 | 14358.8 | 46.61 | 14150 | 14061.7 | 51.79 | 13455 | 13063.47 | 162.42 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |
| | 50 | rnd | 14417 | 14324.8 | 48.66 | 14477 | 14347.13 | 76.2 | 14650 | 14159.73 | 176.87 | 13538 | 13205.23 | 203.47 |
| | | 2op | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 | 47336 | 47336 | 0 |

Table A.887: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46474 | 45927.63 | 276.23 | 43288 | 41997.53 | 826.25 | 31102 | 29334.4 | 1243.46 | 21820 | 19898.3 | 687.88 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 47792 | 47166.13 | 208.36 | 45196 | 44391.3 | 448.52 | 37217 | 34424.43 | 1361.61 | 25136 | 22998.9 | 860.75 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| 51 | 20 | rnd | 46351 | 46025.53 | 212.79 | 46351 | 45894.37 | 317.07 | 40684 | 38885.47 | 944.37 | 27955 | 26203.77 | 866.73 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 47504 | 47117.7 | 221.9 | 47187 | 46799.73 | 278.02 | 43502 | 42079.53 | 846.92 | 33187 | 30492.87 | 1227.8 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |

Table A.888: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17024 | 16890.73 | 75.4 | 19082 | 18088.93 | 392.23 | 16352 | 16104.57 | 119.93 | 15446 | 15145.83 | 168.97 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 17122 | 16928.93 | 102.62 | 19937 | 19096.13 | 856.96 | 16502 | 16335.2 | 107.35 | 15815 | 15576.67 | 133.21 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| 51 | 20 | rnd | 17052 | 16893.73 | 80.62 | 19790 | 18746.07 | 536.36 | 16657 | 16485.47 | 96.55 | 16073 | 15895.83 | 107.85 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 17035 | 16846.17 | 77.53 | 19741 | 19100.2 | 390.74 | 19415 | 16979.43 | 1015.59 | 16319 | 16021.1 | 125.27 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |

Table A.889: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46690 | 45908.57 | 234.08 | 42958 | 41725.37 | 784.85 | 31808 | 29845.93 | 1179.57 | 21655 | 19898.83 | 809.1 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 47597 | 47005.77 | 240.76 | 45709 | 44033.57 | 649.46 | 35592 | 33521.77 | 1089.59 | 25406 | 23059.8 | 838.12 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| 51 | 20 | rnd | 46389 | 46066.3 | 199.32 | 46389 | 45938.8 | 306.06 | 39793 | 38380.6 | 943.58 | 28352 | 26435.6 | 814.41 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 47724 | 47137.47 | 226.35 | 47380 | 46895.63 | 233.01 | 43353 | 41936.07 | 722.52 | 32007 | 30312.73 | 1136.41 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |

Table A.890: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17090 | 16897.57 | 93.59 | 19045 | 18115.03 | 384.64 | 16392 | 16129.47 | 132.77 | 15360 | 15118.37 | 150.34 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 17042 | 16898.87 | 84.95 | 19773 | 18404.4 | 980.44 | 16439 | 16261.53 | 97.97 | 15746 | 15438.63 | 164.51 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| 51 | 20 | rnd | 17057 | 16891.77 | 77.31 | 19330 | 18568.27 | 296.29 | 16648 | 16473.73 | 92.76 | 16146 | 15911.4 | 128.02 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 16968 | 16830.9 | 87.71 | 19968 | 19026.1 | 433.97 | 19368 | 16883.47 | 936.37 | 16168 | 15949.37 | 127.75 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |

Table A.891: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 45162 | 44734.33 | 239.56 | 45162 | 44734.33 | 239.56 | 34835 | 32286.77 | 1203.51 | 20241 | 19123.33 | 563.28 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 45996 | 45470.13 | 269.11 | 45996 | 45470.13 | 269.11 | 37164 | 34060.3 | 1848.13 | 23433 | 22131.9 | 413.14 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| 51 | 20 | rnd | 44234 | 43832.6 | 231.9 | 44234 | 43832.6 | 231.9 | 42554 | 40577.13 | 987.51 | 26635 | 23464 | 2275.9 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 44624 | 44124.93 | 244.08 | 44624 | 44124.93 | 244.08 | 43619 | 42584.4 | 747.57 | 30373 | 25162 | 3008.72 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |

Table A.892: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17039 | 16920.83 | 80.17 | 17017 | 16873 | 82.5 | 16342 | 16142.07 | 109.46 | 15141 | 14929.57 | 155.06 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 17114 | 16957.4 | 57.9 | 18426 | 17538.1 | 397.53 | 16430 | 16271.4 | 91.9 | 15549 | 15346.67 | 92.88 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| 51 | 20 | rnd | 17074 | 16945.9 | 66.89 | 17074 | 16945.9 | 66.89 | 16733 | 16557.7 | 72.96 | 15649 | 15357.7 | 184.44 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |
| | 50 | rnd | 17012 | 16866.93 | 58.61 | 17127 | 16869.93 | 80.55 | 16752 | 16564.2 | 71.65 | 15879 | 15392.93 | 213.68 |
| | | 2op | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 | 55561 | 55561 | 0 |

Table A.893: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

**Results With Post Optimization and No Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47286 | 47054.33 | 124.55 | 47270 | 47048.3 | 111.16 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47238 | 47043 | 117.89 | 47269 | 47055.97 | 111.47 | 47274 | 47272.03 | 10.77 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47333 | 47143.93 | 103.26 | 47339 | 47150.37 | 103.67 | 47392 | 47139.23 | 123.14 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47262 | 47118.77 | 97.81 | 47278 | 47119.33 | 113.72 | 47356 | 47144.17 | 126.42 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.894: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47328 | 47223.07 | 62.12 | 47343 | 47206.77 | 61.74 | 47394 | 47211.87 | 80.39 | 47344 | 47225.17 | 77.3 |
| | | 2op | 47367 | 47307.3 | 29.62 | 47359 | 47280.23 | 21.13 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47337 | 47228.8 | 72.62 | 47443 | 47284.9 | 62.51 | 47336 | 47210.63 | 75.73 | 47321 | 47177.3 | 66.83 |
| | | 2op | 47399 | 47329.33 | 29.56 | 47368 | 47305 | 30 | 47325 | 47275.7 | 9.31 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47345 | 47230.7 | 74.53 | 47421 | 47308.03 | 53 | 47338 | 47206.13 | 72.12 | 47341 | 47208.73 | 87.12 |
| | | 2op | 47395 | 47316.93 | 33.89 | 47412 | 47335.6 | 37.79 | 47365 | 47279.37 | 20.61 | 47274 | 47274 | 0 |
| | 50 | rnd | 47322 | 47245.77 | 62.29 | 47442 | 47333.13 | 56.8 | 47386 | 47245.73 | 69.47 | 47359 | 47243.27 | 86.58 |
| | | 2op | 47401 | 47322.47 | 30.49 | 47430 | 47364.13 | 27.05 | 47344 | 47276.33 | 12.78 | 47274 | 47274 | 0 |

Table A.895: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47270 | 47088.13 | 102.88 | 47284 | 47078.87 | 131.36 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47354 | 47059.07 | 131.45 | 47271 | 47086.77 | 126.83 | 47274 | 47253.6 | 67.1 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47332 | 47124.53 | 85.24 | 47332 | 47125.33 | 87.53 | 47292 | 47149.57 | 78.18 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47278 | 47089.7 | 112.54 | 47286 | 47099.7 | 111.08 | 47358 | 47115.27 | 124.75 | 47274 | 47271.8 | 12.05 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.896: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47329 | 47207.83 | 66.03 | 47344 | 47241.63 | 67.08 | 47365 | 47205.9 | 76.91 | 47429 | 47206.93 | 96.41 |
| | | 2op | 47390 | 47319.7 | 34 | 47360 | 47283.57 | 22.98 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47397 | 47227.57 | 51.81 | 47416 | 47268.07 | 77 | 47345 | 47172.8 | 89.31 | 47310 | 47174.8 | 86.64 |
| | | 2op | 47398 | 47334.07 | 34.58 | 47398 | 47314.33 | 38.84 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47336 | 47248.33 | 61.89 | 47388 | 47310.8 | 47.3 | 47340 | 47203.67 | 70.03 | 47356 | 47180.4 | 112.18 |
| | | 2op | 47377 | 47307.37 | 32.86 | 47414 | 47340.7 | 32.72 | 47357 | 47276.77 | 15.15 | 47274 | 47274 | 0 |
| | 50 | rnd | 47386 | 47252.1 | 59.59 | 47401 | 47337.93 | 43.3 | 47402 | 47253.6 | 67.49 | 47409 | 47242 | 77.51 |
| | | 2op | 47408 | 47322.27 | 35.97 | 47426 | 47366 | 25 | 47359 | 47283.93 | 22.75 | 47274 | 47274 | 0 |

Table A.897: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47303 | 47102.57 | 92.53 | 47310 | 47101.83 | 93.92 | 47274 | 47265.97 | 44 | 47274 | 47274 | 0 |
| | | 2op | 47348 | 47276.47 | 13.51 | 47348 | 47276.47 | 13.51 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47369 | 47154.4 | 118.78 | 47369 | 47155.13 | 117.53 | 47274 | 47252.83 | 55.15 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47341 | 47220.13 | 53.08 | 47341 | 47219.53 | 53.68 | 47419 | 47229.07 | 92.89 | 47274 | 47274 | 0 |
| | | 2op | 47378 | 47305.27 | 35.7 | 47378 | 47305.27 | 35.7 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47355 | 47254.1 | 53.59 | 47355 | 47250.27 | 57.53 | 47367 | 47186.63 | 76.51 | 47274 | 47274 | 0 |
| | | 2op | 47436 | 47307.5 | 48.11 | 47436 | 47307.43 | 47.99 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.898: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47320 | 47218.1 | 55.34 | 47355 | 47220.3 | 69.19 | 47354 | 47209.63 | 74.77 | 47362 | 47197.83 | 71.68 |
| | | 2op | 47371 | 47318.27 | 26.44 | 47366 | 47297.9 | 29.56 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47312 | 47240.9 | 47.77 | 47374 | 47220.6 | 66.15 | 47328 | 47223.47 | 65.37 | 47330 | 47211.03 | 88.71 |
| | | 2op | 47407 | 47336.87 | 31.21 | 47401 | 47315.2 | 35.65 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47321 | 47211.33 | 57.26 | 47335 | 47205.57 | 61.88 | 47320 | 47183.97 | 72.58 | 47399 | 47213.5 | 87.51 |
| | | 2op | 47381 | 47329.63 | 24.62 | 47371 | 47323.9 | 27.96 | 47313 | 47275.3 | 7.12 | 47274 | 47274 | 0 |
| | 50 | rnd | 47341 | 47257.03 | 50.53 | 47365 | 47237.67 | 71.29 | 47353 | 47243.83 | 70.32 | 47304 | 47183.93 | 91.43 |
| | | 2op | 47378 | 47330.37 | 20.52 | 47395 | 47308.5 | 31.46 | 47290 | 47274.53 | 2.92 | 47274 | 47274 | 0 |

Table A.899: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151224 | 150900.67 | 352 | 151256 | 151153.53 | 19.35 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151210 | 150940.8 | 284.93 | 151249 | 151037.9 | 283.29 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151244 | 150961.13 | 315.84 | 151249 | 150890.43 | 369.07 | 151150 | 151147.2 | 15.34 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151059.1 | 231.88 | 151295 | 151061.53 | 238.86 | 151227 | 151117.5 | 117.12 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.900: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151322 | 151152.63 | 125.35 | 151271 | 151147.33 | 116.02 | 151231 | 151110.33 | 160.91 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151169.1 | 51.02 | 151291 | 151166.2 | 60.73 | 151255 | 151124.43 | 146.59 | 151171 | 151150.7 | 3.83 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151279 | 151120.77 | 125.61 | 151216 | 151149.03 | 53.11 | 151291 | 151149.17 | 112.13 | 151228 | 151151.3 | 21.59 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151249 | 151138.93 | 45.97 | 151229 | 151160.2 | 48.91 | 151279 | 151161.67 | 53.54 | 151215 | 151086.2 | 177.9 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.901: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151275 | 151065.8 | 202.88 | 151245 | 151128.6 | 108.42 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151220 | 150989.1 | 280.14 | 151267 | 151039.07 | 309.08 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151280 | 151023.7 | 289.64 | 151306 | 151071 | 235.96 | 151170 | 151129.17 | 117.94 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151233 | 151026.97 | 219.88 | 151237 | 151033.77 | 277.53 | 151172 | 151046.43 | 256.19 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.902: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151288 | 151139.57 | 118.36 | 151260 | 151139.43 | 113.88 | 151220 | 151145.6 | 28.64 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151272 | 151151.3 | 47.2 | 151237 | 151156.8 | 51.07 | 151226 | 151121.77 | 149.72 | 151150 | 151149.8 | 1.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151262 | 151142.3 | 117.27 | 151293 | 151153.13 | 64.68 | 151229 | 151087.33 | 184.83 | 151259 | 151153 | 34.39 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151236 | 151140.43 | 47.58 | 151249 | 151160.63 | 43.71 | 151273 | 151173.67 | 47.23 | 151223 | 151125.5 | 110.01 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.903: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151265 | 151105.13 | 188.01 | 151255 | 151095.3 | 202.53 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151068.93 | 288.32 | 151227 | 150968.7 | 306.24 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151290 | 151109.23 | 210.85 | 151290 | 151112.23 | 210.97 | 151249 | 151105.17 | 170.81 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151228 | 151081.07 | 207.51 | 151235 | 151076.93 | 207.62 | 151266 | 151093.37 | 218.88 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.904: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151241 | 151159.63 | 44.85 | 151263 | 151159.03 | 49.54 | 151228 | 151133.9 | 107.77 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151165.7 | 46.99 | 151217 | 151126.1 | 104.71 | 151297 | 151119.27 | 178.83 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151240 | 151146.23 | 49.16 | 151245 | 151157.07 | 45.82 | 151256 | 151169.07 | 57.18 | 151150 | 151149.27 | 4.02 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151299 | 151167.47 | 51.98 | 151259 | 151159.23 | 58.32 | 151222 | 151151.7 | 43.52 | 151295 | 151147.47 | 38.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.905: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167083 | 166465.67 | 294.78 | 166879 | 166513.23 | 271.97 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166980 | 166376 | 300.81 | 166903 | 166410.9 | 325.13 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167096 | 166520.43 | 344.98 | 166930 | 166509.13 | 287.68 | 166880 | 166536.73 | 153.41 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166921 | 166497.47 | 320.52 | 166768 | 166518.6 | 227.41 | 166911 | 166501.33 | 291.39 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.906: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167325 | 166955.17 | 205.51 | 167284 | 166868.83 | 248.66 | 167320 | 166836.37 | 259.86 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167309 | 166965.7 | 180.76 | 167416 | 167042.27 | 237.21 | 167304 | 166918.57 | 180.5 | 167256 | 166586.87 | 187.24 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167332 | 166960.43 | 228.42 | 167331 | 167031.3 | 182.67 | 167335 | 166817.03 | 263.63 | 167127 | 166653.47 | 228.62 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167363 | 166965.77 | 172.33 | 167351 | 167124.5 | 175.11 | 167282 | 166869.1 | 247.93 | 167235 | 166857.63 | 212.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.907: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166930 | 166544.23 | 300.66 | 166749 | 166470.63 | 256.37 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166976 | 166466.13 | 344.2 | 166876 | 166408 | 317.92 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 166952 | 166532.33 | 267.19 | 166967 | 166482.87 | 267.92 | 166751 | 166491.67 | 152.46 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166964 | 166578.67 | 336.85 | 167015 | 166527.3 | 314.2 | 166894 | 166541.67 | 217.32 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.908: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167387 | 166917.97 | 218.43 | 167216 | 166874.57 | 199.53 | 167287 | 166731.03 | 229.52 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167403 | 166940.03 | 232.47 | 167337 | 166942.97 | 216.17 | 167350 | 166823.83 | 198.99 | 167018 | 166578.4 | 143.63 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167395 | 166992.37 | 185.38 | 167318 | 167002.63 | 203.72 | 167292 | 166878.47 | 208.76 | 167126 | 166740 | 227.78 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167314 | 166955.27 | 193.81 | 167404 | 167183.33 | 141.43 | 167284 | 166907.6 | 217.01 | 167156 | 166867.97 | 194.35 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.909: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166934 | 166528.37 | 295.43 | 166921 | 166517.4 | 318.91 | 166773 | 166526.6 | 49.18 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167029 | 166545.23 | 326.64 | 166862 | 166544.97 | 217.39 | 166929 | 166544.03 | 81.85 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167068 | 166723.37 | 199.72 | 167124 | 166727.47 | 199.16 | 167149 | 166739.63 | 193.94 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167016 | 166713.73 | 187.05 | 167016 | 166715.1 | 187.35 | 166922 | 166696.03 | 179.51 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.910: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167318 | 167006.8 | 203.65 | 167301 | 166973.4 | 193.54 | 167368 | 166960.43 | 219.45 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167360 | 167025 | 183.2 | 167395 | 167012.03 | 227 | 167321 | 166876.83 | 170.75 | 166815 | 166529.83 | 53.86 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167330 | 167008.57 | 155.69 | 167315 | 167009.43 | 169.14 | 167234 | 166925.63 | 200.5 | 166974 | 166549.3 | 111.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167373 | 167032.73 | 199.07 | 167413 | 167015.2 | 192.34 | 167363 | 166940.4 | 227.5 | 167245 | 166841.43 | 222.73 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.911: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163097 | 162964.47 | 81.77 | 163080 | 162929.63 | 89.01 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163171 | 162939.33 | 118.26 | 163114 | 162934.1 | 84.08 | 163089 | 162980.57 | 50.75 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163106 | 162983.1 | 75.81 | 163120 | 162955.2 | 111.5 | 163086 | 162917.43 | 101.17 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163129 | 162970.5 | 111.37 | 163141 | 162953.2 | 108.07 | 163177 | 162928.1 | 105.23 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.912: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163162 | 162964 | 82.69 | 163168 | 162983 | 90.22 | 163195 | 162993.23 | 89.87 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163191 | 162980.97 | 85.15 | 163085 | 162956.7 | 69.52 | 163112 | 162984.5 | 79.44 | 163118 | 162973.13 | 71.26 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163151 | 162984.43 | 88.72 | 163150 | 163015.8 | 69.48 | 163093 | 162972.6 | 73.01 | 163182 | 162988.37 | 71.15 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163078 | 162971.73 | 65.78 | 163073 | 162981.23 | 66.59 | 163126 | 162949.43 | 92.28 | 163120 | 162980.43 | 70.72 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.913: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163070 | 162932.63 | 94.57 | 163100 | 162920.9 | 117.33 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163067 | 162925.13 | 113.67 | 163068 | 162937.23 | 102.08 | 163082 | 162960.2 | 81.58 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163120 | 162971.23 | 65.97 | 163085 | 162952.1 | 71.66 | 163092 | 162950.57 | 71.54 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162945.23 | 109.16 | 163167 | 162943.3 | 86.03 | 163075 | 162940.57 | 108.62 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.914: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163148 | 162965.5 | 68.67 | 163119 | 162971.9 | 75.51 | 163068 | 162973.47 | 45.34 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163098 | 162965.7 | 64.09 | 163095 | 162948 | 70.81 | 163100 | 162993.53 | 71.77 | 163083 | 162990.17 | 29.74 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163099 | 162990.73 | 76.52 | 163182 | 162995.73 | 73.74 | 163133 | 162968.67 | 70.55 | 163083 | 162969.97 | 56.31 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163155 | 162973.47 | 112.53 | 163103 | 162966.57 | 94.87 | 163093 | 162941.97 | 80.95 | 163116 | 162976.83 | 80.34 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.915: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163047 | 162938.13 | 99.39 | 163116 | 162950.73 | 91.84 | 163056 | 162912.03 | 86.1 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163075 | 162970.9 | 64.49 | 163101 | 162944.57 | 78.29 | 163081 | 162948.13 | 78.24 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163043 | 162914.07 | 85.06 | 163043 | 162914.07 | 85.06 | 163047 | 162929.43 | 100.07 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163150 | 162967.63 | 89 | 163150 | 162967.63 | 89 | 163144 | 162920.8 | 93.27 | 162995 | 162986.37 | 10.35 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.916: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163134 | 162978.3 | 80.52 | 163117 | 162984.67 | 79.61 | 163118 | 162947.5 | 78.29 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162973.1 | 87.98 | 163093 | 162997.8 | 56.61 | 163144 | 162984.17 | 77.96 | 163065 | 162961.67 | 114.09 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163161 | 162984.13 | 75.67 | 163133 | 162975.77 | 66.1 | 163154 | 162991.3 | 82.11 | 163104 | 162981.7 | 36.81 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163118 | 162985.87 | 71.3 | 163108 | 162979.93 | 91.08 | 163143 | 162997.37 | 64.08 | 163177 | 162976.97 | 111.1 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.917: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179812 | 179677.5 | 88.01 | 179815 | 179690.97 | 76.49 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179878 | 179699.8 | 92.46 | 179860 | 179671.17 | 101.55 | 179839 | 179625.2 | 78.25 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179922 | 179737.67 | 99.98 | 179841 | 179684.13 | 97.48 | 179856 | 179686.1 | 79.61 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179874 | 179707.1 | 86.07 | 179970 | 179709.27 | 120.48 | 179901 | 179686.87 | 90.38 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.918: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179884 | 179702.27 | 91.18 | 179868 | 179681.67 | 88.27 | 179865 | 179629.23 | 78.58 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179973 | 179737.87 | 97.25 | 179892 | 179717.17 | 94.65 | 179862 | 179682.43 | 102.86 | 179822 | 179620.43 | 44.13 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179881 | 179721.77 | 85.33 | 179893 | 179678.23 | 111.08 | 179921 | 179699.43 | 100.01 | 179866 | 179653 | 86.12 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179846 | 179703.67 | 74.2 | 179961 | 179702.6 | 121.55 | 179869 | 179711.2 | 73.49 | 179975 | 179703.97 | 96.23 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.919: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179843 | 179698.07 | 83.7 | 179907 | 179688.4 | 91.56 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179870 | 179732.7 | 74.4 | 179892 | 179698.73 | 85 | 179872 | 179655.6 | 71.1 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179927 | 179724.2 | 85.27 | 179900 | 179686.1 | 111.9 | 179888 | 179681.8 | 86.82 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179833 | 179681.07 | 92.49 | 179848 | 179702.13 | 84.07 | 179920 | 179682.33 | 85.62 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.920: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179865 | 179702.3 | 101.36 | 179891 | 179687.47 | 96.02 | 179937 | 179673.83 | 102.83 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179885 | 179702.5 | 87.81 | 179920 | 179702.07 | 87.97 | 179898 | 179707.27 | 87.84 | 179734 | 179615.7 | 53.58 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179913 | 179738.73 | 87.62 | 179952 | 179730.4 | 92.83 | 180023 | 179712.1 | 102.42 | 179785 | 179645.03 | 55.96 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179949 | 179706.1 | 104.97 | 179836 | 179674.03 | 89.98 | 179931 | 179711.4 | 82.88 | 179932 | 179705.83 | 98.77 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.921: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179816 | 179685.17 | 86.78 | 179882 | 179677.47 | 89.57 | 179828 | 179676.57 | 87.56 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179901 | 179693.7 | 103.67 | 179958 | 179710.83 | 110.59 | 179872 | 179665.33 | 94.3 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179879 | 179695.03 | 85.52 | 179879 | 179695.03 | 85.52 | 179858 | 179678.13 | 98.57 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179916 | 179710.17 | 93.31 | 179916 | 179710.17 | 93.31 | 179827 | 179686.13 | 90.2 | 179642 | 179609.13 | 8.16 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.922: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179831 | 179719 | 80.84 | 179996 | 179707.37 | 90.83 | 179910 | 179710.17 | 85.27 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179854 | 179739.67 | 62.47 | 179911 | 179696.83 | 124.46 | 179854 | 179703.67 | 89.17 | 179759 | 179612.07 | 27.75 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179843 | 179709.4 | 89.13 | 179841 | 179686.77 | 81.47 | 179959 | 179708.97 | 82.57 | 179733 | 179613.83 | 26.73 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179845 | 179687.6 | 85.28 | 179877 | 179694.7 | 102.34 | 179952 | 179712.87 | 103.4 | 179879 | 179657.97 | 76.54 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.923: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343090 | 342627.93 | 408.14 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343130 | 342584.93 | 446.18 | 342835 | 342694.9 | 241.36 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343107 | 342631.63 | 402.65 | 343032 | 342629.67 | 374.91 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342996 | 342643.97 | 288.44 | 343092 | 342626.77 | 384.89 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.924: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343123 | 342867.97 | 134.26 | 343158 | 342851.93 | 215.75 | 343012 | 342805.37 | 114.07 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343171 | 342878.6 | 134.05 | 343131 | 342833.07 | 243.58 | 343099 | 342755.8 | 290.48 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343011 | 342846 | 122.13 | 343203 | 342882.63 | 168.5 | 343022 | 342814.7 | 173.26 | 342915 | 342771.93 | 34.32 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343120 | 342896.7 | 96.94 | 343118 | 342872.3 | 137.17 | 343084 | 342881.3 | 179.5 | 343110 | 342726.5 | 234.13 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.925: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343093 | 342585.37 | 392.07 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343091 | 342580.7 | 393.26 | 342861 | 342717.93 | 190.04 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343064 | 342596.8 | 428.76 | 343168 | 342543.17 | 452.8 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343111 | 342806 | 235.38 | 343034 | 342764.27 | 252.67 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.926: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343109 | 342870 | 117.2 | 343163 | 342796.17 | 306.15 | 343051 | 342799.57 | 106.84 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343100 | 342903.2 | 107.83 | 343049 | 342828.03 | 216.63 | 343173 | 342797.07 | 225.63 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343049 | 342871.6 | 102.32 | 343156 | 342873.77 | 154.27 | 343126 | 342818.87 | 208.11 | 343007 | 342786.9 | 66 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343181 | 342884.13 | 133.46 | 343066 | 342787.4 | 276.02 | 343136 | 342845.23 | 256.17 | 343090 | 342820 | 223.44 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.927: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343140 | 342504.6 | 458.31 | 343140 | 342511.6 | 464.4 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342994 | 342546.4 | 432.62 | 342994 | 342524.03 | 428.31 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343079 | 342748.17 | 305.22 | 343079 | 342748.17 | 305.22 | 343067 | 342714.33 | 229.44 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343074 | 342683 | 321.63 | 343074 | 342683 | 321.63 | 343073 | 342567.6 | 373.35 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.928: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343125 | 342898.8 | 104.66 | 343129 | 342886.23 | 152.23 | 343091 | 342732.27 | 283.51 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343147 | 342945.97 | 91.11 | 343169 | 342926.93 | 94.31 | 343118 | 342760.43 | 244.79 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343118 | 342905 | 141.81 | 343092 | 342881.43 | 154.54 | 343208 | 342836.2 | 264.59 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343114 | 342874.8 | 108.34 | 343126 | 342884.17 | 100.63 | 343089 | 342893.83 | 133.37 | 342936 | 342760.27 | 70.6 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.929: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226996 | 225497.37 | 835.16 | 226232 | 225417.97 | 617.72 | 226732 | 225243.57 | 791.22 | 226468 | 225211 | 738.34 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227264 | 225345.53 | 793.51 | 226685 | 225411.77 | 681.01 | 226798 | 225190.73 | 780.58 | 227269 | 225514.2 | 941.39 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226415 | 225618.3 | 500.43 | 226633 | 225497.7 | 739.51 | 226681 | 225059.1 | 878.83 | 226622 | 225269.9 | 790.65 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226770 | 225514.73 | 617.17 | 227096 | 225392.13 | 817.39 | 226665 | 225187.33 | 666.87 | 226606 | 225125.97 | 887.35 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |

Table A.930: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226223 | 225146.3 | 706.13 | 226756 | 225249.67 | 895.19 | 226217 | 224996.4 | 643.26 | 226451 | 225242.47 | 790.03 |
| | | 2op | 226435 | 225692.5 | 250.67 | 226609 | 225591.47 | 226.61 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226629 | 224966.53 | 876.61 | 226304 | 225159.87 | 611.93 | 226616 | 225261.5 | 622.12 | 227086 | 225248.2 | 898.4 |
| | | 2op | 226415 | 225765.93 | 282.23 | 226281 | 225709.87 | 276.35 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226717 | 225011.93 | 778.71 | 226523 | 225191.5 | 604.25 | 226529 | 225150.3 | 700.12 | 226476 | 225048.53 | 676.18 |
| | | 2op | 226364 | 225742.3 | 325.1 | 226698 | 226053.63 | 403.4 | 226370 | 225592.23 | 228.89 | 225517 | 225517 | 0 |
| | 50 | rnd | 226542 | 225019.7 | 902.9 | 227430 | 225435.2 | 834.72 | 226510 | 225319.83 | 825 | 226693 | 225005.33 | 850.79 |
| | | 2op | 226768 | 225740.7 | 388.93 | 226610 | 226198.87 | 228.9 | 226537 | 225579.07 | 284.59 | 225517 | 225517 | 0 |

Table A.931: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226800 | 225637.37 | 683.45 | 226883 | 225426.57 | 684.01 | 226884 | 225486.57 | 681.11 | 226456 | 225038.6 | 690.35 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226436 | 225362.17 | 671.57 | 226792 | 225280.23 | 848.65 | 226874 | 225221.33 | 865.92 | 226134 | 225097.23 | 671.09 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226995 | 225515.9 | 767.23 | 226910 | 225464.63 | 742.02 | 227383 | 225321.47 | 647.89 | 226387 | 224877.07 | 969.09 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226858 | 225455.57 | 728.53 | 226335 | 225388.67 | 572.2 | 226785 | 225252.7 | 838.63 | 226633 | 225154.33 | 873.97 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |

Table A.932: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226793 | 225139.63 | 1001.81 | 226537 | 225078.2 | 852.16 | 227010 | 225286.23 | 869.92 | 226654 | 225032 | 824.1 |
| | | 2op | 226736 | 225879.97 | 351.65 | 226291 | 225677.63 | 264.55 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226635 | 225297.83 | 592.26 | 226531 | 225231.33 | 670.52 | 227570 | 225494.2 | 831.67 | 226312 | 224948.63 | 929.61 |
| | | 2op | 226844 | 225861.63 | 326.95 | 226879 | 225775.93 | 391.87 | 226233 | 225540.87 | 130.72 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226733 | 225230.2 | 829.31 | 226558 | 225145.87 | 625.6 | 227135 | 225109.67 | 734.67 | 226609 | 224999.33 | 851.49 |
| | | 2op | 226624 | 225759.37 | 343.29 | 226690 | 225967.23 | 363.35 | 226840 | 225565.07 | 241.63 | 225517 | 225517 | 0 |
| | 50 | rnd | 226840 | 225052.83 | 919.62 | 226399 | 225157.37 | 848.99 | 226733 | 225232.13 | 824.8 | 226723 | 225197.03 | 752.23 |
| | | 2op | 226314 | 225776.33 | 291.33 | 226599 | 226212.7 | 236.64 | 226512 | 225692.87 | 304.03 | 225517 | 225517 | 0 |

Table A.933: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226411 | 225509.9 | 611.81 | 227184 | 225360.33 | 701.71 | 226376 | 225252.13 | 637.37 | 226380 | 225086.17 | 767.64 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226950 | 225330.77 | 803.07 | 226046 | 225025.4 | 598.59 | 226885 | 225224.7 | 760.07 | 226501 | 225059.43 | 923.67 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 227217 | 225389.1 | 844.1 | 226745 | 225318.77 | 771.54 | 226836 | 225393.53 | 683.59 | 226772 | 225165.97 | 702.34 |
| | | 2op | 226912 | 225735.83 | 370.24 | 226912 | 225735.83 | 370.24 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226993 | 225406.03 | 685.1 | 226268 | 225365.33 | 641.8 | 226708 | 225196.6 | 763.07 | 226709 | 225336.23 | 651.35 |
| | | 2op | 226586 | 225651.33 | 295.36 | 226586 | 225651.33 | 295.36 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |

Table A.934: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226265 | 225139.13 | 907.65 | 226527 | 225163.07 | 818.68 | 226664 | 225134.2 | 705.25 | 226698 | 224937.13 | 928.79 |
| | | 2op | 226619 | 225921.17 | 361.33 | 226611 | 225848.3 | 399.77 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226916 | 225157.43 | 794.01 | 226946 | 225065.6 | 977.93 | 226991 | 225203.4 | 759.85 | 226308 | 225023.83 | 788.33 |
| | | 2op | 226297 | 225872.63 | 313.82 | 226824 | 225974.77 | 345.74 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226598 | 225027.33 | 925.99 | 226337 | 225214.07 | 629.37 | 226484 | 225193.8 | 721.83 | 226480 | 225165.97 | 649.12 |
| | | 2op | 226887 | 226049.43 | 346.07 | 226887 | 226071.17 | 350.85 | 226601 | 225643.23 | 286.56 | 225517 | 225517 | 0 |
| | 50 | rnd | 227229 | 225087.67 | 730.38 | 226317 | 224829.8 | 833.71 | 226318 | 224949.2 | 814.2 | 226531 | 225310.23 | 714.46 |
| | | 2op | 226424 | 225893.7 | 323.94 | 226404 | 225992.37 | 282.95 | 226181 | 225632.73 | 237.05 | 225517 | 225517 | 0 |

Table A.935: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441145 | 438926.53 | 1276.86 | 440158 | 438691.07 | 1047.55 | 440394 | 438436.23 | 1329.59 | 440646 | 438355.07 | 1545.38 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 442381 | 439450.37 | 1290.37 | 440344 | 438574.67 | 1034.78 | 440614 | 438473.77 | 1252.12 | 440874 | 438311.43 | 1338.47 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440865 | 438524.87 | 1238.74 | 440406 | 438849.27 | 1044.33 | 440790 | 438350.3 | 1011.71 | 440361 | 438273.67 | 1262.72 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440822 | 438747.67 | 1114.99 | 441795 | 439248.7 | 1163.72 | 440309 | 438738.37 | 1125.23 | 440197 | 438220.8 | 1002.45 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.936: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440918 | 438629 | 1318.13 | 441469 | 438664.9 | 1332.21 | 442079 | 438477.23 | 1231.64 | 441312 | 438675.77 | 1234.51 |
| | | 2op | 438680 | 437898.77 | 407.68 | 438642 | 437497 | 284.6 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440961 | 438194.43 | 1246.16 | 440185 | 438430.83 | 1093.63 | 440555 | 438831.67 | 1175.19 | 440145 | 438339.8 | 1030.8 |
| | | 2op | 438887 | 437776.27 | 381.84 | 438278 | 437560.6 | 288.92 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440731 | 438155.2 | 1211.97 | 440331 | 437968.07 | 1240.61 | 440297 | 438560.2 | 1280.21 | 440544 | 438110.77 | 1305.49 |
| | | 2op | 438599 | 437765.77 | 375.07 | 438735 | 437604.47 | 363.02 | 437775 | 437410.57 | 68.83 | 437398 | 437398 | 0 |
| | 50 | rnd | 440419 | 438128 | 1275.49 | 441245 | 438556.2 | 1341.44 | 440917 | 438656.43 | 1118.17 | 441191 | 438825.5 | 1259.97 |
| | | 2op | 438507 | 437879.73 | 308.96 | 439035 | 437880.13 | 425.06 | 438297 | 437455.4 | 218.67 | 437398 | 437398 | 0 |

Table A.937: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441097 | 438985.7 | 1086.28 | 440595 | 438590.1 | 1274.51 | 440863 | 438490.27 | 1225.79 | 440676 | 438381.8 | 1197.4 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440779 | 438685.47 | 1240.31 | 441734 | 438654.8 | 1232 | 440772 | 438543.47 | 1177.38 | 440469 | 438434.07 | 989.61 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440729 | 438986.47 | 1084.19 | 441130 | 438775.23 | 1305.78 | 441451 | 438822.17 | 1403.64 | 440889 | 438600.53 | 1244.5 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441958 | 439020.67 | 1078.66 | 441393 | 439279.3 | 1106.29 | 441119 | 438669.53 | 1252.27 | 440396 | 438418.2 | 1077.26 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.938: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441351 | 438668.23 | 1013.9 | 440984 | 438451.27 | 1320.04 | 440118 | 437911.5 | 1366.12 | 440021 | 438344.5 | 1234.66 |
| | | 2op | 438989 | 437979.8 | 477.85 | 438417 | 437454.47 | 219.59 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440850 | 438402.37 | 1208 | 441680 | 438671.1 | 1321.64 | 441063 | 438393.83 | 1376.42 | 440051 | 437912.63 | 1163.38 |
| | | 2op | 438962 | 438031.43 | 425.33 | 438971 | 437554.67 | 387.13 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441685 | 438500.1 | 1376.79 | 440565 | 438375.43 | 1277.26 | 440377 | 438126.37 | 1154.28 | 440247 | 437981.77 | 1429.8 |
| | | 2op | 438548 | 437765.37 | 382.13 | 439390 | 437702.33 | 490.22 | 438357 | 437429.97 | 175.09 | 437398 | 437398 | 0 |
| | 50 | rnd | 441622 | 438744.37 | 1111.44 | 440908 | 438393.37 | 1245.36 | 441200 | 438677.77 | 1105.43 | 439938 | 437871.27 | 1325.81 |
| | | 2op | 438576 | 437859.53 | 307.65 | 438527 | 437628.3 | 339.94 | 437825 | 437412.23 | 77.96 | 437398 | 437398 | 0 |

Table A.939: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441453 | 439012.43 | 1283.58 | 441181 | 439192.07 | 1288.63 | 441532 | 438532.9 | 1635.93 | 441010 | 438329.03 | 1551.12 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441049 | 438757.53 | 1158.59 | 441049 | 438776.97 | 1087.1 | 440169 | 438402.27 | 1285.38 | 440042 | 438236.13 | 1041.71 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440953 | 439197.2 | 927.65 | 440953 | 439197.2 | 927.65 | 441367 | 438379.4 | 1543.8 | 440312 | 438623.57 | 1300.69 |
| | | 2op | 439393 | 437551.2 | 479.58 | 439393 | 437551.2 | 479.58 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441453 | 438885.6 | 1286.99 | 441453 | 438885.6 | 1286.99 | 441712 | 439081.93 | 1128.11 | 440590 | 438385.07 | 1244.08 |
| | | 2op | 439642 | 437609 | 645.91 | 439642 | 437609 | 645.91 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.940: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440597 | 438306.7 | 1310.83 | 440494 | 438604.3 | 967.29 | 441978 | 438503.93 | 1117.13 | 440304 | 437982.37 | 1291.64 |
| | | 2op | 438481 | 437936.3 | 316.67 | 438481 | 437751.67 | 340.4 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440755 | 438672.93 | 1195.54 | 441008 | 438401.87 | 1613.41 | 441365 | 438503.73 | 1436.87 | 441129 | 438344.37 | 1304.22 |
| | | 2op | 438750 | 438070.27 | 360.37 | 438533 | 437920.2 | 356.93 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440678 | 438520.93 | 1154.36 | 440678 | 438653.67 | 1209.19 | 440925 | 438557.57 | 1344.76 | 440166 | 438301.8 | 929.55 |
| | | 2op | 439240 | 437945.6 | 372.02 | 438664 | 437881.3 | 306.67 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440295 | 438395.97 | 1224.45 | 441003 | 438410.57 | 1413.13 | 441429 | 438650.3 | 1323.07 | 440472 | 438328.1 | 1180.34 |
| | | 2op | 438806 | 437967.03 | 330.47 | 438989 | 437950.27 | 369.01 | 438193 | 437440 | 165.61 | 437398 | 437398 | 0 |

Table A.941: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115741 | 114802.93 | 434.43 | 115993 | 114811.83 | 506.51 | 115744 | 114827.03 | 664.09 | 115808 | 114876.57 | 555.67 |
| | | 2op | 115851 | 115525.23 | 61.53 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115994 | 115026.07 | 562.12 | 115873 | 115188.57 | 458.97 | 116177 | 114914.37 | 609.54 | 115754 | 114670.17 | 543.26 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115833 | 114958.93 | 501.25 | 115851 | 114896.1 | 414.29 | 115725 | 114907.03 | 580.6 | 115753 | 114843.43 | 563.73 |
| | | 2op | 115782 | 115531.27 | 65.75 | 115782 | 115522.93 | 48.93 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115952 | 114948.67 | 541.85 | 116124 | 114938.4 | 570.57 | 115735 | 114860.03 | 496.8 | 115490 | 114664.33 | 445.38 |
| | | 2op | 115514 | 115513.97 | 0.18 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |

Table A.942: *j02459_7*: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115876 | 114810.13 | 502.7 | 115553 | 114666.33 | 450.23 | 116248 | 114811.33 | 564.26 | 115420 | 114584.37 | 517.36 |
| | | 2op | 116327 | 115525.47 | 221.84 | 115802 | 115485.33 | 151.71 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115431 | 114772.17 | 426.02 | 115621 | 114661.17 | 423.71 | 115768 | 114871.47 | 532.51 | 115601 | 114849.4 | 560.44 |
| | | 2op | 115767 | 115456.6 | 186.34 | 116023 | 115537.6 | 200.88 | 115547 | 115501.8 | 72.39 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115953 | 114696.83 | 655.13 | 115653 | 114806.33 | 595.07 | 115619 | 114648.23 | 488.37 | 115930 | 114819.53 | 502.83 |
| | | 2op | 115633 | 115437.33 | 123.2 | 115893 | 115570.1 | 177.56 | 115633 | 115411.53 | 142.09 | 115514 | 115514 | 0 |
| | 50 | rnd | 115690 | 114774.6 | 475.75 | 115402 | 114728.9 | 437.08 | 115654 | 114830.5 | 497.95 | 115717 | 114705.07 | 560.4 |
| | | 2op | 115803 | 115507.73 | 142.89 | 116424 | 115750 | 237.71 | 115858 | 115508.63 | 147.62 | 115514 | 115514 | 0 |

Table A.943: *j02459_7*: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115817 | 115065.97 | 514.33 | 115626 | 114797.73 | 527.07 | 115976 | 114843.4 | 494.71 | 115737 | 114668.2 | 426.4 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115839 | 115173.83 | 459.92 | 115614 | 114912.83 | 433.06 | 115983 | 114694.33 | 569.27 | 115778 | 114784.53 | 549.5 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116009 | 115007.27 | 459.63 | 115725 | 114895.03 | 557.38 | 115956 | 115033.4 | 587.18 | 115713 | 114743.93 | 547.53 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116139 | 114960.07 | 551.69 | 116308 | 115073.63 | 551.94 | 116026 | 115037.17 | 433.96 | 115847 | 114729.2 | 467.54 |
| | | 2op | 115864 | 115525.67 | 63.9 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |

Table A.944: *j02459_7*: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115650 | 114856.67 | 517.37 | 115592 | 114918.4 | 501.3 | 115774 | 114999.83 | 392.1 | 115283 | 114585.63 | 557.15 |
| | | 2op | 115647 | 115496.53 | 132.75 | 115690 | 115491.97 | 110.25 | 115514 | 115510.53 | 18.99 | 115514 | 115514 | 0 |
| | 50 | rnd | 115678 | 114754.07 | 457.41 | 115604 | 114849.77 | 502.5 | 115742 | 114600.03 | 499.21 | 115724 | 114705.97 | 525.73 |
| | | 2op | 116039 | 115483.67 | 209.74 | 116035 | 115553.33 | 242.13 | 115670 | 115509.27 | 79.91 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115911 | 114853.5 | 617.63 | 115789 | 114763.07 | 538.52 | 115503 | 114763.7 | 509.22 | 116175 | 114743.03 | 640.99 |
| | | 2op | 115933 | 115472.4 | 181.3 | 116399 | 115691.43 | 283.42 | 115654 | 115493.9 | 105.78 | 115514 | 115514 | 0 |
| | 50 | rnd | 115862 | 114884.67 | 534.74 | 115233 | 114636.3 | 490.59 | 115908 | 114864.9 | 572.34 | 115851 | 114823.7 | 513.33 |
| | | 2op | 116025 | 115445.3 | 202.6 | 116438 | 115787.1 | 169.6 | 116023 | 115499.03 | 162.76 | 115514 | 115514 | 0 |

Table A.945: $j02459\_7$: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115844 | 114891.23 | 507.18 | 116029 | 115064.87 | 523.77 | 115682 | 114727.33 | 433.13 | 115682 | 114816.4 | 533.12 |
| | | 2op | 116239 | 115545.9 | 194.11 | 116026 | 115534.57 | 124.3 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115434 | 114776.6 | 384.15 | 115661 | 114869.97 | 478.05 | 115645 | 114961.23 | 392.1 | 115617 | 114781.03 | 453.88 |
| | | 2op | 115514 | 115490.77 | 85.48 | 115514 | 115490.37 | 85.79 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115836 | 115034.53 | 432.45 | 115836 | 114975.8 | 408.29 | 115990 | 115012.53 | 501.07 | 115913 | 114669.37 | 709.08 |
| | | 2op | 116111 | 115453.37 | 253.39 | 116111 | 115447.67 | 257.91 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115996 | 115006.17 | 435.82 | 115996 | 115095.73 | 564.14 | 116207 | 115136.37 | 599.75 | 116174 | 114855.43 | 727.06 |
| | | 2op | 116422 | 115769.33 | 311.02 | 116422 | 115770.43 | 308.72 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |

Table A.946: $j02459\_7$: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115900 | 114858.97 | 368.14 | 116164 | 114863.5 | 560.47 | 115381 | 114658.13 | 463.67 | 115460 | 114632.77 | 620.94 |
| | | 2op | 116308 | 115499.63 | 210.59 | 115749 | 115446.73 | 144.04 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115594 | 114770.57 | 422.58 | 115638 | 114576.8 | 579.79 | 115831 | 114763.43 | 480.57 | 115837 | 114792.47 | 608.15 |
| | | 2op | 115696 | 115465.33 | 175.89 | 116004 | 115482.43 | 191.98 | 115514 | 115510.93 | 11.72 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115953 | 114822.57 | 515.73 | 115811 | 114853.13 | 556.89 | 115365 | 114724.63 | 473.9 | 115856 | 114623.7 | 539.41 |
| | | 2op | 115807 | 115469.73 | 181.43 | 116333 | 115487.5 | 232.12 | 116077 | 115469.37 | 180.16 | 115514 | 115514 | 0 |
| | 50 | rnd | 115716 | 114664.47 | 643.39 | 115698 | 114815.43 | 605.18 | 115592 | 114641.5 | 534.9 | 115604 | 114842.9 | 548.75 |
| | | 2op | 116052 | 115504.73 | 217.93 | 115771 | 115431.47 | 162.07 | 115645 | 115487.77 | 81.48 | 115514 | 115514 | 0 |

Table A.947: $j02459\_7$: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38534 | 38280.97 | 159 | 38522 | 38256.27 | 153.44 | 38593 | 38210 | 160.23 | 38526 | 38147.33 | 234.82 |
| | | 2op | 38408 | 38236.07 | 45.93 | 38389 | 38229.5 | 30.12 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 38578 | 38297.57 | 167.63 | 38618 | 38260.77 | 230.09 | 38548 | 38232.3 | 196.14 | 38534 | 38166.03 | 215.66 |
| | | 2op | 38415 | 38237.8 | 44.39 | 38414 | 38232.2 | 35.82 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38496 | 38183.53 | 222.2 | 38617 | 38204.2 | 198.91 | 38591 | 38270 | 204.43 | 38586 | 38250.1 | 226.13 |
| | | 2op | 38432 | 38278.6 | 85.69 | 38437 | 38337.03 | 84.01 | 38417 | 38230.43 | 35.24 | 38224 | 38224 | 0 |
| | 50 | rnd | 38567 | 38272.83 | 196.64 | 38623 | 38285.43 | 168.45 | 38613 | 38303.53 | 192.07 | 38638 | 38231.23 | 194.55 |
| | | 2op | 38440 | 38309.37 | 87.4 | 38436 | 38337.17 | 81.47 | 38407 | 38235.13 | 42.58 | 38224 | 38224 | 0 |

Table A.948: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38492 | 38181.7 | 174.35 | 38482 | 38151.33 | 220.5 | 38581 | 38256.53 | 240.69 | 38531 | 38211.8 | 225.03 |
| | | 2op | 38414 | 38356.17 | 71.46 | 38437 | 38410.57 | 8.83 | 38557 | 38305.23 | 109.24 | 38224 | 38224 | 0 |
| | 50 | rnd | 38559 | 38177.03 | 217.62 | 38527 | 38146.4 | 249.88 | 38580 | 38145.57 | 279.67 | 38588 | 38197.73 | 176.85 |
| | | 2op | 38409 | 38379.63 | 50.95 | 38442 | 38424.57 | 14.6 | 38524 | 38401.57 | 39.38 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38566 | 38237.77 | 221.91 | 38579 | 38226 | 225.57 | 38577 | 38175.67 | 258.74 | 38580 | 38151.07 | 275.96 |
| | | 2op | 38414 | 38369.17 | 65.12 | 38442 | 38424.17 | 14.63 | 38418 | 38403.77 | 10.63 | 38409 | 38259.93 | 73.25 |
| | 50 | rnd | 38681 | 38195.47 | 232.31 | 38656 | 38256.27 | 228.08 | 38677 | 38202.77 | 223.89 | 38542 | 38224.7 | 201.97 |
| | | 2op | 38409 | 38374.03 | 55.09 | 38442 | 38430.27 | 14.18 | 38529 | 38411.7 | 23.79 | 38519 | 38324.87 | 92.83 |

Table A.949: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38584 | 38249.13 | 199.44 | 38570 | 38262.9 | 191.95 | 38664 | 38205.2 | 221.54 | 38537 | 38174.77 | 228.22 |
| | | 2op | 38224 | 38224 | 0 | 38224 | 38224 | 0 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 38432 | 38164.63 | 185.73 | 38580 | 38264.8 | 208.7 | 38527 | 38260.43 | 181.29 | 38518 | 38177.9 | 242.61 |
| | | 2op | 38224 | 38224 | 0 | 38445 | 38231.37 | 40.35 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38612 | 38226.03 | 216.74 | 38567 | 38266.13 | 198.58 | 38462 | 38174.57 | 204.65 | 38546 | 38122.67 | 249.77 |
| | | 2op | 38424 | 38309.93 | 85.15 | 38436 | 38328.9 | 84.37 | 38419 | 38230.5 | 35.6 | 38224 | 38224 | 0 |
| | 50 | rnd | 38567 | 38258.83 | 157.95 | 38546 | 38243 | 220.08 | 38590 | 38208.23 | 181.86 | 38492 | 38210.7 | 199.32 |
| | | 2op | 38445 | 38287.1 | 88.31 | 38504 | 38354.2 | 72.47 | 38417 | 38244.07 | 54.19 | 38224 | 38224 | 0 |

Table A.950: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38658 | 38232.1 | 192.45 | 38647 | 38221.33 | 209.93 | 38567 | 38128.33 | 284.34 | 38686 | 38216.17 | 224.51 |
| | | 2op | 38413 | 38366 | 68.07 | 38441 | 38412.87 | 13.73 | 38441 | 38271.2 | 80.57 | 38224 | 38224 | 0 |
| | 50 | rnd | 38485 | 38125.9 | 236.6 | 38649 | 38198.93 | 234.3 | 38563 | 38228.93 | 232.99 | 38619 | 38200.03 | 248.5 |
| | | 2op | 38413 | 38368.3 | 65.65 | 38442 | 38420.2 | 13.72 | 38524 | 38397.07 | 37.54 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38506 | 38181.87 | 241.99 | 38606 | 38193.7 | 227.19 | 38567 | 38175.6 | 222.14 | 38486 | 38199.9 | 182.12 |
| | | 2op | 38436 | 38368.4 | 67.02 | 38442 | 38420.1 | 13.62 | 38432 | 38405.97 | 13.59 | 38411 | 38253.03 | 66.24 |
| | 50 | rnd | 38657 | 38170.27 | 250.78 | 38601 | 38188.2 | 218.95 | 38539 | 38183 | 231.85 | 38633 | 38182 | 226.91 |
| | | 2op | 38414 | 38367.3 | 65.2 | 38442 | 38428.23 | 13.02 | 38437 | 38412.03 | 14.01 | 38530 | 38312.9 | 101.16 |

Table A.951: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38642 | 38288.7 | 197.11 | 38575 | 38280.47 | 186.83 | 38663 | 38206.67 | 240.09 | 38655 | 38185.2 | 221.33 |
| | | 2op | 38431 | 38367.97 | 68.86 | 38430 | 38357.9 | 71.19 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 38629 | 38275.93 | 181.16 | 38612 | 38306.03 | 196.56 | 38626 | 38201.47 | 211.23 | 38626 | 38210.33 | 195.38 |
| | | 2op | 38437 | 38352.17 | 80.46 | 38437 | 38343.33 | 85.4 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38573 | 38232.2 | 172.52 | 38508 | 38232.8 | 196.44 | 38652 | 38240.07 | 190.26 | 38573 | 38214.4 | 188.94 |
| | | 2op | 38437 | 38415.17 | 14.12 | 38442 | 38436.83 | 6.59 | 38437 | 38329.2 | 88.75 | 38224 | 38224 | 0 |
| | 50 | rnd | 38555 | 38265.07 | 192.25 | 38639 | 38242.57 | 210.66 | 38515 | 38185.77 | 214.42 | 38491 | 38106.53 | 239.65 |
| | | 2op | 38442 | 38424.2 | 14.5 | 38442 | 38428.6 | 13.57 | 38418 | 38312.43 | 90.26 | 38224 | 38224 | 0 |

Table A.952: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38650 | 38217.73 | 214.76 | 38527 | 38198.97 | 239.34 | 38634 | 38120 | 245.46 | 38612 | 38185.97 | 238.01 |
| | | 2op | 38409 | 38402.53 | 8.87 | 38418 | 38402.8 | 9.69 | 38436 | 38296.5 | 90.8 | 38224 | 38224 | 0 |
| | 50 | rnd | 38615 | 38230.7 | 214.57 | 38527 | 38192.7 | 229.25 | 38535 | 38181.13 | 200.91 | 38571 | 38214.37 | 238.86 |
| | | 2op | 38409 | 38404.77 | 7.61 | 38409 | 38403.7 | 8.57 | 38427 | 38333.67 | 85.76 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38569 | 38176.37 | 201.59 | 38522 | 38169.8 | 223.64 | 38636 | 38202.5 | 271.77 | 38553 | 38152.83 | 229.71 |
| | | 2op | 38437 | 38407.93 | 9.59 | 38437 | 38408.43 | 9.44 | 38432 | 38392.97 | 21.63 | 38224 | 38224 | 0 |
| | 50 | rnd | 38528 | 38158.7 | 234.41 | 38513 | 38258.53 | 202.08 | 38566 | 38171.5 | 241.5 | 38687 | 38171.97 | 260.43 |
| | | 2op | 38432 | 38408.87 | 4.76 | 38437 | 38406.97 | 8.14 | 38413 | 38385.47 | 45.83 | 38432 | 38247.33 | 61.02 |

Table A.953: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47921 | 47585.67 | 234.12 | 47846 | 47537.33 | 229.16 | 47961 | 47547.23 | 337.94 | 47899 | 47546.2 | 261.82 |
| | | 2op | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 48034 | 47613.93 | 270.9 | 47894 | 47522.63 | 265.52 | 47917 | 47464 | 316.18 | 47862 | 47600.7 | 190.43 |
| | | 2op | 47731 | 47374.47 | 96.92 | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47870 | 47556.03 | 230.7 | 47843 | 47543.93 | 289 | 47905 | 47584.07 | 210.88 | 48023 | 47503.47 | 271.02 |
| | | 2op | 47801 | 47492.67 | 189.47 | 47801 | 47477.73 | 182.87 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47887 | 47594.67 | 177.54 | 47897 | 47577.47 | 208.21 | 47998 | 47554.73 | 238.16 | 47849 | 47528.27 | 252.6 |
| | | 2op | 47755 | 47394.53 | 134.01 | 47814 | 47526.23 | 185.93 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |

Table A.954: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47851 | 47569.53 | 209.95 | 47923 | 47473.93 | 264.22 | 47899 | 47562.3 | 283.96 | 47846 | 47431.87 | 287.17 |
| | | 2op | 47758 | 47482.57 | 160.26 | 47758 | 47738.97 | 51.81 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47824 | 47493.63 | 260.9 | 47949 | 47428.83 | 371.53 | 47851 | 47514.47 | 212.22 | 47939 | 47515.83 | 257.85 |
| | | 2op | 47758 | 47470.63 | 160.21 | 47758 | 47755.9 | 4.84 | 47755 | 47406.6 | 131.8 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47772 | 47433.13 | 290.55 | 47913 | 47538.5 | 216.69 | 47820 | 47494.27 | 309.7 | 47939 | 47512.67 | 305.14 |
| | | 2op | 47758 | 47495.3 | 160.08 | 47758 | 47756.57 | 3.37 | 47758 | 47554.53 | 193.51 | 47349 | 47349 | 0 |
| | 50 | rnd | 47848 | 47434.7 | 265.21 | 47919 | 47450.87 | 342.01 | 47838 | 47518.43 | 216.44 | 47833 | 47475.07 | 251.89 |
| | | 2op | 47758 | 47442.27 | 123.79 | 47758 | 47756.8 | 1.49 | 47758 | 47714.73 | 101.66 | 47349 | 47349 | 0 |

Table A.955: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48021 | 47635.27 | 187.35 | 47909 | 47630.5 | 225.44 | 47862 | 47579.8 | 254.74 | 47943 | 47560.4 | 313.84 |
| | | 2op | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47888 | 47541.43 | 251.35 | 47961 | 47605.63 | 234.32 | 48002 | 47575.93 | 260.72 | 48027 | 47545.97 | 262.63 |
| | | 2op | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47933 | 47532.87 | 245.91 | 47868 | 47544.37 | 200.38 | 47923 | 47611.33 | 235.31 | 47866 | 47553.37 | 174.66 |
| | | 2op | 47755 | 47408.1 | 132.16 | 47758 | 47417.43 | 145.4 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 48043 | 47636.7 | 237.48 | 47897 | 47492.93 | 289.89 | 47915 | 47557.1 | 227.61 | 47972 | 47509.57 | 274.39 |
| | | 2op | 47758 | 47400.13 | 120.94 | 47758 | 47475.1 | 161.57 | 47458 | 47352.63 | 19.9 | 47349 | 47349 | 0 |

Table A.956: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47919 | 47514.43 | 268.33 | 47982 | 47536.1 | 269.66 | 47864 | 47477.83 | 251.91 | 47925 | 47482.5 | 256.88 |
| | | 2op | 47758 | 47506.07 | 161.06 | 47758 | 47741 | 53.47 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47790 | 47444.2 | 299.97 | 47923 | 47503.43 | 239.68 | 47914 | 47470.27 | 340.86 | 47916 | 47568.33 | 236.33 |
| | | 2op | 47758 | 47467.13 | 167.03 | 47758 | 47754.03 | 6.39 | 47758 | 47391.37 | 122.14 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47830 | 47536.7 | 255.82 | 47916 | 47485.07 | 299.76 | 47909 | 47563.83 | 270.74 | 47839 | 47510.6 | 228.83 |
| | | 2op | 47758 | 47444.53 | 135.36 | 47758 | 47756.87 | 3.06 | 47758 | 47509.03 | 177.54 | 47349 | 47349 | 0 |
| | 50 | rnd | 47848 | 47459.07 | 235.74 | 47837 | 47407.9 | 327.14 | 47986 | 47562.3 | 298.49 | 47916 | 47524.33 | 246.58 |
| | | 2op | 47758 | 47509.3 | 165 | 47758 | 47757.2 | 1.35 | 47758 | 47713.13 | 97.34 | 47738 | 47373.37 | 92.94 |

Table A.957: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47599.67 | 223.12 | 47949 | 47573.7 | 212.01 | 47967 | 47606.47 | 197.48 | 48027 | 47525.53 | 293.73 |
| | | 2op | 47814 | 47593.8 | 181.83 | 47814 | 47566.97 | 186.5 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47904 | 47626.4 | 206.68 | 47924 | 47572.87 | 218.92 | 47933 | 47567.07 | 217.95 | 47836 | 47558.2 | 261.46 |
| | | 2op | 47758 | 47549.8 | 193.01 | 47758 | 47549.67 | 192.88 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47848 | 47490.57 | 282.97 | 48052 | 47620.5 | 227.66 | 47952 | 47521.4 | 377.02 | 48043 | 47548.93 | 314.69 |
| | | 2op | 47758 | 47711 | 101.9 | 47758 | 47753.87 | 6.98 | 47758 | 47402.17 | 137.89 | 47349 | 47349 | 0 |
| | 50 | rnd | 47836 | 47489.2 | 328.75 | 47978 | 47541.77 | 236.47 | 47892 | 47599.67 | 235.55 | 47862 | 47546.23 | 215.16 |
| | | 2op | 47758 | 47737.73 | 62.01 | 47758 | 47722.57 | 111.41 | 47758 | 47485.27 | 183.7 | 47349 | 47349 | 0 |

Table A.958: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47821 | 47473.7 | 297.8 | 47898 | 47489.5 | 272.75 | 47906 | 47566.23 | 218.64 | 47910 | 47539.4 | 262.32 |
| | | 2op | 47758 | 47543 | 167.51 | 47758 | 47562.23 | 170.11 | 47758 | 47375.9 | 102.38 | 47349 | 47349 | 0 |
| | 50 | rnd | 47840 | 47527.57 | 209.96 | 47886 | 47521.93 | 238.67 | 47944 | 47451.63 | 342.38 | 47943 | 47457.27 | 280.78 |
| | | 2op | 47758 | 47652.9 | 146.07 | 47758 | 47664.33 | 140.94 | 47747 | 47362.27 | 72.66 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47844 | 47534.77 | 252.42 | 47833 | 47468.8 | 277.22 | 47914 | 47565.23 | 266.4 | 47848 | 47578.77 | 181.18 |
| | | 2op | 47758 | 47671.67 | 131.56 | 47758 | 47739.73 | 61.45 | 47758 | 47540.6 | 192.13 | 47349 | 47349 | 0 |
| | 50 | rnd | 47814 | 47517.53 | 203.14 | 47841 | 47436.57 | 258.2 | 47973 | 47511.87 | 294.4 | 47898 | 47502.57 | 241.79 |
| | | 2op | 47758 | 47634.67 | 156.98 | 47758 | 47739.83 | 35.57 | 47758 | 47425.77 | 142.64 | 47349 | 47349 | 0 |

Table A.959: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54876 | 54399.93 | 310.77 | 54998 | 54335.17 | 287.61 | 54876 | 54344.57 | 374.8 | 54921 | 54336.9 | 344.49 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54947 | 54343.53 | 310.46 | 55024 | 54416.37 | 330.3 | 54985 | 54380 | 243.85 | 55100 | 54313.33 | 364.19 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54898 | 54288.13 | 425.26 | 54909 | 54378.37 | 351.6 | 54752 | 54290.43 | 372.14 | 54955 | 54322.97 | 270.66 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54903 | 54341.83 | 327.59 | 55078 | 54507.67 | 286.81 | 54960 | 54393.73 | 372.39 | 54951 | 54349.9 | 337.73 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |

Table A.960: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54750 | 54213.5 | 266.11 | 55042 | 54361.5 | 406.41 | 54729 | 54358.1 | 271.44 | 54880 | 54300.37 | 341.91 |
| | | 2op | 54753 | 54722.77 | 20.06 | 54959 | 54733.4 | 47.51 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54874 | 54324.53 | 368.91 | 54960 | 54266.5 | 418.26 | 54884 | 54329 | 412.07 | 54827 | 54397.83 | 274.96 |
| | | 2op | 54745 | 54718.43 | 18.75 | 54754 | 54745.1 | 4.03 | 54745 | 54706.33 | 7.3 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54685 | 54310.23 | 315.37 | 54803 | 54321.3 | 327.67 | 54815 | 54274.07 | 283.99 | 54895 | 54293.73 | 318.65 |
| | | 2op | 54745 | 54719.57 | 19.25 | 54766 | 54747.2 | 7.7 | 54745 | 54713.93 | 14.74 | 54705 | 54705 | 0 |
| | 50 | rnd | 54922 | 54451.17 | 252 | 54742 | 54332.77 | 292.18 | 54739 | 54270.33 | 356.22 | 54716 | 54283.9 | 274.34 |
| | | 2op | 54753 | 54733.53 | 18.11 | 54754 | 54751.03 | 4.82 | 54959 | 54737.9 | 46.09 | 54705 | 54705 | 0 |

Table A.961: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55112 | 54443.47 | 335.24 | 55014 | 54381.13 | 405.03 | 55084 | 54432.3 | 355.28 | 55018 | 54299.83 | 353.09 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54837 | 54331.9 | 369.22 | 54866 | 54304.77 | 334.66 | 54902 | 54405.9 | 333.46 | 54912 | 54335.63 | 378.13 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54853 | 54428 | 242.82 | 54773 | 54330.43 | 316.82 | 54927 | 54311.13 | 315.53 | 54801 | 54293 | 354.18 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54951 | 54441 | 296.28 | 54931 | 54479.93 | 342.07 | 55046 | 54433.57 | 295.44 | 54924 | 54427.27 | 352.54 |
| | | 2op | 54741 | 54706.2 | 6.57 | 54710 | 54705.17 | 0.91 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |

Table A.962: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54814 | 54322.9 | 320.56 | 54866 | 54364.2 | 293.07 | 54827 | 54341.97 | 352.12 | 54872 | 54356.33 | 359.93 |
| | | 2op | 54745 | 54719.9 | 19.71 | 54747 | 54724.53 | 18.32 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54802 | 54304.4 | 377.65 | 55008 | 54384.9 | 369.44 | 54757 | 54177.23 | 390.15 | 54788 | 54203.73 | 333.19 |
| | | 2op | 54745 | 54720.47 | 18.78 | 54755 | 54744.97 | 5.82 | 54745 | 54706.5 | 7.33 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54832 | 54320.53 | 281.71 | 54783 | 54275.33 | 354.57 | 54615 | 54243.57 | 259.54 | 54853 | 54379.4 | 243.98 |
| | | 2op | 54745 | 54721.6 | 20.34 | 54756 | 54746.9 | 6.19 | 54747 | 54720.03 | 20.27 | 54705 | 54705 | 0 |
| | 50 | rnd | 54847 | 54372.4 | 334.76 | 54939 | 54387.57 | 329.35 | 54776 | 54307.6 | 328.01 | 54805 | 54323.33 | 325.92 |
| | | 2op | 54745 | 54723.63 | 19.72 | 54762 | 54750.33 | 5.03 | 54959 | 54737.6 | 45.91 | 54705 | 54705 | 0 |

Table A.963: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54994 | 54446.3 | 344.19 | 54731 | 54374.83 | 271.92 | 54921 | 54370.57 | 321.8 | 54842 | 54340.5 | 374.99 |
| | | 2op | 54754 | 54708.9 | 13.36 | 54754 | 54708.2 | 12.98 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 55135 | 54415.3 | 326.01 | 54882 | 54310.73 | 324.64 | 54866 | 54278.97 | 393.39 | 54899 | 54383.23 | 348.37 |
| | | 2op | 54754 | 54707.63 | 11.42 | 54754 | 54707.6 | 11.45 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54909 | 54377.83 | 386.89 | 54977 | 54336.93 | 342.75 | 55037 | 54452.73 | 333.2 | 54942 | 54183.1 | 423.38 |
| | | 2op | 54754 | 54736.83 | 17.45 | 54769 | 54746.93 | 5.69 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54938 | 54506.83 | 279.2 | 54933 | 54335.03 | 414.61 | 54834 | 54333.97 | 318.79 | 54913 | 54309.4 | 397.13 |
| | | 2op | 54754 | 54742.17 | 13.13 | 54754 | 54741.63 | 14.21 | 54733 | 54705.93 | 5.11 | 54705 | 54705 | 0 |

Table A.964: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54884 | 54280.63 | 441.6 | 54869 | 54384.7 | 316.75 | 54939 | 54354.97 | 361.88 | 54834 | 54348.53 | 281.78 |
| | | 2op | 54754 | 54737.13 | 16.53 | 54959 | 54741.03 | 44.56 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54881 | 54403.27 | 235.41 | 54982 | 54432.83 | 358.75 | 54832 | 54270.77 | 300.29 | 54945 | 54355.3 | 334.98 |
| | | 2op | 54754 | 54739.77 | 13.89 | 54754 | 54738.1 | 13.98 | 54720 | 54705.5 | 2.74 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54633 | 54314.83 | 314.02 | 54632 | 54184.93 | 288.41 | 54772 | 54340.73 | 308.73 | 55031 | 54326.07 | 372.7 |
| | | 2op | 54754 | 54742.13 | 10.6 | 54754 | 54745.33 | 2.56 | 54747 | 54713.87 | 16.32 | 54705 | 54705 | 0 |
| | 50 | rnd | 54778 | 54368.1 | 279.54 | 54826 | 54280.13 | 428.56 | 54858 | 54321.37 | 487.16 | 54856 | 54220.83 | 395.98 |
| | | 2op | 54754 | 54744.3 | 6.15 | 54746 | 54732.17 | 17.56 | 54746 | 54708.8 | 13.04 | 54705 | 54705 | 0 |

Table A.965: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11209.17 | 127.74 | 11478 | 11244.3 | 123.58 | 11372 | 11161.4 | 172.76 | 11478 | 11207.7 | 116.54 |
| | | 2op | 11109 | 11020.4 | 35.83 | 11373 | 11221.83 | 89.73 | 11109 | 11013.33 | 26.68 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11218.8 | 183.94 | 11478 | 11254.37 | 95.12 | 11478 | 11246 | 139.26 | 11411 | 11169.57 | 158.97 |
| | | 2op | 11305 | 11049.03 | 80.26 | 11373 | 11252.8 | 70.74 | 11373 | 11074 | 86.52 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 11478 | 11159.67 | 156.7 | 11478 | 11215.17 | 146.25 | 11478 | 11208.33 | 118.96 | 11478 | 11148.7 | 179 |
| | | 2op | 11109 | 11016.33 | 18.59 | 11285 | 11119.77 | 41.15 | 11305 | 11176.93 | 79.97 | 11109 | 11043.93 | 47.14 |
| | 50 | rnd | 11478 | 11185.37 | 143.02 | 11478 | 11302.8 | 113.92 | 11478 | 11269.13 | 143.1 | 11478 | 11209.17 | 157.25 |
| | | 2op | 11109 | 11069.73 | 45.01 | 11373 | 11213.83 | 85.29 | 11373 | 11277.3 | 56.23 | 11109 | 11029.8 | 39.67 |

Table A.966: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11340 | 11116.9 | 171.15 | 11478 | 11203.93 | 148.99 | 11478 | 11177.77 | 203.64 | 11478 | 11178.23 | 187.02 |
| | | 2op | 11109 | 11023.2 | 32.22 | 11305 | 11121.4 | 47.26 | 11109 | 11109 | 0 | 11017 | 11003.93 | 3.55 |
| | 50 | rnd | 11291 | 11111.53 | 142.9 | 11478 | 11182.17 | 168.78 | 11478 | 11188.77 | 181.01 | 11411 | 11179.47 | 161.68 |
| | | 2op | 11109 | 11027.67 | 35.09 | 11285 | 11129.57 | 53.53 | 11285 | 11125.63 | 50.94 | 11109 | 11053.13 | 46.29 |
| 51 | 20 | rnd | 11340 | 11075.03 | 151.01 | 11478 | 11162.67 | 166.24 | 11478 | 11183.63 | 191.15 | 11411 | 11164.93 | 176.98 |
| | | 2op | 11109 | 11020.6 | 27.67 | 11109 | 11105.93 | 16.8 | 11256 | 11123.7 | 44.85 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11053.6 | 195.52 | 11411 | 11180.7 | 157.17 | 11394 | 11151.33 | 159.52 | 11478 | 11201.9 | 165.44 |
| | | 2op | 11109 | 11020.6 | 30.71 | 11109 | 11109 | 0 | 11256 | 11122.17 | 46.14 | 11109 | 11109 | 0 |

Table A.967: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11217.5 | 173.54 | 11478 | 11289.4 | 125.16 | 11478 | 11205.27 | 147.92 | 11478 | 11175.8 | 158.56 |
| | | 2op | 11285 | 11026.67 | 63.08 | 11394 | 11251.63 | 81.23 | 11151 | 11023 | 42.61 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11197.6 | 122.5 | 11478 | 11241.8 | 148.21 | 11373 | 11219.43 | 99.22 | 11478 | 11213.37 | 131.19 |
| | | 2op | 11213 | 11022.93 | 48.02 | 11373 | 11270.6 | 55 | 11305 | 11074.33 | 92.1 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 11478 | 11172.53 | 138.2 | 11478 | 11165.97 | 156.32 | 11394 | 11214.2 | 104.45 | 11478 | 11162.43 | 172.15 |
| | | 2op | 11109 | 11034 | 38.37 | 11305 | 11138.7 | 67.96 | 11305 | 11155.7 | 79.66 | 11109 | 11047.93 | 47.55 |
| | 50 | rnd | 11478 | 11186.97 | 178.68 | 11478 | 11275 | 146.34 | 11478 | 11286.63 | 135.67 | 11478 | 11238.8 | 167.13 |
| | | 2op | 11305 | 11056.13 | 66.34 | 11373 | 11210.83 | 101.36 | 11373 | 11268.03 | 57.77 | 11109 | 11027.93 | 41.66 |

Table A.968: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11126.6 | 152.11 | 11411 | 11196.33 | 144.16 | 11478 | 11195.37 | 178.27 | 11478 | 11154.13 | 175.89 |
| | | 2op | 11109 | 11014.47 | 19.14 | 11285 | 11124.67 | 48.01 | 11305 | 11115.53 | 35.78 | 11017 | 11003.47 | 2.56 |
| | 50 | rnd | 11303 | 11052.33 | 191.91 | 11478 | 11180.73 | 172 | 11411 | 11140.37 | 172.54 | 11411 | 11211.2 | 117.81 |
| | | 2op | 11109 | 11017.53 | 23.99 | 11305 | 11149.17 | 74.89 | 11256 | 11113.9 | 26.84 | 11109 | 11026.73 | 36.79 |
| 51 | 20 | rnd | 11332 | 11077.93 | 190.75 | 11394 | 11195.37 | 147.18 | 11478 | 11228.87 | 139.55 | 11478 | 11215.83 | 140.69 |
| | | 2op | 11095 | 11021.07 | 25.81 | 11109 | 11109 | 0 | 11305 | 11132.17 | 60.42 | 11109 | 11109 | 0 |
| | 50 | rnd | 11291 | 11191.73 | 101.97 | 11478 | 11144.73 | 169.41 | 11478 | 11181.5 | 139.92 | 11478 | 11238.63 | 151.76 |
| | | 2op | 11095 | 11013.53 | 16.89 | 11109 | 11105.93 | 16.8 | 11256 | 11128.6 | 50.82 | 11109 | 11109 | 0 |

Table A.969: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11207.13 | 136.89 | 11478 | 11260.37 | 135.45 | 11478 | 11187.1 | 176.02 | 11394 | 11182.2 | 159.84 |
| | | 2op | 11109 | 11069.87 | 48.95 | 11305 | 11273.3 | 59.4 | 11109 | 11011.47 | 26.85 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11166.7 | 154.82 | 11478 | 11267.17 | 117.2 | 11478 | 11202.57 | 132.96 | 11478 | 11169.17 | 167.18 |
| | | 2op | 11256 | 11083.23 | 54.56 | 11394 | 11233.4 | 87.01 | 11109 | 11015.47 | 32.07 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 11478 | 11178.37 | 154.6 | 11478 | 11269.33 | 145.05 | 11478 | 11239.53 | 125.21 | 11478 | 11207.2 | 151.73 |
| | | 2op | 11109 | 11078.33 | 44.11 | 11305 | 11122.07 | 49.73 | 11109 | 11050.73 | 45.09 | 11003 | 11003 | 0 |
| | 50 | rnd | 11411 | 11214.07 | 120.53 | 11478 | 11241 | 148.49 | 11478 | 11179.83 | 153.47 | 11413 | 11163.6 | 162.93 |
| | | 2op | 11213 | 11094.07 | 43.51 | 11305 | 11149.17 | 74.89 | 11305 | 11043.13 | 61.99 | 11017 | 11004.4 | 4.27 |

Table A.970: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11096.7 | 193.59 | 11394 | 11116.53 | 188.36 | 11413 | 11177.87 | 168.11 | 11394 | 11133.73 | 171.11 |
| | | 2op | 11109 | 11043.2 | 40.87 | 11109 | 11086.13 | 39.02 | 11095 | 11009.33 | 17.25 | 11003 | 11003 | 0 |
| | 50 | rnd | 11332 | 11154.37 | 132.5 | 11478 | 11190.93 | 178.07 | 11478 | 11183.1 | 133.63 | 11394 | 11146.7 | 157.54 |
| | | 2op | 11109 | 11052.87 | 44.8 | 11305 | 11120.43 | 43.98 | 11109 | 11028.87 | 37.86 | 11095 | 11006.07 | 16.8 |
| 51 | 20 | rnd | 11332 | 11090.2 | 177.56 | 11478 | 11148.63 | 163.61 | 11478 | 11164.13 | 203.87 | 11411 | 11112.6 | 194.91 |
| | | 2op | 11109 | 11061.13 | 45.11 | 11151 | 11106.87 | 18.83 | 11109 | 11048.87 | 43.82 | 11017 | 11004.4 | 4.27 |
| | 50 | rnd | 11332 | 11137.43 | 156.88 | 11394 | 11189.87 | 184.02 | 11478 | 11199.8 | 137.2 | 11478 | 11158.07 | 164.89 |
| | | 2op | 11109 | 11055.93 | 45.41 | 11109 | 11087.07 | 39.4 | 11109 | 11083.07 | 40.74 | 11109 | 11008.4 | 19.6 |

Table A.971: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14119 | 13827.37 | 154.68 | 14161 | 13929.93 | 111.58 | 14006 | 13824.63 | 131.07 | 14133 | 13847.53 | 163 |
| | | 2op | 14001 | 13843.13 | 117.19 | 14157 | 13999.97 | 48.74 | 13995 | 13744.63 | 73.03 | 13721 | 13721 | 0 |
| | 50 | rnd | 14157 | 13818.33 | 202.6 | 14133 | 13899.6 | 124.22 | 14157 | 13857.5 | 169.49 | 14133 | 13767.93 | 206.85 |
| | | 2op | 14133 | 13873.27 | 124.09 | 14133 | 14006.57 | 39.87 | 14001 | 13809.33 | 103.79 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14119 | 13817.5 | 195.03 | 14137 | 13850.93 | 140.58 | 14139 | 13872.37 | 120 | 14076 | 13818.57 | 191.96 |
| | | 2op | 14038 | 13858.3 | 90.31 | 14124 | 13982.2 | 46.82 | 14038 | 13981.73 | 32.51 | 13867 | 13725.87 | 26.66 |
| | 50 | rnd | 14071 | 13800 | 196.69 | 14161 | 13917.47 | 158.44 | 14139 | 13915.67 | 134.12 | 14161 | 13797.3 | 154.33 |
| | | 2op | 13995 | 13890.63 | 88.4 | 14157 | 14001.7 | 50.28 | 14157 | 13996.27 | 37.85 | 13827 | 13724.53 | 19.35 |

Table A.972: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14039 | 13770.97 | 171.96 | 14157 | 13856 | 179.11 | 14133 | 13801.7 | 185.76 | 14157 | 13780.1 | 195.92 |
| | | 2op | 13938 | 13770.63 | 61.03 | 14064 | 13968.4 | 32.02 | 13995 | 13938.77 | 64.06 | 13721 | 13721 | 0 |
| | 50 | rnd | 14091 | 13820.43 | 172.24 | 14099 | 13863.6 | 144.68 | 14139 | 13868.47 | 122.34 | 14079 | 13827.23 | 186.88 |
| | | 2op | 13938 | 13791.8 | 64.6 | 14064 | 13979.87 | 37.64 | 13995 | 13965.8 | 25.88 | 13922 | 13737.77 | 46.44 |
| 51 | 20 | rnd | 14100 | 13812.9 | 133.98 | 14089 | 13746.33 | 206.78 | 14161 | 13851.57 | 183.56 | 14137 | 13831.73 | 164.8 |
| | | 2op | 13938 | 13803.1 | 78.63 | 14030 | 13972.07 | 17.43 | 13995 | 13963.3 | 21.22 | 13995 | 13800.23 | 91.94 |
| | 50 | rnd | 14060 | 13835.6 | 162.09 | 14121 | 13825.73 | 158.63 | 14133 | 13883.7 | 166.14 | 14121 | 13799.5 | 160.83 |
| | | 2op | 13827 | 13752.8 | 49.41 | 13995 | 13958.37 | 21.63 | 14157 | 13985.5 | 47.79 | 13968 | 13824.87 | 84.98 |

Table A.973: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13809.7 | 180.54 | 14139 | 13923.5 | 143.53 | 14139 | 13825.83 | 181.57 | 14105 | 13745.6 | 187.53 |
| | | 2op | 14038 | 13868.97 | 115.99 | 14157 | 14002.4 | 60.12 | 13995 | 13738.33 | 66.07 | 13721 | 13721 | 0 |
| | 50 | rnd | 14128 | 13845.6 | 129.23 | 14157 | 13936.5 | 169.67 | 14100 | 13844.7 | 186.52 | 14137 | 13836.5 | 201.54 |
| | | 2op | 14038 | 13884.67 | 119.68 | 14064 | 14002.17 | 28.38 | 14038 | 13799.03 | 114.85 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14064 | 13840.43 | 144.36 | 14107 | 13858.53 | 123.01 | 14157 | 13880.77 | 155.82 | 14139 | 13877.27 | 183.92 |
| | | 2op | 14038 | 13849.6 | 100.14 | 14157 | 13995.2 | 39.59 | 14064 | 13992.07 | 23.21 | 13932 | 13734.73 | 52.28 |
| | 50 | rnd | 14139 | 13855.3 | 181.78 | 14161 | 13936.37 | 163.69 | 14161 | 13958.47 | 139.53 | 14137 | 13768.83 | 186.91 |
| | | 2op | 14038 | 13883.2 | 109.28 | 14157 | 13995.23 | 41.26 | 14064 | 14000.67 | 31.28 | 14038 | 13734.57 | 59.62 |

Table A.974: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14089 | 13835.97 | 159.75 | 14161 | 13856.7 | 172.94 | 14133 | 13836.93 | 155.29 | 14094 | 13796.4 | 135.01 |
| | | 2op | 13938 | 13774.33 | 67.58 | 14064 | 13964.5 | 36.83 | 13995 | 13902.6 | 84.55 | 13721 | 13721 | 0 |
| | 50 | rnd | 14133 | 13803.7 | 180.42 | 14161 | 13829.57 | 171.11 | 14139 | 13817.83 | 194.22 | 14066 | 13800.07 | 148.12 |
| | | 2op | 13938 | 13780.67 | 66.37 | 14064 | 13974.4 | 31.1 | 13995 | 13965.97 | 25.88 | 13827 | 13724.53 | 19.35 |
| 51 | 20 | rnd | 14064 | 13799.87 | 188 | 14161 | 13820.43 | 182.58 | 14079 | 13825.87 | 158.06 | 14121 | 13791.23 | 195.85 |
| | | 2op | 13932 | 13773.97 | 60.58 | 14157 | 13979.77 | 39.01 | 13995 | 13968.73 | 22.96 | 13968 | 13796.97 | 79.61 |
| | 50 | rnd | 14067 | 13826.77 | 150.24 | 14094 | 13777.37 | 177.08 | 14161 | 13855.43 | 197.82 | 14103 | 13858.4 | 167.89 |
| | | 2op | 13827 | 13774 | 53.91 | 14064 | 13956.77 | 51.1 | 14005 | 13963.83 | 29.7 | 14038 | 13803.67 | 86.23 |

Table A.975: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14139 | 13827.17 | 179.85 | 14139 | 13944.13 | 97.81 | 14127 | 13779.83 | 167.36 | 14139 | 13842.1 | 171.19 |
| | | 2op | 14038 | 13924.83 | 74.7 | 14157 | 14003.53 | 48.34 | 13995 | 13737.17 | 62.08 | 13721 | 13721 | 0 |
| | 50 | rnd | 14161 | 13823.47 | 193.1 | 14139 | 13908.83 | 141.21 | 14038 | 13770.4 | 146.87 | 14064 | 13800.23 | 157.74 |
| | | 2op | 14038 | 13966.33 | 85.82 | 14038 | 13991 | 26.98 | 14004 | 13755.53 | 89.85 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14103 | 13862.2 | 140.16 | 14161 | 13882.03 | 122.8 | 14139 | 13855.63 | 161.24 | 14127 | 13814.5 | 177.43 |
| | | 2op | 14038 | 13913.83 | 99.82 | 13995 | 13978.13 | 14.1 | 14001 | 13814.4 | 99.42 | 13721 | 13721 | 0 |
| | 50 | rnd | 14038 | 13841.17 | 113.27 | 14133 | 13899.67 | 134.99 | 14161 | 13870.2 | 161.6 | 14161 | 13814.87 | 157.21 |
| | | 2op | 14038 | 13971.27 | 42.96 | 14064 | 13985.2 | 31.24 | 13962 | 13790.1 | 92.92 | 13721 | 13721 | 0 |

Table A.976: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14078 | 13839.8 | 165.27 | 14068 | 13824.67 | 184.18 | 14105 | 13844.5 | 160.53 | 14099 | 13778.4 | 189.13 |
| | | 2op | 13938 | 13825.5 | 66.14 | 13995 | 13879.73 | 60.9 | 13827 | 13731.07 | 30.81 | 13721 | 13721 | 0 |
| | 50 | rnd | 14100 | 13880.73 | 182.42 | 14125 | 13840.87 | 201.65 | 14127 | 13776.27 | 188.36 | 14123 | 13835.73 | 146.61 |
| | | 2op | 13932 | 13819.9 | 38.61 | 14038 | 13936.37 | 52.31 | 13827 | 13731.6 | 32.34 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14103 | 13835.17 | 178.69 | 13998 | 13811.93 | 135.66 | 14097 | 13817.07 | 183.84 | 14071 | 13867.87 | 145.04 |
| | | 2op | 13938 | 13830.8 | 52.51 | 13995 | 13904.7 | 60.8 | 14038 | 13788.73 | 88.46 | 13721 | 13721 | 0 |
| | 50 | rnd | 14133 | 13876.43 | 135.81 | 14038 | 13802 | 125.09 | 14139 | 13882.8 | 140.03 | 14133 | 13768.97 | 160.52 |
| | | 2op | 13968 | 13842.6 | 40.79 | 13995 | 13871.17 | 57.99 | 13995 | 13795.37 | 75.33 | 13721 | 13721 | 0 |

Table A.977: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18093 | 17859.67 | 166.99 | 18101 | 17936.8 | 143.85 | 18301 | 17895.07 | 211.04 | 18261 | 17880.73 | 193.21 |
| | | 2op | 18017 | 18003.2 | 11.46 | 18017 | 18001.67 | 11.03 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 18175 | 17837.77 | 201.91 | 18181 | 17961.2 | 175.24 | 18172 | 17871.83 | 218.22 | 18301 | 17895.5 | 196.63 |
| | | 2op | 18017 | 18003.97 | 11.59 | 18017 | 18015.2 | 5.94 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18184 | 17865.43 | 173.41 | 18171 | 17929.03 | 140.77 | 18131 | 17873.73 | 202.05 | 18176 | 17881.67 | 208.26 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 | 17994 | 17994 | 0 |
| | 50 | rnd | 18114 | 17810.53 | 188.22 | 18125 | 17896.73 | 180.08 | 18156 | 17915.17 | 145.38 | 18172 | 17865.93 | 184.48 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18017 | 0 | 18017 | 18009.33 | 11.03 | 17994 | 17994 | 0 |

Table A.978: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18074 | 17842.47 | 140.26 | 18152 | 17783.27 | 208.26 | 18172 | 17828.63 | 219.55 | 18172 | 17775.6 | 173.04 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18013.93 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18156 | 17844.9 | 124.42 | 18172 | 17929.33 | 181.74 | 18156 | 17801.73 | 232.58 | 18184 | 17841.37 | 175.94 |
| | | 2op | 18017 | 18006.27 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17994.77 | 4.2 |
| 51 | 20 | rnd | 18184 | 17837.37 | 193.04 | 18129 | 17780.33 | 172.57 | 18129 | 17832.93 | 178.13 | 18171 | 17860.8 | 179.6 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |
| | 50 | rnd | 18184 | 17900.13 | 193.83 | 18091 | 17823.47 | 184.19 | 18175 | 17871.37 | 188.06 | 18172 | 17882.83 | 167.63 |
| | | 2op | 18017 | 18004.73 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |

Table A.979: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18176 | 17840.53 | 208.39 | 18171 | 17858.57 | 169.86 | 18159 | 17883.8 | 179.23 | 18171 | 17863.13 | 185.53 |
| | | 2op | 18017 | 17997.07 | 7.95 | 18017 | 18003.2 | 11.46 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 18109 | 17884.63 | 146.16 | 18301 | 17923.93 | 166.27 | 18172 | 17869.2 | 167.75 | 18172 | 17908.8 | 188.91 |
| | | 2op | 18017 | 18001.67 | 11.03 | 18017 | 18013.17 | 8.72 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18235 | 17849.8 | 182.91 | 18131 | 17925.17 | 154.87 | 18275 | 17932.57 | 174.04 | 18084 | 17793.9 | 178.44 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 17999.37 | 9.89 | 17994 | 17994 | 0 |
| | 50 | rnd | 18301 | 17929.2 | 160.94 | 18171 | 17918.9 | 149.08 | 18184 | 17915.37 | 154.93 | 18134 | 17899.43 | 121.66 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18014.7 | 7.02 | 17994 | 17994 | 0 |

Table A.980: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17851.53 | 189.79 | 18171 | 17868.83 | 184.71 | 18292 | 17809.7 | 187.23 | 18184 | 17817.83 | 235.51 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18017 | 0 | 18017 | 18009.33 | 11.03 | 17994 | 17994 | 0 |
| | 50 | rnd | 18172 | 17811.67 | 194.1 | 18156 | 17898.9 | 159.69 | 18172 | 17851.6 | 181.36 | 18142 | 17868.37 | 176.77 |
| | | 2op | 18017 | 18003.97 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18175 | 17848.87 | 146.01 | 18086 | 17850.63 | 157.35 | 18301 | 17874.5 | 231.84 | 18109 | 17830.6 | 177.33 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17999.37 | 9.89 |
| | 50 | rnd | 18142 | 17843.4 | 165.66 | 18142 | 17796.1 | 215.55 | 18156 | 17873.87 | 196.26 | 18301 | 17832.43 | 224.63 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18002.43 | 11.27 |

Table A.981: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17852.13 | 239.69 | 18175 | 17975.57 | 139.04 | 18152 | 17877.5 | 144.8 | 18301 | 17900.93 | 151.42 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 18084 | 17851.57 | 139.95 | 18186 | 17978.1 | 135.46 | 18156 | 17869.5 | 181.29 | 18152 | 17889.67 | 166.8 |
| | | 2op | 18017 | 18015.47 | 5.84 | 18017 | 18016.23 | 4.2 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18181 | 17862.47 | 216.93 | 18159 | 17899.5 | 155.8 | 18053 | 17838.83 | 193.69 | 18260 | 17856.6 | 205.15 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18008.57 | 11.27 | 17994 | 17994 | 0 |
| | 50 | rnd | 18176 | 17984.53 | 145.49 | 18143 | 17890.3 | 171.8 | 18142 | 17938.8 | 129.6 | 18216 | 17903.23 | 126.59 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18001.67 | 11.03 | 17994 | 17994 | 0 |

Table A.982: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18156 | 17832.27 | 196.72 | 18105 | 17868.13 | 176.45 | 18301 | 17842.6 | 248.55 | 18275 | 17901.4 | 192.21 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17997.07 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18109 | 17880 | 126.64 | 18172 | 17872.23 | 159.89 | 18171 | 17885.03 | 207.79 | 18044 | 17777.53 | 187.56 |
| | | 2op | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18175 | 17892.53 | 190.12 | 18158 | 17876 | 194.91 | 18141 | 17886.13 | 171.23 | 18119 | 17831.87 | 156.64 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.63 | 9.89 | 17994 | 17994 | 0 |
| | 50 | rnd | 18142 | 17826.27 | 193.62 | 18142 | 17849.27 | 171.02 | 18184 | 17835.2 | 224.97 | 18172 | 17873.53 | 181.16 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.63 | 9.89 | 17994 | 17994 | 0 |

Table A.983: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21178 | 20839.17 | 201.65 | 21167 | 20876.37 | 178.07 | 21153 | 20863.37 | 246.93 | 21150 | 20869.97 | 195.18 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20855.17 | 78.95 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21162 | 20812.47 | 237.93 | 21176 | 20933.93 | 141.9 | 21184 | 20846.13 | 214.07 | 21196 | 20867.57 | 230.28 |
| | | 2op | 21008 | 20839.43 | 40.14 | 21210 | 20945.1 | 129.46 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21172 | 20826.4 | 213.93 | 21158 | 20891.5 | 190.26 | 21182 | 20939.97 | 155.72 | 21192 | 20810.37 | 249.79 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20914.2 | 111.85 | 21052 | 20836.43 | 40.71 | 20829 | 20829 | 0 |
| | 50 | rnd | 21206 | 20809.13 | 280.19 | 21186 | 20909.57 | 196.91 | 21206 | 20910.77 | 150.09 | 21172 | 20870.3 | 216.24 |
| | | 2op | 20889 | 20831 | 10.95 | 21187 | 20942.27 | 106.62 | 21193 | 20849.13 | 68.16 | 20829 | 20829 | 0 |

Table A.984: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21199 | 20863.17 | 197.87 | 21157 | 20791.73 | 247.76 | 21104 | 20797.03 | 192.01 | 21212 | 20883.13 | 190.11 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21212 | 20859.33 | 199.94 | 21203 | 20815.07 | 213.97 | 21177 | 20813.33 | 259.85 | 21206 | 20831 | 221.23 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21152 | 20870.53 | 181.34 | 21163 | 20917.53 | 193.55 | 21163 | 20802.7 | 262.34 | 21181 | 20882.37 | 178.41 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21199 | 20890.8 | 195.48 | 21182 | 20747.3 | 259.05 | 21141 | 20821.43 | 182.92 | 21212 | 20865.4 | 207.35 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.985: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20831.87 | 233.29 | 21135 | 20907.77 | 168.9 | 21166 | 20807.47 | 217.94 | 21233 | 20848.9 | 212.81 |
| | | 2op | 20997 | 20836.6 | 32.21 | 21139 | 20844.1 | 58.75 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21233 | 20871.33 | 227.66 | 21206 | 20981.33 | 142.41 | 21113 | 20725.43 | 230.55 | 21157 | 20846 | 178.94 |
| | | 2op | 21077 | 20844.87 | 60.44 | 21135 | 20865.5 | 78.21 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21157 | 20822.73 | 232.04 | 21160 | 20883.4 | 203.24 | 21197 | 20813.57 | 259.64 | 21212 | 20854.97 | 187.9 |
| | | 2op | 20889 | 20831 | 10.95 | 21035 | 20896.03 | 76.31 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21122 | 20860 | 212.71 | 21176 | 20946.97 | 175.15 | 21161 | 20952.57 | 119.87 | 21168 | 20847.63 | 169.31 |
| | | 2op | 21042 | 20839.4 | 42.31 | 21090 | 20945.53 | 92.47 | 21187 | 20848.03 | 74.89 | 20829 | 20829 | 0 |

Table A.986: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21159 | 20799.33 | 185.26 | 21212 | 20815.6 | 208.4 | 21212 | 20857.57 | 256.52 | 21132 | 20857.67 | 213.98 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21198 | 20886.33 | 180.87 | 21149 | 20860.67 | 204.53 | 21184 | 20778.57 | 214.77 | 21162 | 20832.6 | 183.47 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21152 | 20896.9 | 152.23 | 21186 | 20843.73 | 200.29 | 21172 | 20737.6 | 239.79 | 21160 | 20873.87 | 170.82 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21182 | 20870 | 209.59 | 21161 | 20784.97 | 219.06 | 21151 | 20867.3 | 175.2 | 21195 | 20882.77 | 215.54 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.987: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21215 | 20858.97 | 210.35 | 21260 | 20946.47 | 147.93 | 21169 | 20869.83 | 205.33 | 21246 | 20852.7 | 204.59 |
| | | 2op | 20829 | 20829 | 0 | 21057 | 20865.27 | 68.09 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21271 | 20862.33 | 160.94 | 21164 | 20967.33 | 138.63 | 21190 | 20808.07 | 181.92 | 21160 | 20817.83 | 187.75 |
| | | 2op | 21008 | 20838.77 | 35.08 | 21193 | 20875.97 | 88.97 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21157 | 20848.57 | 201.83 | 21164 | 20887.2 | 187.65 | 21132 | 20885.77 | 214.88 | 21224 | 20819 | 223.81 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20902.83 | 104.34 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21145 | 20848.07 | 187.4 | 21166 | 20860.1 | 186.52 | 21211 | 20873.1 | 230.4 | 21178 | 20849.07 | 189.47 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21193 | 20923 | 122.08 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |

Table A.988: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21207 | 20899.17 | 200.27 | 21165 | 20797.23 | 244.8 | 21160 | 20790.6 | 228.93 | 21130 | 20761.17 | 192.23 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21218 | 20830.13 | 265.92 | 21156 | 20799.3 | 208.06 | 21160 | 20802.07 | 212.69 | 21087 | 20795.5 | 177.88 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21203 | 20836.03 | 221.55 | 21159 | 20841.6 | 224.83 | 21271 | 20873.13 | 233.25 | 21114 | 20830.47 | 199.72 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21203 | 20840.67 | 176.38 | 21182 | 20890.33 | 209.7 | 21075 | 20772.83 | 207.53 | 21186 | 20839.33 | 215.68 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.989: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.2 | 2.95 | 596 | 593.47 | 1.87 | 596 | 592.7 | 2.2 | 596 | 590.03 | 2.82 |
| | | 2op | 596 | 591.73 | 2.63 | 596 | 594.43 | 1.17 | 596 | 594.23 | 1.38 | 595 | 590.37 | 2.31 |
| | 50 | rnd | 596 | 592.1 | 2.95 | 596 | 594.27 | 1.36 | 596 | 594.6 | 1.1 | 595 | 589.7 | 3.65 |
| | | 2op | 595 | 592.3 | 2.26 | 596 | 594.27 | 1.2 | 596 | 594.7 | 0.84 | 595 | 590.57 | 2.19 |
| 51 | 20 | rnd | 595 | 591.03 | 2.41 | 596 | 593.47 | 1.66 | 596 | 594.13 | 1.46 | 596 | 592.83 | 2.18 |
| | | 2op | 595 | 593.27 | 1.86 | 596 | 594.63 | 0.61 | 596 | 595.23 | 0.43 | 595 | 594.7 | 0.53 |
| | 50 | rnd | 596 | 592.4 | 2.31 | 596 | 594.43 | 1.19 | 596 | 594.5 | 1.11 | 596 | 593.77 | 1.81 |
| | | 2op | 595 | 592.9 | 2.29 | 596 | 595 | 0.69 | 596 | 595.13 | 0.57 | 596 | 594.3 | 1.09 |

Table A.990: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 589.7 | 4.21 | 595 | 591.6 | 3.21 | 596 | 592.33 | 2.6 | 596 | 590.77 | 3.06 |
| | | 2op | 594 | 590.6 | 2.33 | 595 | 594.83 | 0.38 | 595 | 594.2 | 0.48 | 594 | 593.6 | 1.1 |
| | 50 | rnd | 596 | 590.73 | 3.93 | 596 | 591.23 | 2.42 | 596 | 592.83 | 2.31 | 595 | 591.47 | 2.86 |
| | | 2op | 594 | 590.67 | 2.19 | 595 | 594.9 | 0.31 | 595 | 594.83 | 0.38 | 595 | 594.1 | 0.31 |
| 51 | 20 | rnd | 596 | 590.57 | 4.51 | 596 | 590.23 | 4.92 | 596 | 591.23 | 3.14 | 595 | 590.87 | 2.8 |
| | | 2op | 594 | 591.03 | 2.3 | 595 | 594.27 | 0.94 | 595 | 594.7 | 0.47 | 595 | 594.13 | 0.43 |
| | 50 | rnd | 596 | 591.4 | 3.15 | 596 | 589.27 | 5.32 | 596 | 590.9 | 5.02 | 596 | 591.57 | 2.42 |
| | | 2op | 594 | 591.07 | 2.29 | 595 | 594.4 | 0.5 | 595 | 594.9 | 0.31 | 595 | 594.17 | 0.46 |

Table A.991: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 590.9 | 3.36 | 596 | 593.67 | 1.77 | 596 | 592.73 | 2.03 | 595 | 590.6 | 2.84 |
| | | 2op | 596 | 591.13 | 2.43 | 596 | 594.43 | 1.07 | 596 | 593.77 | 1.22 | 594 | 589.17 | 0.91 |
| | 50 | rnd | 595 | 591.03 | 2.83 | 596 | 593.9 | 1.73 | 596 | 593.9 | 1.42 | 595 | 591 | 3.01 |
| | | 2op | 596 | 592.03 | 2.33 | 596 | 594.93 | 1.01 | 596 | 594.5 | 1.01 | 595 | 589.87 | 2 |
| 51 | 20 | rnd | 595 | 590.5 | 3.31 | 596 | 593.27 | 1.84 | 596 | 594.4 | 1.67 | 595 | 592.73 | 1.72 |
| | | 2op | 595 | 592.73 | 2.15 | 596 | 594.67 | 0.55 | 596 | 595.07 | 0.37 | 596 | 594.83 | 0.53 |
| | 50 | rnd | 596 | 591.63 | 2.7 | 596 | 594.67 | 0.96 | 596 | 594.5 | 1.25 | 596 | 593.2 | 1.97 |
| | | 2op | 596 | 593.37 | 1.85 | 596 | 595.07 | 0.74 | 596 | 595.13 | 0.78 | 596 | 594.47 | 0.9 |

Table A.992: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 590.2 | 5.09 | 596 | 591.37 | 3.93 | 595 | 591.37 | 2.57 | 596 | 590.87 | 3.28 |
| | | 2op | 594 | 591.13 | 2.18 | 595 | 594.8 | 0.55 | 595 | 594.1 | 0.31 | 594 | 593.03 | 1.45 |
| | 50 | rnd | 596 | 590.7 | 3.42 | 596 | 591.23 | 3.41 | 595 | 591.13 | 3.26 | 596 | 590.6 | 3.01 |
| | | 2op | 594 | 591.23 | 2.4 | 596 | 594.9 | 0.4 | 595 | 594.67 | 0.48 | 595 | 594 | 0.26 |
| 51 | 20 | rnd | 595 | 589.3 | 5.94 | 596 | 589.87 | 5.32 | 596 | 592.53 | 2.7 | 595 | 591.8 | 2.47 |
| | | 2op | 594 | 590.9 | 2.25 | 595 | 594.53 | 0.51 | 595 | 594.67 | 0.48 | 595 | 594.13 | 0.35 |
| | 50 | rnd | 596 | 590.33 | 5.09 | 596 | 590.5 | 3.17 | 596 | 590.93 | 2.89 | 595 | 590.9 | 3.2 |
| | | 2op | 594 | 590.97 | 2.24 | 595 | 594.3 | 0.47 | 595 | 594.9 | 0.31 | 595 | 594.1 | 0.4 |

Table A.993: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.37 | 2.61 | 596 | 593.97 | 1.33 | 595 | 591.23 | 2.86 | 595 | 589.03 | 3.42 |
| | | 2op | 596 | 594.33 | 0.71 | 596 | 595.1 | 0.55 | 594 | 589.17 | 0.91 | 589 | 589 | 0 |
| | 50 | rnd | 595 | 591.77 | 2.01 | 595 | 593.2 | 1.75 | 595 | 590.57 | 2.93 | 595 | 588.7 | 3.65 |
| | | 2op | 596 | 593.9 | 1.52 | 596 | 594.83 | 0.46 | 594 | 589.43 | 1.25 | 589 | 589 | 0 |
| 51 | 20 | rnd | 596 | 592.6 | 1.98 | 596 | 594.17 | 1.23 | 596 | 592.37 | 2.04 | 596 | 591.77 | 2.11 |
| | | 2op | 595 | 594.13 | 0.35 | 596 | 595.07 | 0.25 | 595 | 594.3 | 0.47 | 595 | 591.47 | 2.33 |
| | 50 | rnd | 596 | 592.77 | 1.7 | 596 | 593.77 | 1.55 | 596 | 592.07 | 2.32 | 595 | 589.17 | 3.65 |
| | | 2op | 596 | 594.67 | 0.55 | 596 | 595.07 | 0.58 | 595 | 593.63 | 1.1 | 592 | 589.1 | 0.55 |

Table A.994: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.37 | 3.49 | 596 | 591.07 | 2.65 | 596 | 590.57 | 3.66 | 595 | 589.97 | 4.09 |
| | | 2op | 594 | 592.93 | 1.8 | 595 | 593.93 | 0.58 | 594 | 590.17 | 1.93 | 589 | 589 | 0 |
| | 50 | rnd | 595 | 591.57 | 2.36 | 595 | 590.57 | 3.09 | 595 | 590.57 | 2.98 | 595 | 589.27 | 3.78 |
| | | 2op | 594 | 593.1 | 1.6 | 595 | 594.07 | 0.25 | 594 | 593.2 | 1.35 | 592 | 589.17 | 0.65 |
| 51 | 20 | rnd | 596 | 589.67 | 3.79 | 595 | 589.77 | 3.23 | 596 | 591.07 | 2.68 | 595 | 589.77 | 2.74 |
| | | 2op | 595 | 593.53 | 1.2 | 594 | 594 | 0 | 594 | 593.93 | 0.37 | 594 | 589.33 | 1.27 |
| | 50 | rnd | 596 | 589.83 | 5.07 | 596 | 590.97 | 3.15 | 596 | 591.3 | 2.9 | 595 | 588.7 | 3.88 |
| | | 2op | 594 | 593.37 | 1.38 | 594 | 594 | 0 | 595 | 594.03 | 0.18 | 594 | 589.53 | 1.43 |

Table A.995: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 770.53 | 5.83 | 777 | 774.13 | 2.26 | 777 | 773.63 | 2.51 | 776 | 770.8 | 5.59 |
| | | 2op | 775 | 767.87 | 3.55 | 777 | 774.1 | 2.29 | 777 | 773.13 | 1.98 | 770 | 765.23 | 0.97 |
| | 50 | rnd | 777 | 772.03 | 5.08 | 777 | 775.33 | 1.47 | 777 | 775 | 1.86 | 777 | 770.77 | 3.28 |
| | | 2op | 775 | 769.93 | 3.42 | 777 | 774.93 | 1.68 | 777 | 775.1 | 1.92 | 770 | 766.37 | 1.79 |
| 51 | 20 | rnd | 777 | 770.87 | 5.27 | 776 | 773.2 | 2.48 | 777 | 773.93 | 1.96 | 777 | 772.4 | 2.54 |
| | | 2op | 775 | 768.07 | 2.55 | 777 | 772.6 | 1.75 | 777 | 773.3 | 1.21 | 775 | 771.7 | 1.9 |
| | 50 | rnd | 777 | 771.97 | 4.59 | 777 | 774.5 | 1.55 | 777 | 775.27 | 1.48 | 777 | 773.97 | 1.88 |
| | | 2op | 773 | 769.33 | 1.75 | 777 | 774.37 | 1.81 | 777 | 775.1 | 1.75 | 775 | 772.1 | 1.56 |

Table A.996: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 762.67 | 9.85 | 777 | 773.03 | 3.07 | 777 | 771.47 | 5.54 | 777 | 769.47 | 8.24 |
| | | 2op | 770 | 766.57 | 1.99 | 772 | 769.63 | 0.67 | 770 | 769.4 | 0.5 | 772 | 769.47 | 0.82 |
| | 50 | rnd | 772 | 763.7 | 7.86 | 776 | 770.97 | 4.86 | 777 | 773.03 | 2.62 | 777 | 769.07 | 7.57 |
| | | 2op | 770 | 765.6 | 1.38 | 770 | 769.57 | 0.5 | 772 | 769.67 | 0.66 | 770 | 769.37 | 0.49 |
| 51 | 20 | rnd | 775 | 762.77 | 9.59 | 775 | 769.3 | 6.6 | 777 | 772.23 | 3.33 | 777 | 769.63 | 7.78 |
| | | 2op | 770 | 767.27 | 2.29 | 770 | 769.6 | 0.5 | 770 | 769.33 | 0.48 | 772 | 769.67 | 0.8 |
| | 50 | rnd | 775 | 762.7 | 9.08 | 775 | 767.03 | 6.92 | 777 | 770.17 | 5.4 | 777 | 771.8 | 3.66 |
| | | 2op | 770 | 766.2 | 1.88 | 770 | 769.47 | 0.51 | 770 | 769.57 | 0.5 | 770 | 769.47 | 0.51 |

Table A.997: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.6 | 2.77 | 777 | 774.5 | 1.85 | 777 | 773.83 | 2.1 | 777 | 768.67 | 6.28 |
| | | 2op | 774 | 768.73 | 3.14 | 777 | 773.87 | 2.36 | 777 | 772.2 | 1.65 | 770 | 765.43 | 1.3 |
| | 50 | rnd | 777 | 772.6 | 2.97 | 777 | 774.77 | 1.38 | 777 | 774.67 | 1.52 | 775 | 770.77 | 3.14 |
| | | 2op | 775 | 769.6 | 2.79 | 777 | 775.03 | 1.87 | 777 | 774.8 | 1.45 | 770 | 765.8 | 1.61 |
| 51 | 20 | rnd | 777 | 770.87 | 4.82 | 777 | 773.67 | 2.4 | 777 | 774.1 | 1.84 | 777 | 772.93 | 3.11 |
| | | 2op | 775 | 768.13 | 2.34 | 777 | 773.4 | 1.63 | 777 | 773.6 | 1.75 | 776 | 772.07 | 1.68 |
| | 50 | rnd | 777 | 773.5 | 1.93 | 777 | 774.6 | 1.73 | 777 | 775.7 | 1.15 | 777 | 773.07 | 3.04 |
| | | 2op | 775 | 769.83 | 2.72 | 777 | 774.07 | 1.68 | 777 | 775 | 1.93 | 777 | 772.9 | 2.32 |

Table A.998: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 770 | 760.5 | 10.38 | 776 | 770.47 | 6.53 | 777 | 772 | 2.96 | 777 | 770.03 | 8.07 |
| | | 2op | 770 | 766.1 | 1.95 | 770 | 769.57 | 0.97 | 774 | 769.53 | 0.97 | 770 | 769.07 | 1.34 |
| | 50 | rnd | 775 | 764.6 | 9.73 | 777 | 766.8 | 9.93 | 777 | 772.13 | 3.03 | 777 | 769.27 | 5.84 |
| | | 2op | 770 | 765.87 | 1.7 | 770 | 769.47 | 0.51 | 772 | 769.77 | 0.77 | 770 | 769.43 | 0.5 |
| 51 | 20 | rnd | 775 | 763.83 | 10.5 | 777 | 765.9 | 10.51 | 777 | 770.8 | 5.61 | 776 | 772.07 | 3.15 |
| | | 2op | 770 | 766.43 | 1.98 | 770 | 769.6 | 0.5 | 772 | 769.57 | 0.68 | 770 | 769.6 | 0.5 |
| | 50 | rnd | 775 | 765.77 | 7.53 | 777 | 766.77 | 10.38 | 777 | 770.1 | 5.27 | 777 | 772.73 | 3.65 |
| | | 2op | 770 | 766.1 | 1.73 | 770 | 769.4 | 0.5 | 770 | 769.33 | 0.48 | 770 | 769.5 | 0.51 |

Table A.999: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 770.5 | 3.4 | 776 | 773.73 | 1.8 | 777 | 770.97 | 3.77 | 775 | 766.7 | 9.4 |
| | | 2op | 775 | 769.17 | 2.28 | 777 | 773.23 | 1.59 | 770 | 765.33 | 1.27 | 765 | 765 | 0 |
| | 50 | rnd | 777 | 772.43 | 2.66 | 777 | 774.77 | 1.55 | 777 | 770.73 | 4.27 | 776 | 767.27 | 6.55 |
| | | 2op | 777 | 770.27 | 3.13 | 777 | 773.87 | 1.66 | 775 | 765.87 | 2.24 | 765 | 765 | 0 |
| 51 | 20 | rnd | 777 | 771.47 | 2.75 | 777 | 773.33 | 2.48 | 777 | 772.37 | 2.67 | 777 | 771.1 | 3.14 |
| | | 2op | 772 | 769.37 | 1.4 | 776 | 772.17 | 1.42 | 774 | 770.73 | 1.39 | 770 | 766 | 1.78 |
| | 50 | rnd | 777 | 773.7 | 2.32 | 777 | 773.83 | 2.05 | 777 | 773.1 | 2.67 | 776 | 769.07 | 4.93 |
| | | 2op | 775 | 770.53 | 1.8 | 777 | 772.57 | 1.55 | 774 | 770.63 | 1.5 | 765 | 765 | 0 |

Table A.1000: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 774 | 763.13 | 10.14 | 776 | 770.03 | 3.4 | 777 | 770.7 | 3.72 | 777 | 769.13 | 5.63 |
| | | 2op | 770 | 767.87 | 1.93 | 770 | 769.47 | 0.68 | 770 | 766.07 | 1.72 | 765 | 765 | 0 |
| | 50 | rnd | 775 | 764.63 | 7.52 | 775 | 768.17 | 7.4 | 777 | 770.77 | 3.76 | 777 | 770.13 | 3.95 |
| | | 2op | 770 | 768.37 | 1.87 | 770 | 769.53 | 0.51 | 770 | 768.33 | 1.67 | 765 | 765 | 0 |
| 51 | 20 | rnd | 775 | 764.33 | 9.26 | 775 | 764.93 | 9.48 | 777 | 771.6 | 3.79 | 775 | 770.6 | 3.57 |
| | | 2op | 770 | 769 | 1.31 | 770 | 769.73 | 0.45 | 770 | 769.3 | 0.65 | 769 | 765.47 | 1.11 |
| | 50 | rnd | 775 | 764.3 | 9.07 | 774 | 766.5 | 6.63 | 777 | 769.73 | 4.73 | 777 | 769.93 | 4.84 |
| | | 2op | 770 | 769.03 | 1.13 | 770 | 769.47 | 0.68 | 770 | 769.57 | 0.5 | 770 | 765.2 | 0.92 |

Table A.1001: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 913.97 | 3.37 | 921 | 916.63 | 2.61 | 921 | 915.9 | 2.6 | 919 | 913.07 | 3.94 |
| | | 2op | 919 | 912.57 | 4.45 | 921 | 918.43 | 1.87 | 921 | 917.5 | 2 | 918 | 909.3 | 3.74 |
| | 50 | rnd | 921 | 915.1 | 2.99 | 921 | 917.8 | 2.35 | 921 | 918.2 | 2.04 | 919 | 912.97 | 3.84 |
| | | 2op | 921 | 914.13 | 3.94 | 921 | 918.43 | 2.03 | 921 | 918.87 | 2.06 | 919 | 912.43 | 3.82 |
| 51 | 20 | rnd | 919 | 913.47 | 3.53 | 921 | 915.77 | 2.45 | 921 | 917.53 | 2.24 | 921 | 915.93 | 2.96 |
| | | 2op | 916 | 913.87 | 2.66 | 921 | 916.93 | 1.39 | 921 | 917.6 | 1.63 | 918 | 916.07 | 0.69 |
| | 50 | rnd | 919 | 914.1 | 3.2 | 921 | 916.1 | 2.62 | 921 | 917.23 | 2.14 | 921 | 914.87 | 3.56 |
| | | 2op | 917 | 914.97 | 2.28 | 921 | 918.73 | 2.05 | 921 | 919.27 | 1.78 | 921 | 916.53 | 1.7 |

Table A.1002: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 912.97 | 6.41 | 919 | 913.6 | 2.7 | 919 | 915.03 | 3.27 | 921 | 915.3 | 3.23 |
| | | 2op | 916 | 911.1 | 3.54 | 918 | 915.9 | 0.84 | 916 | 916 | 0 | 916 | 915.9 | 0.55 |
| | 50 | rnd | 919 | 912.13 | 6.33 | 919 | 912.83 | 6.22 | 921 | 915.13 | 2.87 | 921 | 914.2 | 3.21 |
| | | 2op | 916 | 911.9 | 4.16 | 916 | 915.97 | 0.18 | 921 | 916.23 | 0.97 | 916 | 915.97 | 0.18 |
| 51 | 20 | rnd | 918 | 909.8 | 9.5 | 919 | 914.17 | 3.75 | 919 | 914.53 | 3.4 | 919 | 914.3 | 2.82 |
| | | 2op | 916 | 911.13 | 4.29 | 916 | 916 | 0 | 918 | 916.07 | 0.37 | 916 | 915.97 | 0.18 |
| | 50 | rnd | 921 | 912.5 | 4.53 | 919 | 913.67 | 3.67 | 921 | 912.67 | 3.64 | 921 | 915.17 | 2.61 |
| | | 2op | 916 | 911.33 | 3.79 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 915.97 | 0.18 |

Table A.1003: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.93 | 3.84 | 921 | 917.3 | 2.02 | 921 | 916.27 | 2.55 | 919 | 913.27 | 3.19 |
| | | 2op | 919 | 912.83 | 3.79 | 921 | 918.1 | 2.16 | 921 | 916.63 | 2.01 | 921 | 908.87 | 4.45 |
| | 50 | rnd | 921 | 913.83 | 3.12 | 921 | 916.83 | 2.12 | 921 | 917.8 | 2.06 | 919 | 914.83 | 3.12 |
| | | 2op | 921 | 914.57 | 4.01 | 921 | 918.33 | 1.9 | 921 | 918.9 | 1.92 | 918 | 910.9 | 4.54 |
| 51 | 20 | rnd | 919 | 914.13 | 2.32 | 919 | 915.53 | 2.3 | 921 | 916.3 | 2.38 | 921 | 915.9 | 3.13 |
| | | 2op | 917 | 914.5 | 2.86 | 921 | 916.57 | 2.34 | 921 | 918.07 | 1.98 | 921 | 916.43 | 1.1 |
| | 50 | rnd | 921 | 914.97 | 3.16 | 921 | 916.83 | 2 | 921 | 918.1 | 1.6 | 919 | 915 | 2.73 |
| | | 2op | 919 | 914.57 | 2.43 | 921 | 918.53 | 1.94 | 921 | 918.67 | 1.92 | 919 | 916.2 | 0.89 |

Table A.1004: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 910.67 | 7.08 | 919 | 914.23 | 3.39 | 921 | 915.73 | 2.42 | 919 | 913.07 | 5.52 |
| | | 2op | 916 | 911.43 | 4.1 | 916 | 916 | 0 | 918 | 916.13 | 0.51 | 916 | 916 | 0 |
| | 50 | rnd | 919 | 911.6 | 7.67 | 919 | 913.63 | 3.46 | 921 | 914.97 | 2.74 | 919 | 914.7 | 3.71 |
| | | 2op | 916 | 911.33 | 4.01 | 916 | 915.97 | 0.18 | 921 | 916.53 | 1.36 | 916 | 915.83 | 0.91 |
| 51 | 20 | rnd | 918 | 911.37 | 4.67 | 919 | 913.07 | 4.52 | 919 | 914.1 | 2.78 | 919 | 915.3 | 3.01 |
| | | 2op | 916 | 911.37 | 3.93 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |
| | 50 | rnd | 918 | 911.2 | 3.39 | 918 | 913.23 | 4.11 | 919 | 914.57 | 3.21 | 921 | 914.43 | 3.65 |
| | | 2op | 916 | 910.57 | 3.95 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.1005: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.57 | 2.91 | 921 | 916.8 | 2.3 | 917 | 911.47 | 2.49 | 918 | 910.83 | 4.74 |
| | | 2op | 918 | 914.6 | 2.31 | 921 | 917.1 | 1.54 | 918 | 907.6 | 3.12 | 906 | 906 | 0 |
| | 50 | rnd | 919 | 915.2 | 2.71 | 921 | 918 | 1.93 | 919 | 913.77 | 3.41 | 918 | 912.43 | 3.65 |
| | | 2op | 918 | 914.73 | 2.36 | 921 | 917.43 | 1.63 | 917 | 908 | 3.56 | 906 | 906 | 0 |
| 51 | 20 | rnd | 921 | 915.27 | 2.56 | 921 | 917.1 | 2.51 | 921 | 915.97 | 2.65 | 921 | 914.17 | 3.29 |
| | | 2op | 916 | 915.83 | 0.91 | 917 | 916.07 | 0.25 | 918 | 916.07 | 0.37 | 919 | 914.7 | 2.87 |
| | 50 | rnd | 921 | 916.23 | 3.4 | 921 | 916.43 | 3.06 | 921 | 915.53 | 2.79 | 921 | 913.67 | 3.29 |
| | | 2op | 916 | 915.97 | 0.18 | 921 | 916.5 | 1.17 | 919 | 915.5 | 1.89 | 919 | 907.53 | 3.75 |

Table A.1006: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 911.07 | 5.37 | 921 | 914.23 | 3.83 | 921 | 914.13 | 3.26 | 921 | 913.03 | 3.93 |
| | | 2op | 916 | 913.93 | 2.42 | 916 | 916 | 0 | 919 | 915.7 | 2.31 | 914 | 906.27 | 1.46 |
| | 50 | rnd | 921 | 913.5 | 3.93 | 921 | 912.7 | 5.49 | 921 | 915.03 | 2.93 | 919 | 913.43 | 3.84 |
| | | 2op | 916 | 914.17 | 2.31 | 916 | 916 | 0 | 916 | 916 | 0 | 912 | 906.7 | 1.62 |
| 51 | 20 | rnd | 918 | 912.43 | 5.06 | 921 | 910.53 | 8.58 | 919 | 913.7 | 4.85 | 919 | 912.6 | 4.47 |
| | | 2op | 916 | 915.87 | 0.73 | 916 | 916 | 0 | 916 | 916 | 0 | 919 | 910.97 | 4.37 |
| | 50 | rnd | 919 | 912.73 | 3.3 | 921 | 912.9 | 7.1 | 918 | 913.23 | 3.1 | 919 | 912.83 | 3.18 |
| | | 2op | 916 | 915.3 | 1.6 | 916 | 916 | 0 | 916 | 916 | 0 | 918 | 909.43 | 3.28 |

Table A.1007: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1577 | 1559.2 | 13.02 | 1572 | 1559.67 | 7.57 | 1572 | 1557.87 | 10.34 | 1573 | 1556.77 | 11.97 |
| | | 2op | 1553 | 1553 | 0 | 1553 | 1553 | 0 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1558.97 | 9.22 | 1574 | 1560.2 | 6.89 | 1575 | 1560.03 | 8.06 | 1568 | 1553.8 | 12.88 |
| | | 2op | 1568 | 1553.87 | 3.34 | 1570 | 1553.57 | 3.1 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1571 | 1559.2 | 10.68 | 1572 | 1559.37 | 8.34 | 1573 | 1559.7 | 10.56 | 1570 | 1553.83 | 11.19 |
| | | 2op | 1562 | 1554.07 | 2.48 | 1563 | 1554.47 | 2.89 | 1572 | 1554.77 | 3.9 | 1553 | 1553 | 0 |
| | 50 | rnd | 1568 | 1554.9 | 10.05 | 1578 | 1562.03 | 7.48 | 1577 | 1558.9 | 6.95 | 1573 | 1555.77 | 9.33 |
| | | 2op | 1566 | 1555.17 | 4.07 | 1562 | 1553.93 | 2.33 | 1569 | 1555.57 | 4.28 | 1553 | 1553 | 0 |

Table A.1008: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1555.7 | 10.99 | 1577 | 1554.13 | 12.09 | 1572 | 1555.43 | 11.5 | 1577 | 1553.13 | 14.23 |
| | | 2op | 1567 | 1554.67 | 2.76 | 1569 | 1559.07 | 4.89 | 1557 | 1553.17 | 0.75 | 1553 | 1553 | 0 |
| | 50 | rnd | 1573 | 1558.77 | 7.03 | 1576 | 1560.7 | 6.65 | 1568 | 1551.4 | 11.31 | 1573 | 1552.73 | 14.14 |
| | | 2op | 1555 | 1553.6 | 0.93 | 1572 | 1565.63 | 4.63 | 1567 | 1556.43 | 3.5 | 1555 | 1553.07 | 0.37 |
| 51 | 20 | rnd | 1578 | 1555.43 | 10.7 | 1576 | 1556.03 | 10.81 | 1578 | 1559.07 | 10.39 | 1575 | 1557.33 | 9.8 |
| | | 2op | 1558 | 1553.8 | 1.42 | 1572 | 1563.47 | 6.16 | 1572 | 1558.67 | 5.25 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1554.6 | 12.34 | 1577 | 1558.6 | 9.76 | 1577 | 1560.57 | 9.77 | 1571 | 1556 | 9.86 |
| | | 2op | 1558 | 1554.33 | 1.47 | 1573 | 1562.4 | 5.93 | 1572 | 1563.2 | 4.67 | 1557 | 1553.27 | 0.87 |

Table A.1009: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1557.03 | 9.7 | 1573 | 1558.37 | 7.81 | 1573 | 1555.9 | 9.26 | 1580 | 1557.3 | 10.89 |
| | | 2op | 1570 | 1553.57 | 3.1 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1558.47 | 9.16 | 1576 | 1559.27 | 8.28 | 1574 | 1558.1 | 10.57 | 1574 | 1553.93 | 10.01 |
| | | 2op | 1570 | 1554.1 | 3.63 | 1553 | 1553 | 0 | 1558 | 1553.17 | 0.91 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1559.3 | 8.7 | 1580 | 1558.5 | 9.03 | 1574 | 1559.07 | 8.97 | 1573 | 1555.37 | 10.5 |
| | | 2op | 1563 | 1555.23 | 3.63 | 1563 | 1554.13 | 2.7 | 1571 | 1555.6 | 5 | 1553 | 1553 | 0 |
| | 50 | rnd | 1576 | 1560.07 | 9.95 | 1579 | 1561.07 | 8.3 | 1579 | 1559.8 | 7.99 | 1573 | 1555.77 | 10.71 |
| | | 2op | 1569 | 1554.23 | 3.91 | 1564 | 1554.2 | 2.85 | 1572 | 1554.33 | 4.03 | 1553 | 1553 | 0 |

Table A.1010: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1555.27 | 11.11 | 1575 | 1556.6 | 10.75 | 1576 | 1556.03 | 10.9 | 1574 | 1552.93 | 13.69 |
| | | 2op | 1558 | 1553.9 | 1.47 | 1569 | 1559.33 | 4.72 | 1562 | 1553.8 | 1.95 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1557.8 | 8.38 | 1574 | 1556.8 | 10.6 | 1573 | 1557.47 | 7.86 | 1571 | 1553.97 | 12.12 |
| | | 2op | 1558 | 1553.8 | 1.49 | 1572 | 1564.6 | 5.08 | 1563 | 1554.93 | 2.39 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1558.8 | 11.59 | 1574 | 1554.33 | 13.46 | 1572 | 1555.13 | 10.77 | 1570 | 1551.1 | 13.85 |
| | | 2op | 1556 | 1553.77 | 1.14 | 1573 | 1563.2 | 5.35 | 1566 | 1557.73 | 3.55 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1556.17 | 9.6 | 1572 | 1557.37 | 10.56 | 1572 | 1554.4 | 11.22 | 1578 | 1557.07 | 12.3 |
| | | 2op | 1556 | 1553.93 | 1.11 | 1572 | 1564.63 | 4.94 | 1572 | 1563.1 | 5.03 | 1563 | 1553.6 | 2.04 |

Table A.1011: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1580 | 1558.57 | 9.1 | 1574 | 1555.13 | 11.6 | 1573 | 1553.13 | 14.47 | 1570 | 1554.07 | 11.52 |
| | | 2op | 1568 | 1555.2 | 4.53 | 1565 | 1555.43 | 4.24 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1558.77 | 8.72 | 1572 | 1559.07 | 7.79 | 1578 | 1556.23 | 8.91 | 1570 | 1558.23 | 10.79 |
| | | 2op | 1564 | 1554.2 | 2.55 | 1562 | 1553.43 | 1.72 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1559 | 7.76 | 1576 | 1560.83 | 6.57 | 1575 | 1557.7 | 10.63 | 1574 | 1554.6 | 10.49 |
| | | 2op | 1564 | 1556.63 | 2.63 | 1571 | 1565.27 | 3.89 | 1559 | 1553.57 | 1.57 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1559.1 | 7.37 | 1573 | 1559.03 | 7.17 | 1576 | 1556.27 | 8.9 | 1577 | 1559.17 | 9.12 |
| | | 2op | 1568 | 1558.6 | 4.54 | 1569 | 1558.77 | 5.09 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |

Table A.1012: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1558.63 | 7.84 | 1576 | 1556.07 | 11.59 | 1568 | 1552.5 | 16.38 | 1571 | 1551.67 | 14.01 |
| | | 2op | 1558 | 1554.07 | 1.28 | 1558 | 1554.17 | 1.23 | 1563 | 1553.33 | 1.83 | 1553 | 1553 | 0 |
| | 50 | rnd | 1570 | 1555.27 | 9.21 | 1578 | 1558.87 | 9.79 | 1572 | 1558.4 | 10.1 | 1577 | 1555.4 | 11.85 |
| | | 2op | 1558 | 1554.8 | 1.35 | 1558 | 1554.47 | 1.2 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1571 | 1555.87 | 13.41 | 1571 | 1555.87 | 11.44 | 1570 | 1555.4 | 11.17 | 1568 | 1552.77 | 10.66 |
| | | 2op | 1558 | 1554.4 | 1.22 | 1560 | 1555.13 | 1.14 | 1555 | 1553.13 | 0.51 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1558.8 | 9.81 | 1570 | 1554.87 | 9.79 | 1571 | 1555.4 | 12.59 | 1573 | 1555.33 | 12.57 |
| | | 2op | 1564 | 1555.57 | 2.42 | 1564 | 1555.73 | 2.41 | 1557 | 1553.2 | 0.81 | 1553 | 1553 | 0 |

Table A.1013: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1553.3 | 10.49 | 1569 | 1555.2 | 7.87 | 1566 | 1550.1 | 12.51 | 1565 | 1548.37 | 11.71 |
| | | 2op | 1563 | 1536 | 10.72 | 1564 | 1536.23 | 10.46 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1571 | 1552.67 | 9.59 | 1570 | 1555.2 | 7.2 | 1564 | 1553.77 | 8.77 | 1564 | 1551.73 | 9.46 |
| | | 2op | 1558 | 1534.23 | 8.46 | 1563 | 1539.47 | 12.56 | 1561 | 1533.37 | 7.37 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1567 | 1553.93 | 10.9 | 1571 | 1554.67 | 9.62 | 1570 | 1556.4 | 7.84 | 1570 | 1550.67 | 10.04 |
| | | 2op | 1561 | 1539.9 | 11.66 | 1565 | 1546.17 | 12.15 | 1567 | 1547.03 | 12.9 | 1531 | 1531 | 0 |
| | 50 | rnd | 1570 | 1551.4 | 7.72 | 1567 | 1555.2 | 7.63 | 1568 | 1557.8 | 5.94 | 1567 | 1550.57 | 11.79 |
| | | 2op | 1566 | 1541.63 | 13.81 | 1565 | 1548.77 | 12.61 | 1569 | 1551.43 | 11.61 | 1550 | 1531.63 | 3.47 |

Table A.1014: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1542 | 15.66 | 1570 | 1548.1 | 12.66 | 1566 | 1548.37 | 12.2 | 1568 | 1547.53 | 9.28 |
| | | 2op | 1531 | 1531 | 0 | 1560 | 1536.53 | 9.83 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1563 | 1542.9 | 12.22 | 1569 | 1551.87 | 11.75 | 1569 | 1554.6 | 10.57 | 1564 | 1549.67 | 10.32 |
| | | 2op | 1531 | 1531 | 0 | 1560 | 1543.1 | 10.09 | 1532 | 1531.03 | 0.18 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1563 | 1543.5 | 11.97 | 1565 | 1549.57 | 10.44 | 1568 | 1555.13 | 8.17 | 1569 | 1552.27 | 10.55 |
| | | 2op | 1531 | 1531 | 0 | 1563 | 1540.27 | 10.14 | 1556 | 1533.63 | 6.53 | 1531 | 1531 | 0 |
| | 50 | rnd | 1563 | 1543.6 | 12.79 | 1566 | 1546.63 | 11.06 | 1567 | 1549 | 12.45 | 1568 | 1551.47 | 12.71 |
| | | 2op | 1531 | 1531 | 0 | 1566 | 1536.47 | 9.47 | 1565 | 1537.33 | 9.13 | 1531 | 1531 | 0 |

Table A.1015: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1551.43 | 10.42 | 1569 | 1556.23 | 9.1 | 1569 | 1549.57 | 11.03 | 1566 | 1545.67 | 11.58 |
| | | 2op | 1557 | 1534.33 | 8.67 | 1562 | 1536.93 | 11.18 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1566 | 1554.5 | 9.5 | 1570 | 1554 | 7.47 | 1568 | 1552.67 | 9.01 | 1567 | 1546.6 | 13.18 |
| | | 2op | 1560 | 1533.47 | 7.6 | 1562 | 1535.97 | 10.19 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1552.83 | 8.17 | 1568 | 1550.8 | 9.13 | 1569 | 1553.3 | 8.46 | 1564 | 1552.73 | 7.95 |
| | | 2op | 1564 | 1537.4 | 11.01 | 1566 | 1544.47 | 12.41 | 1566 | 1541.37 | 13.38 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1553.8 | 8.51 | 1568 | 1555.23 | 9.09 | 1568 | 1557.1 | 7.27 | 1566 | 1554.23 | 12.49 |
| | | 2op | 1563 | 1540.9 | 13.55 | 1568 | 1548.17 | 14.06 | 1568 | 1552.03 | 11.79 | 1531 | 1531 | 0 |

Table A.1016: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1543.43 | 11.3 | 1566 | 1551.33 | 9.91 | 1565 | 1547.37 | 15.16 | 1567 | 1550.73 | 10.18 |
| | | 2op | 1531 | 1531 | 0 | 1565 | 1536.07 | 9.76 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1561 | 1544.97 | 11.3 | 1563 | 1553.07 | 7.76 | 1569 | 1550.47 | 10.01 | 1569 | 1551.57 | 10.49 |
| | | 2op | 1531 | 1531 | 0 | 1565 | 1547.03 | 12.7 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1540.07 | 12.04 | 1564 | 1549.97 | 10.16 | 1565 | 1551.87 | 9.8 | 1567 | 1549 | 11.02 |
| | | 2op | 1531 | 1531 | 0 | 1561 | 1540.73 | 10.6 | 1556 | 1533.43 | 6.25 | 1531 | 1531 | 0 |
| | 50 | rnd | 1566 | 1547.57 | 12.42 | 1567 | 1547.97 | 11.82 | 1566 | 1550.23 | 9.58 | 1562 | 1547.63 | 9.81 |
| | | 2op | 1531 | 1531 | 0 | 1555 | 1536.57 | 8.37 | 1566 | 1538.83 | 10.56 | 1531 | 1531 | 0 |

Table A.1017: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1551.1 | 10.81 | 1568 | 1557.27 | 5.25 | 1564 | 1547.63 | 10.01 | 1570 | 1550.9 | 10.4 |
| | | 2op | 1569 | 1538.67 | 12.63 | 1573 | 1550.5 | 12.28 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1570 | 1551.57 | 7.61 | 1570 | 1556.8 | 8.08 | 1566 | 1548 | 13.9 | 1560 | 1545.33 | 11.21 |
| | | 2op | 1570 | 1540.37 | 13.31 | 1569 | 1544.3 | 15.08 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1572 | 1555.4 | 9.51 | 1570 | 1556.23 | 9.55 | 1564 | 1550.5 | 9.92 | 1567 | 1550.73 | 9.67 |
| | | 2op | 1564 | 1551.77 | 8.32 | 1565 | 1555.9 | 3.9 | 1561 | 1533.77 | 8.48 | 1531 | 1531 | 0 |
| | 50 | rnd | 1567 | 1554.93 | 8.76 | 1568 | 1555.2 | 7.92 | 1569 | 1554.33 | 10.91 | 1571 | 1551.27 | 11.24 |
| | | 2op | 1565 | 1552.73 | 10.4 | 1565 | 1553.63 | 8.76 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.1018: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1542.97 | 10.46 | 1567 | 1549.37 | 10.66 | 1569 | 1548.63 | 9.89 | 1566 | 1546.2 | 13.04 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1546.13 | 10.84 | 1569 | 1549.2 | 12.85 | 1563 | 1547.23 | 12.29 | 1569 | 1546.7 | 11.46 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1548.6 | 11.72 | 1566 | 1551.97 | 8.79 | 1568 | 1550.03 | 12.66 | 1570 | 1551.2 | 12.33 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1544.03 | 11.56 | 1565 | 1548.07 | 8.64 | 1568 | 1547.97 | 12.74 | 1565 | 1544.83 | 12.66 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.1019: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1548.8 | 9.33 | 1564 | 1553.57 | 6.07 | 1568 | 1547.3 | 9.19 | 1562 | 1547.33 | 8.82 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1549.9 | 8.28 | 1565 | 1550.5 | 6.92 | 1566 | 1550.3 | 8.38 | 1561 | 1548.5 | 8.73 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1550.57 | 8.11 | 1566 | 1550.5 | 9.3 | 1565 | 1551.33 | 7.87 | 1562 | 1549.47 | 9.47 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1549.27 | 8.37 | 1562 | 1550.23 | 6.73 | 1563 | 1551.77 | 7.55 | 1564 | 1548.3 | 9.23 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1550 | 1548.13 | 0.51 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 |

Table A.1020: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1558 | 1547.3 | 8.48 | 1566 | 1550.27 | 8 | 1567 | 1547.8 | 9.26 | 1565 | 1548.53 | 7.4 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1562 | 1547.93 | 9.28 | 1565 | 1548.8 | 7.48 | 1566 | 1550 | 9.87 | 1561 | 1551.47 | 6.48 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1559 | 1545.77 | 8.34 | 1565 | 1549.27 | 9.87 | 1567 | 1548.63 | 10.98 | 1559 | 1548.03 | 7.21 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1548.27 | 9.15 | 1564 | 1549 | 7.31 | 1568 | 1549.07 | 8.66 | 1566 | 1549.5 | 8.96 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1021: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1549.67 | 10.98 | 1564 | 1549.23 | 9.9 | 1563 | 1549.9 | 9.51 | 1563 | 1547.27 | 8.66 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1546.3 | 9.63 | 1563 | 1550.93 | 7.16 | 1560 | 1548.83 | 8.52 | 1563 | 1546.9 | 10.66 |
| | | 2op | 1548 | 1548 | 0 | 1556 | 1548.27 | 1.46 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1548.9 | 10.7 | 1565 | 1551.77 | 7.3 | 1565 | 1546.97 | 8.35 | 1564 | 1548.43 | 8.79 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1550.17 | 7.33 | 1568 | 1550.83 | 9.07 | 1565 | 1551.97 | 10.29 | 1561 | 1549.77 | 7.32 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1022: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1545.77 | 9.94 | 1566 | 1547.7 | 9.69 | 1567 | 1547.53 | 11.36 | 1567 | 1551 | 8.52 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1558 | 1546.33 | 7.64 | 1565 | 1548.5 | 8.41 | 1565 | 1547.3 | 11.87 | 1564 | 1550.43 | 9.27 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1566 | 1547.1 | 8.81 | 1566 | 1547.27 | 9.63 | 1568 | 1549.13 | 9.03 | 1565 | 1543.83 | 13.08 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1547.4 | 8.4 | 1566 | 1551.17 | 6.85 | 1564 | 1548 | 8.9 | 1563 | 1549.87 | 7.2 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 |

Table A.1023: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1552.73 | 8.31 | 1565 | 1550.77 | 10.16 | 1568 | 1547.73 | 10.51 | 1565 | 1548.47 | 10.21 |
| | | 2op | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1548.1 | 7.48 | 1564 | 1552.63 | 6.17 | 1566 | 1547.43 | 10.62 | 1562 | 1547.4 | 9.25 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1565 | 1550.57 | 8.08 | 1563 | 1553.23 | 7.76 | 1565 | 1547.73 | 10.14 | 1564 | 1547.47 | 11.39 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1550 | 1548.87 | 1.01 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1548.57 | 7.96 | 1570 | 1552.33 | 8.53 | 1565 | 1548.33 | 8.47 | 1562 | 1547.57 | 9.65 |
| | | 2op | 1550 | 1548.13 | 0.51 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1024: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1545.97 | 9.85 | 1559 | 1547 | 8.21 | 1560 | 1543.6 | 10.77 | 1566 | 1548.53 | 8.9 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1564 | 1547 | 8.09 | 1563 | 1550 | 8.94 | 1565 | 1549.53 | 9.82 | 1564 | 1546.97 | 10.68 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1558 | 1546.9 | 6.5 | 1562 | 1546.6 | 11.81 | 1566 | 1547.73 | 8.39 | 1565 | 1548.07 | 10.01 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1564 | 1547.53 | 7.87 | 1560 | 1544.17 | 9.46 | 1566 | 1548.57 | 8.95 | 1568 | 1546.17 | 10.18 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1025: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2775 | 2745.43 | 12.37 | 2771 | 2746.93 | 12.52 | 2771 | 2742.87 | 15.5 | 2757 | 2740.63 | 10.76 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2759 | 2741.7 | 10.47 | 2758 | 2742.2 | 12.08 | 2764 | 2741.27 | 12.31 | 2765 | 2742.07 | 13.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2768 | 2741.37 | 12.51 | 2762 | 2745.47 | 9.22 | 2767 | 2740.8 | 14.58 | 2764 | 2736.3 | 14.14 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2771 | 2747.43 | 11.83 | 2764 | 2745.03 | 12.43 | 2763 | 2741.27 | 9.71 | 2763 | 2743.03 | 9.73 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1026: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2762 | 2739.93 | 11.6 | 2780 | 2743.2 | 15.47 | 2758 | 2736.83 | 12.41 | 2767 | 2735.77 | 15.51 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.9 | 12.86 | 2765 | 2741.13 | 12.04 | 2771 | 2746.7 | 13.43 | 2763 | 2733.1 | 12.9 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2741.37 | 15.33 | 2771 | 2745.07 | 13.38 | 2764 | 2738.07 | 15.62 | 2773 | 2738.73 | 17.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2762 | 2735.7 | 17.59 | 2766 | 2742.03 | 14.95 | 2767 | 2740.5 | 11.45 | 2772 | 2741.27 | 15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1027: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2769 | 2744.13 | 18.01 | 2770 | 2743.97 | 13.74 | 2766 | 2741.4 | 13.77 | 2766 | 2746.3 | 10.41 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2746.87 | 12.22 | 2768 | 2741.8 | 12.79 | 2765 | 2742.2 | 13.94 | 2763 | 2743.27 | 12.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2764 | 2739.07 | 13.93 | 2774 | 2743.77 | 14.69 | 2763 | 2742.63 | 9.87 | 2767 | 2740.3 | 14.69 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2742.37 | 11.93 | 2770 | 2745.67 | 10.48 | 2760 | 2741.83 | 9.08 | 2762 | 2740.23 | 16.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1028: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2773 | 2740.47 | 17.39 | 2764 | 2740.67 | 14.86 | 2761 | 2741.47 | 11.95 | 2766 | 2741.37 | 19.15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2772 | 2742.53 | 11.68 | 2761 | 2739.87 | 15.75 | 2761 | 2742.83 | 11.19 | 2768 | 2740.03 | 15.66 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2770 | 2739.2 | 13.97 | 2762 | 2739.87 | 15.91 | 2759 | 2737.03 | 15.24 | 2770 | 2739.6 | 18.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2775 | 2739.57 | 12.79 | 2772 | 2740.17 | 19.26 | 2767 | 2742.3 | 13.43 | 2759 | 2741.6 | 12.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1029: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2766 | 2745.63 | 12.84 | 2771 | 2742.47 | 13.99 | 2760 | 2740.33 | 12.4 | 2765 | 2738.1 | 14.19 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.43 | 12.74 | 2766 | 2742.23 | 14.44 | 2761 | 2743.03 | 10.45 | 2763 | 2736.83 | 13.97 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2769 | 2746.37 | 14.21 | 2766 | 2746.27 | 9.4 | 2766 | 2744.27 | 12.45 | 2768 | 2743.83 | 15.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2769 | 2748.07 | 12.73 | 2763 | 2743.77 | 11.5 | 2764 | 2744.3 | 12.49 | 2761 | 2739.5 | 12.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1030: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2740.83 | 13.99 | 2767 | 2743 | 14.82 | 2767 | 2744.6 | 14.09 | 2770 | 2741.4 | 13.37 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2739.73 | 12.51 | 2766 | 2743.4 | 11.52 | 2772 | 2742.53 | 15.67 | 2763 | 2743.23 | 11.83 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2738.87 | 16.12 | 2757 | 2737.37 | 13.92 | 2768 | 2738.93 | 17.31 | 2773 | 2740.37 | 14.28 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2759 | 2737.43 | 18.67 | 2759 | 2739.83 | 11.53 | 2769 | 2740.83 | 15.59 | 2773 | 2742.83 | 13.22 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1031: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2810.7 | 14.63 | 2843 | 2814.37 | 14.41 | 2837 | 2814.13 | 15.34 | 2839 | 2813.9 | 12.79 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2815.63 | 11.82 | 2838 | 2817.2 | 9.24 | 2840 | 2812.57 | 12.91 | 2835 | 2811.07 | 12.23 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2831 | 2813.33 | 12.46 | 2835 | 2818.8 | 12.93 | 2835 | 2810.7 | 18.77 | 2844 | 2811.87 | 12.11 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2813.9 | 10.56 | 2838 | 2813 | 14.67 | 2832 | 2814.43 | 10.66 | 2842 | 2815.47 | 13.99 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1032: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2834 | 2810.1 | 14.44 | 2838 | 2814.1 | 13.2 | 2845 | 2809.4 | 16.84 | 2835 | 2808.7 | 12.44 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2813.87 | 16.35 | 2830 | 2811.4 | 14.13 | 2834 | 2807.53 | 17.03 | 2837 | 2805.97 | 14.87 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2834 | 2809.7 | 14.7 | 2842 | 2815.6 | 9.57 | 2844 | 2813.63 | 12.79 | 2837 | 2809.1 | 16.26 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2804.6 | 1.83 | 2804 | 2804 | 0 |
| | 50 | rnd | 2827 | 2808.7 | 10.57 | 2837 | 2811.73 | 18.95 | 2834 | 2812.4 | 12.84 | 2829 | 2806.13 | 12.85 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2805.6 | 2.7 | 2804 | 2804 | 0 |

Table A.1033: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2836 | 2814.27 | 12.29 | 2837 | 2810.27 | 15.73 | 2838 | 2814.8 | 14.12 | 2837 | 2814.8 | 10.91 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2815.5 | 12.86 | 2840 | 2817.27 | 10.52 | 2840 | 2814.5 | 14.17 | 2843 | 2812.33 | 11.7 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2837 | 2814.83 | 13.12 | 2848 | 2819.23 | 13.25 | 2836 | 2812.47 | 13.27 | 2833 | 2810.93 | 14.23 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2812 | 15.11 | 2838 | 2815.6 | 14.18 | 2842 | 2815.5 | 12.56 | 2838 | 2812.47 | 17.08 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1034: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2827 | 2813.33 | 10.91 | 2830 | 2810.43 | 15.93 | 2838 | 2810.03 | 16.83 | 2838 | 2809.8 | 16.1 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2828 | 2813.37 | 8.71 | 2829 | 2813.1 | 9.13 | 2846 | 2812.37 | 16.9 | 2845 | 2813.27 | 13.93 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2805.8 | 2.8 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2833 | 2807.73 | 14.14 | 2832 | 2812.53 | 14.3 | 2838 | 2810.37 | 13.69 | 2838 | 2814.4 | 10.51 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806 | 2.88 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2808.77 | 12.38 | 2835 | 2811.57 | 16.53 | 2838 | 2813.83 | 15.64 | 2836 | 2813.47 | 11.78 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2805.4 | 2.58 | 2804 | 2804 | 0 |

Table A.1035: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2815.5 | 13.96 | 2835 | 2810.17 | 13.51 | 2837 | 2811.47 | 13.81 | 2825 | 2805.8 | 13.12 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2841 | 2814.5 | 14.51 | 2842 | 2815.57 | 14.3 | 2835 | 2805.03 | 15.11 | 2835 | 2814.8 | 11.06 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2835 | 2814.77 | 11.36 | 2838 | 2816.23 | 15.99 | 2835 | 2811.67 | 13.78 | 2842 | 2814.87 | 15.36 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2817.2 | 13.78 | 2838 | 2817.8 | 12.26 | 2834 | 2813.77 | 12.71 | 2845 | 2811.83 | 16.74 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1036: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2837 | 2810.47 | 16.11 | 2833 | 2807.57 | 17.14 | 2833 | 2813.1 | 12.89 | 2833 | 2809.67 | 15.24 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2809.97 | 15.41 | 2839 | 2811.97 | 14.07 | 2840 | 2811.47 | 11.83 | 2837 | 2811.77 | 12.66 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2836 | 2811.07 | 13.13 | 2842 | 2810.2 | 13.18 | 2839 | 2809.77 | 17.31 | 2835 | 2810.37 | 13.57 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.6 | 1.83 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2836 | 2811.63 | 9.95 | 2838 | 2807.2 | 13.97 | 2836 | 2814.77 | 10.4 | 2847 | 2811.97 | 15.89 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1037: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2682.97 | 12.42 | 2718 | 2688.87 | 15.28 | 2705 | 2686.83 | 11.3 | 2709 | 2684.5 | 13.12 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2685.5 | 12.61 | 2708 | 2685.87 | 13.31 | 2704 | 2681.97 | 13.66 | 2710 | 2683.67 | 13.6 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2712 | 2683.77 | 13.71 | 2700 | 2686.17 | 9.48 | 2705 | 2685.6 | 14.7 | 2709 | 2683.37 | 10.8 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2690.43 | 13.68 | 2713 | 2688.63 | 11.68 | 2707 | 2684.73 | 14.17 | 2699 | 2680.3 | 15.67 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.1038: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2709 | 2682.07 | 13.94 | 2710 | 2683.53 | 14.76 | 2714 | 2686.57 | 14.43 | 2702 | 2680.13 | 14.46 |
| | | 2op | 2700 | 2690.13 | 4.28 | 2698 | 2689.9 | 3.98 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2700 | 2683.37 | 13.28 | 2710 | 2684.37 | 17.53 | 2716 | 2683.37 | 11.39 | 2708 | 2687.77 | 11.23 |
| | | 2op | 2706 | 2690.83 | 5.23 | 2702 | 2695.63 | 3.05 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2683.07 | 12.72 | 2711 | 2685.7 | 15.65 | 2715 | 2687.43 | 14.11 | 2706 | 2684.3 | 10.92 |
| | | 2op | 2697 | 2691.2 | 4.05 | 2700 | 2694.7 | 3.71 | 2699 | 2689.97 | 4.41 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2678.43 | 14.62 | 2713 | 2683.13 | 18.89 | 2710 | 2684.67 | 12.44 | 2710 | 2682.93 | 13.94 |
| | | 2op | 2698 | 2692.1 | 4 | 2702 | 2695.67 | 1.75 | 2698 | 2693.67 | 2.96 | 2687 | 2687 | 0 |

Table A.1039: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2713 | 2686.87 | 13.88 | 2706 | 2689.07 | 11.16 | 2707 | 2688.2 | 9.3 | 2703 | 2685.03 | 13.53 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2685.6 | 11.51 | 2712 | 2693.47 | 11 | 2703 | 2686.97 | 12.54 | 2709 | 2682.37 | 13.88 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2709 | 2688 | 11.42 | 2708 | 2684.97 | 11.7 | 2709 | 2683.2 | 15.57 | 2717 | 2685.5 | 16.35 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2683.97 | 11.42 | 2712 | 2688.8 | 13.32 | 2705 | 2682.83 | 11.9 | 2703 | 2684.17 | 16.39 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.1040: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2700 | 2678.9 | 11.61 | 2713 | 2685.23 | 15.38 | 2710 | 2684.07 | 12.28 | 2706 | 2684.17 | 14.9 |
| | | 2op | 2699 | 2690.37 | 4.11 | 2699 | 2690.17 | 4.41 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2684.07 | 11.43 | 2703 | 2683.47 | 10.51 | 2718 | 2683.87 | 12.34 | 2709 | 2682.33 | 14.12 |
| | | 2op | 2698 | 2690.8 | 4.22 | 2706 | 2694.67 | 4.2 | 2698 | 2687.37 | 2.01 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2704 | 2679.5 | 12.68 | 2708 | 2685.97 | 13.7 | 2704 | 2682.23 | 13.35 | 2698 | 2678.97 | 14.18 |
| | | 2op | 2700 | 2691 | 4.5 | 2700 | 2694.47 | 3.23 | 2704 | 2690.27 | 5.03 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2679.27 | 13.84 | 2708 | 2685.97 | 14.42 | 2707 | 2687.6 | 12.16 | 2707 | 2687.33 | 12.29 |
| | | 2op | 2698 | 2691.83 | 4.07 | 2700 | 2695.93 | 1.51 | 2700 | 2693.23 | 4.45 | 2687 | 2687 | 0 |

Table A.1041: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2707 | 2689.37 | 10.71 | 2714 | 2689.07 | 12.02 | 2710 | 2684.97 | 14.67 | 2701 | 2682.2 | 15.84 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2688.4 | 13.69 | 2708 | 2684.6 | 15.89 | 2703 | 2684.63 | 13.24 | 2711 | 2685.67 | 11.35 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2685.93 | 12.66 | 2702 | 2688.43 | 8.88 | 2711 | 2686.83 | 15.97 | 2709 | 2683.83 | 12.16 |
| | | 2op | 2699 | 2690.53 | 4.55 | 2708 | 2693.27 | 6.15 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| | 50 | rnd | 2709 | 2683.93 | 14.92 | 2702 | 2681.03 | 13.44 | 2710 | 2686.57 | 11.45 | 2713 | 2686.7 | 14.63 |
| | | 2op | 2696 | 2687.57 | 2.16 | 2696 | 2687.57 | 2.16 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.1042: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2705 | 2678.3 | 11.29 | 2708 | 2684.3 | 13.05 | 2707 | 2687.03 | 11.52 | 2711 | 2689.1 | 16.7 |
| | | 2op | 2700 | 2691.97 | 4.33 | 2700 | 2690.83 | 4.8 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2682.13 | 10.54 | 2706 | 2684.3 | 13.31 | 2706 | 2686.33 | 13.65 | 2711 | 2686.7 | 13 |
| | | 2op | 2698 | 2694.3 | 2.53 | 2698 | 2691.5 | 4.39 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2700 | 2678.83 | 13.61 | 2703 | 2676.73 | 16.45 | 2705 | 2688.47 | 8.96 | 2713 | 2684.53 | 12.4 |
| | | 2op | 2700 | 2693.63 | 3.92 | 2698 | 2694.1 | 2.95 | 2697 | 2687.53 | 2.1 | 2687 | 2687 | 0 |
| | 50 | rnd | 2698 | 2684 | 11.47 | 2708 | 2685.73 | 13.76 | 2715 | 2687.6 | 12.83 | 2716 | 2685.53 | 14.8 |
| | | 2op | 2696 | 2695.07 | 0.25 | 2699 | 2693.37 | 3.45 | 2695 | 2688 | 2.61 | 2687 | 2687 | 0 |

Table A.1043: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17882 | 17786.2 | 42.05 | 17841 | 17796.1 | 32.29 | 17871 | 17789.2 | 39.13 | 17863 | 17792.4 | 41.13 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17871 | 17807.37 | 32.64 | 17878 | 17798.63 | 36.52 | 17877 | 17803.53 | 41.03 | 17855 | 17782.07 | 37.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17857 | 17791.1 | 41.11 | 17876 | 17812.03 | 35.42 | 17834 | 17786.23 | 41.81 | 17848 | 17785.43 | 39.5 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17866 | 17801.43 | 38.79 | 17869 | 17792.57 | 39.73 | 17878 | 17799.2 | 47.72 | 17889 | 17802.93 | 49.79 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1044: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17870 | 17791.77 | 36.7 | 17886 | 17803 | 34.56 | 17887 | 17788.53 | 47.04 | 17845 | 17779.9 | 44.85 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17906 | 17800.47 | 45 | 17856 | 17799.73 | 35.11 | 17899 | 17799.47 | 35.64 | 17878 | 17785.33 | 46.37 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17899 | 17802.9 | 38.21 | 17871 | 17798.8 | 34.96 | 17866 | 17793.8 | 42.53 | 17860 | 17796.47 | 36.81 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17859 | 17792.17 | 35.18 | 17847 | 17781.93 | 38.19 | 17921 | 17808.7 | 37.78 | 17876 | 17791 | 48.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1045: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17844 | 17790.5 | 29.01 | 17910 | 17801.73 | 44 | 17880 | 17794.73 | 46.31 | 17887 | 17806.9 | 31.33 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17886 | 17803.37 | 36.65 | 17879 | 17804.57 | 36.42 | 17882 | 17815.67 | 30.07 | 17843 | 17789.63 | 32.32 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17925 | 17796.87 | 41.37 | 17868 | 17797 | 43.42 | 17887 | 17792.33 | 47.55 | 17868 | 17796.07 | 36.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17853 | 17796.07 | 33.06 | 17861 | 17801.5 | 33.06 | 17898 | 17808.4 | 30.79 | 17833 | 17792.77 | 34.09 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1046: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17880 | 17792.03 | 40.22 | 17880 | 17804.97 | 33.95 | 17886 | 17787.7 | 45.68 | 17882 | 17796.63 | 40.29 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17861 | 17798.4 | 33.86 | 17850 | 17798.53 | 31.82 | 17884 | 17790.37 | 44.28 | 17877 | 17796.9 | 45.64 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17897 | 17797.2 | 39.64 | 17861 | 17796.23 | 35.58 | 17866 | 17793.8 | 41.1 | 17863 | 17800.83 | 36.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17921 | 17803.57 | 41.35 | 17876 | 17793.77 | 44.69 | 17866 | 17783 | 44.78 | 17893 | 17808.33 | 41.73 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1047: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17879 | 17798.03 | 37.31 | 17899 | 17790.47 | 53.04 | 17880 | 17790.57 | 40.15 | 17866 | 17795.7 | 37.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17865 | 17800.23 | 28 | 17859 | 17809.8 | 30.08 | 17901 | 17814.67 | 40.25 | 17888 | 17806.53 | 43.87 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17865 | 17804.77 | 32.95 | 17862 | 17802.3 | 27.88 | 17849 | 17797 | 36.03 | 17906 | 17810.43 | 39.77 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17836 | 17782.27 | 32.19 | 17874 | 17789.47 | 36.63 | 17853 | 17790.17 | 31.19 | 17867 | 17801.9 | 37.22 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1048: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17853 | 17797.6 | 40.81 | 17877 | 17789.93 | 35.25 | 17843 | 17788.17 | 32.32 | 17862 | 17793.07 | 43.34 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17868 | 17797.23 | 44.88 | 17883 | 17806.77 | 36.28 | 17866 | 17800.07 | 29.95 | 17881 | 17793.03 | 46.05 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17841 | 17789.63 | 38.56 | 17834 | 17782.23 | 31.52 | 17904 | 17785.93 | 43.57 | 17883 | 17795.3 | 43.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17899 | 17797.63 | 44.4 | 17851 | 17800.33 | 31.84 | 17861 | 17803.53 | 32.55 | 17872 | 17798.73 | 37.59 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1049: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22138 | 22071.3 | 45.43 | 22170 | 22064.8 | 43.43 | 22183 | 22056.63 | 48.21 | 22133 | 22060.53 | 36.71 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22167 | 22082.03 | 39.55 | 22143 | 22070.47 | 43.39 | 22161 | 22075.33 | 47.57 | 22170 | 22080.4 | 39.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22164 | 22082 | 51.82 | 22146 | 22066.33 | 34.85 | 22170 | 22065.7 | 44.12 | 22193 | 22066.6 | 54.18 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22069.23 | 43.42 | 22143 | 22057.6 | 48.01 | 22139 | 22065.53 | 46.61 | 22202 | 22084.37 | 46.51 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1050: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22166 | 22068.7 | 38.72 | 22124 | 22045.63 | 51.44 | 22139 | 22066.67 | 39.99 | 22154 | 22049.23 | 46.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22063.8 | 53.57 | 22180 | 22076.07 | 47.99 | 22141 | 22059.43 | 50.97 | 22129 | 22064.27 | 35.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22138 | 22068.4 | 38.27 | 22178 | 22072.13 | 52.6 | 22133 | 22064.53 | 40.4 | 22123 | 22064.33 | 41.55 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22175 | 22065.27 | 54.99 | 22162 | 22065.77 | 38.94 | 22146 | 22061.5 | 42.27 | 22171 | 22066.8 | 48.14 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1051: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22140 | 22059.03 | 36.75 | 22184 | 22082.97 | 46.58 | 22146 | 22057.5 | 46.54 | 22145 | 22065.43 | 42.4 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22141 | 22068.53 | 46.9 | 22145 | 22060.7 | 37.7 | 22155 | 22067.73 | 51.82 | 22161 | 22070.83 | 43.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22144 | 22071.83 | 43.05 | 22157 | 22073.23 | 43.72 | 22183 | 22055.93 | 44.98 | 22144 | 22067.37 | 43.53 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22120 | 22066.67 | 35.27 | 22136 | 22065.27 | 45.87 | 22143 | 22047 | 58.62 | 22155 | 22060.2 | 46.45 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1052: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22163 | 22078.77 | 47.16 | 22160 | 22080.27 | 45.12 | 22130 | 22050 | 42.62 | 22133 | 22053.47 | 42.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22162 | 22057 | 46.54 | 22134 | 22058.33 | 42.67 | 22148 | 22055.83 | 45.7 | 22135 | 22063.97 | 41.79 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22192 | 22068.07 | 47.16 | 22155 | 22073.33 | 51.26 | 22146 | 22065.43 | 42.14 | 22154 | 22061.8 | 50.3 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22148 | 22064.6 | 43.2 | 22160 | 22058.07 | 45.14 | 22168 | 22067.17 | 35.91 | 22168 | 22071.2 | 43.66 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1053: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22178 | 22084.53 | 48.81 | 22150 | 22075.37 | 52.84 | 22203 | 22078.03 | 50.14 | 22133 | 22049.13 | 43.7 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22163 | 22065.93 | 48.08 | 22153 | 22060.87 | 52.35 | 22130 | 22048.6 | 45.97 | 22128 | 22056.87 | 47.98 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22199 | 22068.6 | 47.82 | 22199 | 22068.6 | 47.82 | 22143 | 22067.33 | 44.74 | 22200 | 22068.97 | 60.78 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22155 | 22076.93 | 44.65 | 22155 | 22078.97 | 42.31 | 22154 | 22072.8 | 43.81 | 22166 | 22062.43 | 45.63 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1054: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22164 | 22058.03 | 51.71 | 22155 | 22063.5 | 43.82 | 22137 | 22065.53 | 38.39 | 22220 | 22069 | 53.22 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22136 | 22061.77 | 35.82 | 22128 | 22063.03 | 44.63 | 22176 | 22077.53 | 40.82 | 22157 | 22060.33 | 47.29 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22142 | 22076.33 | 44.3 | 22158 | 22068.6 | 49.43 | 22182 | 22087.17 | 43.58 | 22146 | 22066.73 | 47.13 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22128 | 22042.77 | 54.62 | 22169 | 22065.13 | 39.38 | 22176 | 22065.6 | 46.62 | 22148 | 22060.73 | 48.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1055: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24737 | 24662.73 | 44.97 | 24747 | 24639.5 | 56.87 | 24752 | 24672.57 | 49.29 | 24776 | 24660.43 | 50.57 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24759 | 24667.47 | 51.05 | 24771 | 24656.47 | 51.22 | 24728 | 24664.8 | 39.58 | 24747 | 24655.83 | 41.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24673.73 | 50.69 | 24791 | 24669.97 | 50.42 | 24744 | 24664.77 | 52.91 | 24746 | 24655.37 | 44.26 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24777 | 24664.43 | 53.11 | 24746 | 24674.87 | 36.95 | 24795 | 24653.17 | 57.01 | 24746 | 24653.8 | 46.42 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1056: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24735 | 24674.03 | 43.38 | 24731 | 24659.37 | 49.11 | 24762 | 24667.8 | 51.36 | 24741 | 24671.9 | 43.3 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24651.7 | 60.03 | 24775 | 24656.33 | 39.57 | 24732 | 24663.2 | 40.92 | 24764 | 24683.3 | 43.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24808 | 24662.53 | 65.95 | 24731 | 24665.37 | 34.7 | 24790 | 24681.97 | 49.91 | 24747 | 24658.4 | 48.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24742 | 24655.17 | 49.91 | 24767 | 24664.9 | 48.45 | 24754 | 24658.63 | 51.39 | 24746 | 24671.27 | 47.59 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1057: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24770 | 24680.73 | 38.89 | 24744 | 24665.7 | 55.27 | 24752 | 24660.63 | 59.78 | 24772 | 24673.63 | 46.01 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24752 | 24663.53 | 50.09 | 24727 | 24665.1 | 38.52 | 24771 | 24647.43 | 62.5 | 24778 | 24664.53 | 54.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24763 | 24674.6 | 47.46 | 24770 | 24665.4 | 53.88 | 24800 | 24659.97 | 49.22 | 24746 | 24662 | 54.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24775 | 24683.23 | 49.99 | 24730 | 24671.83 | 38.58 | 24767 | 24679.8 | 42.61 | 24760 | 24675.63 | 53.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1058: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24753 | 24667.9 | 54.58 | 24771 | 24682.13 | 50.59 | 24762 | 24668.57 | 53.11 | 24784 | 24665.27 | 51.19 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24729 | 24661.23 | 40.52 | 24744 | 24670.93 | 41.89 | 24788 | 24661.23 | 48.81 | 24754 | 24669.67 | 41.53 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24747 | 24667.6 | 49.15 | 24788 | 24678.7 | 46.57 | 24781 | 24663.57 | 53.57 | 24734 | 24666.8 | 46.16 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24745 | 24664.7 | 49.48 | 24811 | 24683.17 | 62.38 | 24812 | 24659 | 53.61 | 24736 | 24649.9 | 41.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1059: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24757 | 24675.83 | 47.13 | 24732 | 24657.53 | 41.06 | 24720 | 24640.67 | 46.92 | 24754 | 24657.37 | 43.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24739 | 24651.23 | 53.09 | 24732 | 24652.4 | 45.58 | 24759 | 24657.27 | 56.2 | 24751 | 24675.67 | 32.95 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24672.13 | 54.39 | 24782 | 24672.13 | 54.39 | 24766 | 24673.33 | 52.29 | 24797 | 24667.97 | 61.86 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24674.3 | 41.95 | 24754 | 24674.3 | 41.95 | 24757 | 24650.8 | 53.14 | 24734 | 24661.07 | 34.91 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1060: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24809 | 24674.27 | 43.08 | 24787 | 24666.63 | 43.53 | 24750 | 24659.13 | 57.33 | 24796 | 24681.93 | 53.35 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24727 | 24646.43 | 41.62 | 24742 | 24662.17 | 45.47 | 24771 | 24656.37 | 59.25 | 24750 | 24666.93 | 45.65 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24778 | 24664.87 | 53.45 | 24755 | 24674.7 | 51.6 | 24775 | 24657.97 | 49.92 | 24729 | 24642.2 | 48.06 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24749 | 24661.1 | 46 | 24778 | 24668.43 | 44.53 | 24791 | 24672.3 | 52.43 | 24757 | 24665.63 | 49.5 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1061: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47970 | 47857.6 | 61.56 | 47974 | 47860.57 | 83.4 | 47985 | 47841.37 | 83.33 | 48016 | 47857.93 | 80.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48057 | 47894.67 | 84.9 | 47986 | 47856.03 | 77.18 | 48017 | 47836 | 76.2 | 48025 | 47848.67 | 70.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48067 | 47877.27 | 70.49 | 48067 | 47868.37 | 89.96 | 47960 | 47867.07 | 67.08 | 48024 | 47849.87 | 72.61 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47865.43 | 71.56 | 48096 | 47840.37 | 97.09 | 48030 | 47855.27 | 79.85 | 48029 | 47847.23 | 90.2 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1062: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48003 | 47857.47 | 99.4 | 47998 | 47840.37 | 91 | 47965 | 47832.73 | 69.6 | 47964 | 47815.27 | 76.6 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47997 | 47846.03 | 83.05 | 47970 | 47854.77 | 63.47 | 47983 | 47837.47 | 66.1 | 47994 | 47866.53 | 59.53 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 47959 | 47815.17 | 67.55 | 47973 | 47863.53 | 67.3 | 48090 | 47831.73 | 108.29 | 47999 | 47810 | 102.62 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48012 | 47852.37 | 88.23 | 48002 | 47834.47 | 75.25 | 47957 | 47856.5 | 71.38 | 47979 | 47846.3 | 79.58 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1063: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48033 | 47858.03 | 76.76 | 48077 | 47848.13 | 100.18 | 47967 | 47832.2 | 79.98 | 47971 | 47849.3 | 83.01 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48000 | 47861.3 | 84.69 | 48025 | 47861.37 | 72.3 | 48032 | 47823.83 | 101.51 | 48043 | 47863.1 | 87.03 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48051 | 47907.73 | 77.27 | 47993 | 47864.2 | 76.6 | 47960 | 47831.37 | 75.98 | 48098 | 47871.6 | 92.92 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48021 | 47851.93 | 80.68 | 47990 | 47861.6 | 68.72 | 47940 | 47824.3 | 60.56 | 47979 | 47849.33 | 73.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1064: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47993 | 47850.57 | 75.47 | 48010 | 47877.1 | 74.91 | 48003 | 47828.13 | 114.68 | 48041 | 47867.13 | 74.19 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47982 | 47856.47 | 81.14 | 48081 | 47850.5 | 73.37 | 48033 | 47860.53 | 87.26 | 47993 | 47858.43 | 86.78 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48059 | 47876 | 88.89 | 47978 | 47843.5 | 76.05 | 47970 | 47867 | 63.03 | 47996 | 47857.13 | 84.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48016 | 47851.97 | 74.44 | 47948 | 47848.83 | 67.03 | 48029 | 47825.8 | 63.68 | 48027 | 47845.27 | 96.44 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1065: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48002 | 47844.03 | 68.81 | 48002 | 47844.03 | 68.81 | 47998 | 47865.57 | 70.59 | 48008 | 47838.6 | 81.28 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47964 | 47864.73 | 63.01 | 47964 | 47864.73 | 63.01 | 47983 | 47848.3 | 68.07 | 47998 | 47858.77 | 61.59 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48035 | 47861 | 70.01 | 48035 | 47861 | 70.01 | 47962 | 47856.27 | 61.44 | 47942 | 47832.03 | 60.48 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47841.27 | 77.04 | 48042 | 47841.27 | 77.04 | 47976 | 47809.13 | 85.75 | 47991 | 47810.1 | 89.97 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1066: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48067 | 47865.93 | 79.66 | 47977 | 47860.63 | 76.74 | 47978 | 47866.5 | 67.57 | 47976 | 47854.8 | 59.08 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47965 | 47854.07 | 64.58 | 47957 | 47855.57 | 70.13 | 48090 | 47887.67 | 82.34 | 47966 | 47838.6 | 63.15 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48092 | 47864.67 | 79.98 | 48092 | 47864.67 | 79.98 | 48112 | 47844.97 | 110.85 | 47945 | 47840.17 | 60.56 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47995 | 47860.03 | 93.25 | 47990 | 47844.83 | 80.31 | 48015 | 47871.93 | 64.9 | 48039 | 47866.63 | 91.73 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1067: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56133 | 55944.5 | 86.47 | 56108 | 55940.9 | 94.81 | 56055 | 55922.33 | 79.46 | 56131 | 55911.13 | 113.25 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56124 | 55930.8 | 81.75 | 56130 | 55927.27 | 102.67 | 56098 | 55902.5 | 89.02 | 56205 | 55937.6 | 104.6 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56100 | 55935.07 | 82.69 | 56086 | 55939.1 | 83.46 | 56147 | 55900.13 | 85.57 | 56088 | 55925.9 | 71.94 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56151 | 55970.2 | 79.4 | 56144 | 55959.33 | 88.91 | 56105 | 55913.97 | 85.75 | 56045 | 55929.27 | 67.48 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1068: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56093 | 55893.87 | 103.21 | 56148 | 55945 | 80.61 | 56182 | 55942.17 | 98.7 | 56047 | 55916.13 | 85 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56152 | 55916 | 105.66 | 56131 | 55959.53 | 72.93 | 56110 | 55936.77 | 76.84 | 56051 | 55898.37 | 77.95 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56065 | 55928.83 | 83.98 | 56104 | 55955.53 | 72.05 | 56120 | 55945.33 | 80.11 | 56077 | 55903.77 | 83.29 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56030 | 55909.7 | 59.99 | 56057 | 55941.67 | 87.74 | 56083 | 55909.87 | 72.49 | 56168 | 55943.4 | 116.23 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1069: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56168 | 55962.37 | 104.1 | 56088 | 55941.73 | 88.05 | 56080 | 55927.8 | 74.91 | 56125 | 55936.5 | 96.18 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56172 | 55960.07 | 92.73 | 56066 | 55931.37 | 76.16 | 56083 | 55955.5 | 81.91 | 56029 | 55916 | 87.14 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56099 | 55953.03 | 78.58 | 56098 | 55965 | 83.41 | 56168 | 55952.97 | 96.98 | 56068 | 55935.03 | 84.74 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56099 | 55933.73 | 76.18 | 56177 | 55936 | 89.32 | 56073 | 55933.33 | 80.87 | 56092 | 55925.3 | 73.22 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1070: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56139 | 55909.33 | 104.41 | 56107 | 55949.2 | 80.46 | 56020 | 55898.47 | 69.87 | 56155 | 55955.43 | 91.27 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56114 | 55947.03 | 86.19 | 56147 | 55923.97 | 84.33 | 56086 | 55908.3 | 84.58 | 55996 | 55914.43 | 64.7 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56108 | 55933.53 | 89.43 | 56092 | 55926.57 | 82.01 | 56091 | 55914.23 | 75.41 | 56109 | 55929.4 | 102.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56120 | 55946.63 | 82.67 | 56170 | 55908.63 | 89.4 | 56083 | 55945.7 | 60.2 | 56137 | 55959.2 | 78.54 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1071: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56123 | 55919.67 | 87.96 | 56123 | 55919.67 | 87.96 | 56129 | 55913.2 | 84.72 | 56070 | 55951.27 | 71.9 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56195 | 55923.87 | 111.28 | 56195 | 55923.87 | 111.28 | 56103 | 55914.03 | 84.23 | 56053 | 55928.33 | 69.87 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56193 | 55940.7 | 96.72 | 56193 | 55940.7 | 96.72 | 56091 | 55940.33 | 90.3 | 56061 | 55941.63 | 69.33 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56062 | 55915.77 | 74.41 | 56062 | 55915.77 | 74.41 | 56074 | 55928.83 | 69.66 | 56115 | 55956.57 | 79.61 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1072: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56143 | 55942.57 | 98.83 | 56139 | 55931.73 | 78.41 | 56100 | 55948.57 | 85.87 | 56075 | 55925.97 | 87.59 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56069 | 55937.1 | 100.55 | 56076 | 55938.93 | 75.2 | 56077 | 55947.6 | 69.34 | 56159 | 55938.77 | 86.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56059 | 55947.2 | 70.21 | 56059 | 55947.2 | 70.21 | 56060 | 55940.7 | 70.49 | 56136 | 55945.4 | 84.8 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56146 | 55944 | 88.23 | 56146 | 55942.13 | 75.78 | 56175 | 55940 | 97.49 | 56091 | 55929.03 | 98.32 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1073: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

**Results With No Post on Large Real World Problem Instances**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| 51 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| 101 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |

Table A.1074: *COL*: basicRRGA – Suspected Optimal is 8345841

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5287198 | 5263674.63 | 12805.55 | 5287198 | 5263674.63 | 12805.55 | 5287198 | 5263674.63 | 12805.55 | 5258218 | 5077018.03 | 118522.12 |
| | 50 | rnd | 5548184 | 5523105.07 | 11859.17 | 5548184 | 5523105.07 | 11859.17 | 5548184 | 5523105.07 | 11859.17 | 5544133 | 5463798.37 | 60063.32 |
| 51 | 20 | rnd | 5132699 | 5092742.77 | 18025.5 | 5132699 | 5092742.77 | 18025.5 | 5132699 | 5092742.77 | 18025.5 | 5132699 | 5092742.77 | 18025.5 |
| | 50 | rnd | 5236843 | 5206842.13 | 13796.55 | 5236843 | 5206842.13 | 13796.55 | 5236843 | 5206842.13 | 13796.55 | 5236843 | 5206842.13 | 13796.55 |
| 101 | 20 | rnd | 4919353 | 4890356.47 | 14928.53 | 4919353 | 4890356.47 | 14928.53 | 4919353 | 4890356.47 | 14928.53 | 4919353 | 4890356.47 | 14928.53 |
| | 50 | rnd | 5020476 | 4986755.33 | 15922.1 | 5020476 | 4986755.33 | 15922.1 | 5020476 | 4986755.33 | 15922.1 | 5020476 | 4986755.33 | 15922.1 |

Table A.1075: *COL*: transRRGA – Suspected Optimal is 8345841

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| 51 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| 101 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |

Table A.1076: *COL*: basicRRGA+RS – Suspected Optimal is 8345841

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5269146 | 5244554.83 | 12493.12 | 5269146 | 5244554.83 | 12493.12 | 5269146 | 5244554.83 | 12493.12 | 5197069 | 5039815.67 | 102458.93 |
| | 50 | rnd | 5520975 | 5487050.43 | 14035.44 | 5520975 | 5487050.43 | 14035.44 | 5520975 | 5487050.43 | 14035.44 | 5520975 | 5409440.6 | 80043.76 |
| 51 | 20 | rnd | 5109242 | 5080525.6 | 12976.6 | 5109242 | 5080525.6 | 12976.6 | 5109242 | 5080525.6 | 12976.6 | 5109242 | 5080525.6 | 12976.6 |
| | 50 | rnd | 5229481 | 5198478.07 | 14478.87 | 5229481 | 5198478.07 | 14478.87 | 5229481 | 5198478.07 | 14478.87 | 5229481 | 5198478.07 | 14478.87 |
| 101 | 20 | rnd | 4922915 | 4885896.07 | 14209.69 | 4922915 | 4885896.07 | 14209.69 | 4922915 | 4885896.07 | 14209.69 | 4922915 | 4885896.07 | 14209.69 |
| | 50 | rnd | 5018749 | 4978202.37 | 16100.65 | 5018749 | 4978202.37 | 16100.65 | 5018749 | 4978202.37 | 16100.65 | 5018749 | 4978202.37 | 16100.65 |

Table A.1077: *COL*: transRRGA+RS – Suspected Optimal is 8345841

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| 51 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| 101 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |

Table A.1078: *COL*: basicRRGA+IM – Suspected Optimal is 8345841

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4476848 | 4462690.13 | 6248.89 | 4476848 | 4462690.13 | 6248.89 | 4476848 | 4462690.13 | 6248.89 | 4476848 | 4462690.13 | 6248.89 |
| 51 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| 101 | 20 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |
| | 50 | rnd | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 | 4458492 | 4458492 | 0 |

Table A.1079: *COL*: transRRGA+IM – Suspected Optimal is 8345841

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| 51 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| 101 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |

Table A.1080: $MW2$: basicRRGA – Suspected Optimal is 663208

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 445177 | 442228.3 | 1139.38 | 445177 | 442228.3 | 1139.38 | 445177 | 442228.3 | 1139.38 | 440831 | 430668.3 | 6957.43 |
| | 50 | rnd | 461582 | 459644.07 | 881.92 | 461582 | 459644.07 | 881.92 | 461582 | 459644.07 | 881.92 | 460644 | 455571.03 | 4505.01 |
| 51 | 20 | rnd | 430518 | 428468.83 | 1070.93 | 430518 | 428468.83 | 1070.93 | 430518 | 428468.83 | 1070.93 | 430518 | 428468.83 | 1070.93 |
| | 50 | rnd | 437826 | 436084.23 | 1018.53 | 437826 | 436084.23 | 1018.53 | 437826 | 436084.23 | 1018.53 | 437826 | 436084.23 | 1018.53 |
| 101 | 20 | rnd | 415550 | 413785.6 | 1034.24 | 415550 | 413785.6 | 1034.24 | 415550 | 413785.6 | 1034.24 | 415550 | 413785.6 | 1034.24 |
| | 50 | rnd | 422499 | 420554.63 | 1218.79 | 422499 | 420554.63 | 1218.79 | 422499 | 420554.63 | 1218.79 | 422499 | 420554.63 | 1218.79 |

Table A.1081: $MW2$: transRRGA – Suspected Optimal is 663208

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| 51 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| 101 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |

Table A.1082: $MW2$: basicRRGA+RS – Suspected Optimal is 663208

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 442569 | 441047.93 | 884.22 | 442569 | 441047.93 | 884.22 | 442569 | 441047.93 | 884.22 | 441373 | 430878.8 | 5496.38 |
| | 50 | rnd | 459371 | 457609.13 | 937.39 | 459371 | 457609.13 | 937.39 | 459371 | 457609.13 | 937.39 | 459205 | 453902.57 | 4382.4 |
| 51 | 20 | rnd | 430263 | 428071.1 | 1135.25 | 430263 | 428071.1 | 1135.25 | 430263 | 428071.1 | 1135.25 | 430263 | 428071.1 | 1135.25 |
| | 50 | rnd | 438203 | 436285.33 | 927.63 | 438203 | 436285.33 | 927.63 | 438203 | 436285.33 | 927.63 | 438203 | 436285.33 | 927.63 |
| 101 | 20 | rnd | 414806 | 412982.2 | 913.51 | 414806 | 412982.2 | 913.51 | 414806 | 412982.2 | 913.51 | 414806 | 412982.2 | 913.51 |
| | 50 | rnd | 422404 | 419940.77 | 1115.79 | 422404 | 419940.77 | 1115.79 | 422404 | 419940.77 | 1115.79 | 422404 | 419940.77 | 1115.79 |

Table A.1083: $MW2$: transRRGA+RS – Suspected Optimal is 663208

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| 51 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| 101 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |

Table A.1084: $MW2$: basicRRGA+IM – Suspected Optimal is 663208

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 367659 | 365754.5 | 959.48 | 367659 | 365754.5 | 959.48 | 367659 | 365754.5 | 959.48 | 367659 | 365754.5 | 959.48 |
| | 50 | rnd | 384938 | 382492.93 | 946.17 | 384938 | 382492.93 | 946.17 | 384938 | 382492.93 | 946.17 | 384938 | 382492.93 | 946.17 |
| 51 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| 101 | 20 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |
| | 50 | rnd | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 | 362631 | 362631 | 0 |

Table A.1085: $MW2$: transRRGA+IM – Suspected Optimal is 663208

**Results With No Post Optimization and Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46637 | 46316.97 | 250.01 | 46274 | 45406.8 | 565.78 | 42440 | 41406.8 | 622.15 | 41161 | 40349.3 | 339.31 |
| | | 2op | 47077 | 46657.3 | 192.86 | 46595 | 45907.73 | 342.87 | 43650 | 42337.47 | 512.82 | 42333 | 41720.57 | 381.52 |
| | 50 | rnd | 46680 | 46321.1 | 174.79 | 46559 | 45932.87 | 347.81 | 43627 | 42790.53 | 724.91 | 40854 | 40133 | 350.68 |
| | | 2op | 46964 | 46658.93 | 140.37 | 46885 | 46365.03 | 225.03 | 44554 | 43575.47 | 655.43 | 42193 | 41525.47 | 389.06 |
| 51 | 20 | rnd | 46790 | 46515.33 | 149.75 | 46758 | 46441.4 | 144.39 | 45985 | 44877.67 | 500.37 | 42670 | 42230.57 | 249.4 |
| | | 2op | 47051 | 46811.2 | 147.69 | 47050 | 46729 | 165.46 | 46081 | 45309.1 | 431.51 | 43792 | 43229.93 | 299.41 |
| | 50 | rnd | 46821 | 46505.63 | 183.94 | 46784 | 46443.57 | 180.18 | 46317 | 45669.83 | 361.7 | 43379 | 42091.5 | 464.28 |
| | | 2op | 47096 | 46791.43 | 146.06 | 47096 | 46733.5 | 149.24 | 46775 | 46115.57 | 306.13 | 43621 | 42952.2 | 361.28 |

Table A.1086: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46499 | 46277.77 | 160.12 | 47075 | 46874.63 | 80.05 | 46306 | 45854.67 | 195.16 | 45254 | 44577.47 | 354.6 |
| | | 2op | 47343 | 47288.27 | 29.95 | 47290 | 47205.73 | 51.81 | 47186 | 46991.6 | 95.2 | 46415 | 45819.8 | 323.44 |
| | 50 | rnd | 46527 | 46312.17 | 113 | 47262 | 47108.93 | 69.25 | 46546 | 46152.73 | 213.53 | 45809 | 45293.93 | 198.09 |
| | | 2op | 47354 | 47303.97 | 22.57 | 47347 | 47290.7 | 37.18 | 47287 | 47152.2 | 95.67 | 46810 | 46424.17 | 298.98 |
| 51 | 20 | rnd | 46624 | 46378.27 | 123.42 | 47312 | 47172.4 | 57.75 | 46846 | 46587.5 | 188.99 | 46039 | 45695.3 | 229.93 |
| | | 2op | 47385 | 47290.63 | 29.52 | 47365 | 47310.6 | 33.4 | 47285 | 47186.77 | 55.17 | 47043 | 46830.77 | 134.86 |
| | 50 | rnd | 46579 | 46282.23 | 145.51 | 47344 | 47226.27 | 56.86 | 47111 | 46795.97 | 144 | 46255 | 45854.87 | 162.33 |
| | | 2op | 47355 | 47302.93 | 23.41 | 47421 | 47348.13 | 37.19 | 47284 | 47210.33 | 43.36 | 47141 | 46982.9 | 102.69 |

Table A.1087: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46494 | 46277.23 | 155.16 | 46075 | 45539.33 | 283.85 | 42160 | 41085.77 | 591.5 | 40876 | 40176.7 | 359.03 |
| | | 2op | 46943 | 46683.77 | 155.4 | 46501 | 45988.83 | 323.99 | 43213 | 42068.03 | 516.2 | 42515 | 41575.53 | 435.38 |
| | 50 | rnd | 46723 | 46311.7 | 198.41 | 46450 | 45928.3 | 285.16 | 43710 | 42626.2 | 765.86 | 40699 | 40064.6 | 355.4 |
| | | 2op | 47064 | 46660.67 | 213.54 | 46861 | 46375.77 | 245.38 | 44578 | 43446.27 | 559.63 | 42369 | 41464.63 | 385.29 |
| 51 | 20 | rnd | 46995 | 46490.23 | 202.09 | 46995 | 46406.17 | 258.89 | 45752 | 44963.77 | 510.52 | 42897 | 42237.67 | 307.1 |
| | | 2op | 47037 | 46805.67 | 118.8 | 47023 | 46723.43 | 165.33 | 45878 | 45360.27 | 346.77 | 43625 | 43194.93 | 307.14 |
| | 50 | rnd | 46887 | 46493.87 | 207.73 | 46850 | 46441.83 | 213.39 | 46238 | 45655.63 | 288.48 | 43246 | 42041.1 | 453.72 |
| | | 2op | 47078 | 46798 | 163.14 | 47064 | 46755.9 | 183.92 | 46472 | 46012.57 | 365.92 | 43893 | 42990.37 | 422.98 |

Table A.1088: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46532 | 46282.33 | 149.01 | 47153 | 46880.57 | 134.36 | 46130 | 45835.77 | 152.16 | 45216 | 44700.7 | 358.07 |
| | | 2op | 47382 | 47295.97 | 35.96 | 47305 | 47211.8 | 62.93 | 47156 | 46969.13 | 122.26 | 46364 | 45798.63 | 372.31 |
| | 50 | rnd | 46563 | 46299.77 | 145.28 | 47190 | 47070.9 | 68.19 | 46492 | 46033.77 | 190.87 | 45770 | 45121.27 | 372.8 |
| | | 2op | 47379 | 47307.67 | 29.2 | 47392 | 47271.13 | 42.06 | 47218 | 47105.17 | 85.88 | 46846 | 46298.23 | 265.77 |
| 51 | 20 | rnd | 46574 | 46297.53 | 134.86 | 47310 | 47170.87 | 74.42 | 47008 | 46619.03 | 140.68 | 46035 | 45638.9 | 206.17 |
| | | 2op | 47333 | 47282.43 | 39.43 | 47371 | 47302.93 | 36.41 | 47317 | 47170.27 | 61.96 | 47036 | 46828.1 | 119.73 |
| | 50 | rnd | 46507 | 46298.23 | 130.42 | 47351 | 47228.17 | 70.33 | 47057 | 46791.03 | 105.5 | 46169 | 45777.87 | 198.52 |
| | | 2op | 47356 | 47300.63 | 31.26 | 47396 | 47341.63 | 32.78 | 47340 | 47218.03 | 59.86 | 47196 | 46994.73 | 93.77 |

Table A.1089: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46902 | 46631.5 | 148.53 | 46902 | 46609.3 | 151.49 | 43700 | 41926.9 | 747.88 | 40888 | 40584.33 | 201.77 |
| | | 2op | 47279 | 47065.1 | 95.8 | 47276 | 47042.03 | 103.28 | 44225 | 42776.73 | 621.33 | 42452 | 41868.97 | 227.07 |
| | 50 | rnd | 46921 | 46684.67 | 128.9 | 46889 | 46675.9 | 129.13 | 44331 | 42772.23 | 1019.84 | 40840 | 40422.6 | 197.8 |
| | | 2op | 47224 | 47009.9 | 107.23 | 47215 | 46995 | 109.8 | 44542 | 43661.1 | 565.05 | 42075 | 41753.2 | 181.98 |
| 51 | 20 | rnd | 47139 | 46924.93 | 93.92 | 47139 | 46923.07 | 96.28 | 46455 | 45780.7 | 500 | 42529 | 42136.53 | 206.47 |
| | | 2op | 47349 | 47267.27 | 47.41 | 47349 | 47267.17 | 47.43 | 46990 | 46387.83 | 487.93 | 44300 | 43350.8 | 258.27 |
| | 50 | rnd | 47177 | 47039.63 | 82.98 | 47173 | 47032.17 | 82.79 | 46676 | 46101.23 | 392.24 | 42279 | 41802.37 | 272.41 |
| | | 2op | 47426 | 47280.07 | 52.78 | 47426 | 47277.33 | 56.81 | 47120 | 46509.53 | 369.08 | 43381 | 42846.73 | 223.75 |

Table A.1090: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46636 | 46447.77 | 122.03 | 46595 | 46393.87 | 112.73 | 46234 | 45912.53 | 172.63 | 45010 | 44303.53 | 313.75 |
| | | 2op | 47347 | 47297.53 | 24.36 | 47342 | 47275.07 | 30.84 | 47164 | 47008.93 | 81.55 | 45975 | 45490.27 | 277.42 |
| | 50 | rnd | 46697 | 46509.83 | 88.91 | 47007 | 46688.1 | 177.99 | 46325 | 46122.37 | 123.11 | 45628 | 45016.2 | 257.02 |
| | | 2op | 47353 | 47316.83 | 23.27 | 47331 | 47292.43 | 26.9 | 47259 | 47107.87 | 90.06 | 46620 | 46202.73 | 250.15 |
| 51 | 20 | rnd | 46713 | 46511.7 | 85.81 | 46862 | 46700.27 | 79.35 | 46477 | 46289.43 | 92.35 | 45819 | 45508.63 | 221.73 |
| | | 2op | 47364 | 47317.07 | 20.43 | 47353 | 47302.03 | 21.7 | 47284 | 47211.7 | 44.61 | 46856 | 46606.17 | 175.39 |
| | 50 | rnd | 46964 | 46551.53 | 133.6 | 47034 | 46783.9 | 86.65 | 46721 | 46249.83 | 200.34 | 46040 | 45671.43 | 175.01 |
| | | 2op | 47369 | 47320.13 | 21.14 | 47323 | 47285.6 | 18.58 | 47290 | 47208.87 | 45.17 | 47100 | 46903.37 | 112.02 |

Table A.1091: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 146586 | 144205.7 | 1246.98 | 142950 | 140313.97 | 1693.46 | 128936 | 118105.83 | 5398.38 | 87730 | 78583 | 3882.85 |
| | | 2op | 146825 | 145013.67 | 1007.38 | 145109 | 141765.23 | 1907.28 | 126561 | 117272.17 | 6240.48 | 83733 | 76331.63 | 3651.42 |
| | 50 | rnd | 145504 | 143816.17 | 938.76 | 144805 | 142599.2 | 1176.21 | 136488 | 130666.47 | 3413.43 | 99639 | 90128.47 | 5226.77 |
| | | 2op | 146887 | 144930.37 | 1127.31 | 145760 | 143739.17 | 1250.64 | 136482 | 131041.4 | 3396.69 | 96406 | 84692.37 | 6400.97 |
| 51 | 20 | rnd | 147308 | 145351.33 | 1243.12 | 146967 | 144900.63 | 1309.4 | 143271 | 139132.4 | 2346.87 | 117668 | 111608.8 | 3537.14 |
| | | 2op | 147765 | 146276.17 | 1055.87 | 147688 | 145900.57 | 1159.62 | 142912 | 139138.5 | 2324.23 | 118228 | 106367.7 | 3802.44 |
| | 50 | rnd | 147089 | 145224.63 | 1164.37 | 147044 | 145055.17 | 1150.74 | 145178 | 142274.43 | 1823.99 | 130399 | 123719.43 | 4456.55 |
| | | 2op | 147980 | 146401.23 | 996.22 | 147754 | 146243.2 | 936.25 | 146464 | 143314.43 | 1696.35 | 128754 | 121277.23 | 3866.04 |

Table A.1092: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147160 | 146408.87 | 588.7 | 146756 | 145064.43 | 849.72 | 145582 | 143116.47 | 1383.14 | 139335 | 128892.5 | 5468.34 |
| | | 2op | 150949 | 150438.9 | 415.45 | 150624 | 149325.7 | 886.32 | 149257 | 147184.07 | 1338.63 | 140475 | 132313.4 | 3947.73 |
| | 50 | rnd | 147488 | 146688 | 514.07 | 147560 | 146606.23 | 642.84 | 146663 | 144212.57 | 1462.14 | 144238 | 138108.7 | 2770.41 |
| | | 2op | 150908 | 150663.8 | 243.78 | 150728 | 149921.77 | 571.92 | 150310 | 149020.97 | 818.11 | 145673 | 141705.43 | 2743.16 |
| 51 | 20 | rnd | 147668 | 146305.17 | 685.75 | 147594 | 146712.1 | 467.46 | 147284 | 144526.17 | 1151.47 | 146612 | 141810 | 1873.62 |
| | | 2op | 150913 | 150588.33 | 252.44 | 150693 | 149986.9 | 532.91 | 150567 | 149321.33 | 765.42 | 149406 | 145689 | 1770.49 |
| | 50 | rnd | 147607 | 146807.7 | 367.61 | 147880 | 147332.7 | 355.55 | 146646 | 145658.03 | 701.19 | 145639 | 143808.83 | 1155.16 |
| | | 2op | 150910 | 150672.2 | 208.18 | 150736 | 150337.7 | 288.29 | 150594 | 149897.27 | 555.53 | 149844 | 147636.1 | 1416.23 |

Table A.1093: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147110 | 144290.87 | 1208.12 | 144083 | 141415.57 | 1778.58 | 126085 | 116535.63 | 5340.97 | 85939 | 77933.47 | 4628.29 |
| | | 2op | 146978 | 145039.67 | 1082.67 | 144770 | 141845.03 | 1943.45 | 125600 | 115470.43 | 5794.33 | 81827 | 74828.7 | 3482 |
| | 50 | rnd | 145763 | 143561.87 | 1103.89 | 145139 | 142501.3 | 1247.84 | 135716 | 128878.63 | 4380.55 | 97991 | 89081.6 | 4684.42 |
| | | 2op | 146370 | 144521.13 | 975.85 | 144849 | 143009.4 | 1261.41 | 137079 | 130053.4 | 3876.53 | 102289 | 85226.13 | 7917.23 |
| 51 | 20 | rnd | 147259 | 145583 | 1170.25 | 147131 | 145297.67 | 1227.17 | 144275 | 139032.73 | 2144.28 | 117900 | 110902.97 | 3358.49 |
| | | 2op | 148725 | 145770.43 | 1156.5 | 147319 | 145383.23 | 1156.18 | 143414 | 138650.67 | 3023.14 | 112960 | 106196.4 | 4293.55 |
| | 50 | rnd | 147002 | 145228.73 | 1002.84 | 146901 | 145024.73 | 1078 | 144865 | 142399.27 | 1753.5 | 131517 | 121964.07 | 4507.19 |
| | | 2op | 148166 | 146568.83 | 874.6 | 148157 | 146388.1 | 946.42 | 145495 | 143459.9 | 1457.35 | 130388 | 119711.9 | 4726.97 |

Table A.1094: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147374 | 146051.6 | 690.84 | 147319 | 145072.33 | 923.64 | 144637 | 141941.67 | 1773.21 | 135262 | 127747.77 | 4243.06 |
| | | 2op | 150846 | 150355.57 | 507.72 | 150618 | 149223.3 | 1032.57 | 149541 | 146239.23 | 1785.23 | 141544 | 132559.67 | 4719.04 |
| | 50 | rnd | 147525 | 146537.6 | 623.77 | 147527 | 146254.23 | 605.13 | 146813 | 144247.77 | 1333.18 | 142951 | 137608.9 | 3059.4 |
| | | 2op | 150931 | 150715.67 | 200.84 | 150660 | 149865.17 | 662.27 | 150388 | 148770.37 | 1080.75 | 146361 | 140056 | 3354.37 |
| 51 | 20 | rnd | 147304 | 146273.57 | 629.3 | 147421 | 146405.47 | 543.75 | 146603 | 144389.83 | 1351.24 | 145023 | 141404.67 | 2604.82 |
| | | 2op | 150915 | 150691.47 | 198.81 | 150803 | 150119.2 | 517.14 | 150473 | 149110.33 | 951.91 | 148686 | 145205.73 | 1905.13 |
| | 50 | rnd | 147374 | 146472.27 | 501.58 | 147918 | 147195.67 | 463.72 | 146540 | 145604.93 | 523.65 | 146177 | 144254.3 | 1158.25 |
| | | 2op | 150949 | 150694 | 249.4 | 150830 | 150394.03 | 356.49 | 150497 | 149762.97 | 729.28 | 149566 | 147538.23 | 1438.23 |

Table A.1095: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147466 | 145694.23 | 1032.82 | 147317 | 145536.4 | 1086.99 | 141138 | 135605.87 | 3693.78 | 87589 | 78438.87 | 3883.06 |
| | | 2op | 148001 | 146561.37 | 973.03 | 147994 | 146416.07 | 1003.89 | 141570 | 134108.8 | 5097.85 | 82855 | 76910.67 | 2452.65 |
| | 50 | rnd | 146725 | 145019.43 | 1022.25 | 146665 | 144907.47 | 987.05 | 140202 | 132337.07 | 8564.16 | 93013 | 85931.93 | 4221.67 |
| | | 2op | 147723 | 145718.97 | 1043.05 | 147497 | 145615.47 | 1072.51 | 141157 | 130596.27 | 8828.11 | 86122 | 78461.73 | 3553.35 |
| 51 | 20 | rnd | 149003 | 147485.6 | 807.07 | 148985 | 147481.67 | 805.91 | 147915 | 145815.53 | 1276.47 | 123953 | 112167.57 | 5848.62 |
| | | 2op | 149702 | 148564.8 | 624.51 | 149702 | 148560.03 | 628.72 | 148992 | 147074.4 | 1202.04 | 110181 | 101616.57 | 3798.12 |
| | 50 | rnd | 148039 | 147039.3 | 783.64 | 148039 | 147023 | 787.29 | 147230 | 145661.4 | 923.73 | 127598 | 121014.03 | 3436.61 |
| | | 2op | 149442 | 147964.7 | 808.81 | 149442 | 147959.43 | 810.48 | 148576 | 146592.07 | 1274.57 | 125146 | 117824.77 | 4675.66 |

Table A.1096: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147466 | 146718.07 | 496.1 | 147422 | 146334.83 | 716.4 | 146104 | 144096.67 | 1145.44 | 131282 | 125303.37 | 3607.07 |
| | | 2op | 150913 | 150567.03 | 266.9 | 150831 | 150295.73 | 313.74 | 148923 | 147164.5 | 1369.72 | 132417 | 127450.67 | 4221.53 |
| | 50 | rnd | 147661 | 146970.77 | 453.52 | 147633 | 146724.73 | 493.63 | 146714 | 145043.83 | 886.39 | 139774 | 134889.3 | 3551.28 |
| | | 2op | 150915 | 150754.53 | 151.78 | 150854 | 150458.77 | 370.87 | 150251 | 148597.93 | 968.72 | 143757 | 137617 | 3382.49 |
| 51 | 20 | rnd | 147390 | 146926.93 | 311.03 | 147374 | 146863.63 | 297.44 | 147032 | 145679.77 | 1016.48 | 143367 | 138924.43 | 2108.24 |
| | | 2op | 150927 | 150710.43 | 200.35 | 150869 | 150600.97 | 207.62 | 150569 | 149865.07 | 467.22 | 145364 | 141991.1 | 1697.15 |
| | 50 | rnd | 147566 | 147168.07 | 221.95 | 147524 | 146972.07 | 273.2 | 147151 | 146230.23 | 613.14 | 145345 | 142137.87 | 1891.21 |
| | | 2op | 150949 | 150828.73 | 83.59 | 150918 | 150641.37 | 170.05 | 150582 | 150113.53 | 329.17 | 147720 | 144355.67 | 1871.24 |

Table A.1097: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161887 | 160419.63 | 874.61 | 159583 | 157164.03 | 1455.33 | 143795 | 132071.07 | 5206.28 | 92312 | 82727.37 | 4590.59 |
| | | 2op | 162439 | 160467.23 | 1088.17 | 160838 | 157429.63 | 1685.89 | 140955 | 131236.63 | 5914.99 | 87789 | 80045.77 | 4263.74 |
| | 50 | rnd | 162414 | 160374.83 | 956.84 | 161393 | 159155.3 | 914.43 | 152844 | 146321.2 | 3387.42 | 116899 | 97752.2 | 7610.16 |
| | | 2op | 162846 | 160637.57 | 1136.4 | 161501 | 159299.6 | 1271.32 | 152964 | 146098.03 | 3619.14 | 102736 | 92048.77 | 6844.04 |
| 51 | 20 | rnd | 162349 | 160742.3 | 979.39 | 162238 | 160232.5 | 1066.34 | 157539 | 153972.17 | 2611.87 | 129939 | 120261.23 | 5853.07 |
| | | 2op | 162814 | 161453.2 | 927.39 | 162664 | 160770.37 | 933.45 | 158140 | 154256.63 | 2565.28 | 127136 | 114516.43 | 6279.72 |
| | 50 | rnd | 163156 | 161224.17 | 852.64 | 163071 | 160990.6 | 874.96 | 160094 | 157995.13 | 1887.85 | 148636 | 136757.1 | 4617.8 |
| | | 2op | 162825 | 161609.4 | 635.95 | 162626 | 161412.97 | 651.29 | 160125 | 157982.77 | 1424.16 | 145945 | 134827.8 | 5235.48 |

Table A.1098: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161050 | 159969.07 | 759.45 | 160338 | 158844.73 | 825.82 | 159183 | 156559.5 | 1874.68 | 148945 | 144499.13 | 3587.14 |
| | | 2op | 165991 | 165602.23 | 303.56 | 165638 | 164699.9 | 523.33 | 164394 | 162035.5 | 1547.98 | 153082 | 147600.07 | 3617.1 |
| | 50 | rnd | 161328 | 160027.97 | 585.44 | 161808 | 160440.4 | 663.49 | 160243 | 157628.53 | 1293.83 | 157316 | 152887.77 | 2708.1 |
| | | 2op | 166124 | 165699.87 | 326.64 | 165743 | 164811.33 | 505.47 | 165047 | 163568.07 | 920.9 | 160647 | 157051.03 | 2404.48 |
| 51 | 20 | rnd | 161461 | 160220.07 | 792.49 | 161515 | 160447.23 | 565.45 | 160163 | 157915.87 | 1203.29 | 158041 | 154951.3 | 1869.48 |
| | | 2op | 165995 | 165645.5 | 285.12 | 165720 | 164957.73 | 489.53 | 165358 | 164188.83 | 696.21 | 163544 | 159841.67 | 2136.27 |
| | 50 | rnd | 160982 | 160010.37 | 576.6 | 161913 | 161175 | 484.73 | 160729 | 158802.67 | 1078.44 | 159797 | 157497.87 | 1621.62 |
| | | 2op | 166172 | 165896.1 | 159.87 | 165934 | 165525.53 | 296.34 | 165733 | 164948.07 | 649.09 | 164709 | 162445.07 | 1457.26 |

Table A.1099: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161450 | 160171.5 | 921.5 | 159315 | 156698.6 | 1658.56 | 145308 | 132617.93 | 4966.67 | 92284 | 82498.6 | 4540.1 |
| | | 2op | 161703 | 160654.6 | 674.79 | 160558 | 157107.93 | 1888.45 | 138973 | 130742.17 | 5302.82 | 84416 | 77361.53 | 3689.05 |
| | 50 | rnd | 161423 | 160221.6 | 976.78 | 160703 | 158762.23 | 1137.55 | 150987 | 145933.13 | 2754.6 | 106948 | 93629 | 6331.43 |
| | | 2op | 163022 | 160347.7 | 1187.96 | 162116 | 159098.5 | 1404.58 | 152230 | 146210.33 | 3600.34 | 109550 | 90486.33 | 8208.61 |
| 51 | 20 | rnd | 162374 | 161160.43 | 873.65 | 162124 | 160657.73 | 896.15 | 158167 | 153635.07 | 2586.32 | 128733 | 119689.27 | 4500.26 |
| | | 2op | 163116 | 161892.1 | 698.72 | 162679 | 161301.8 | 834.49 | 158135 | 154387.83 | 2517.66 | 127879 | 115640.7 | 7040.82 |
| | 50 | rnd | 163206 | 161279.83 | 968.69 | 163080 | 161066.83 | 975.21 | 160322 | 157973.63 | 1424.37 | 145838 | 135758.7 | 4912.83 |
| | | 2op | 163250 | 161582.37 | 995.02 | 162799 | 161288.67 | 970.22 | 161573 | 158068.07 | 1821.8 | 140985 | 133780.83 | 4377.87 |

Table A.1100: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161156 | 159572.1 | 813.55 | 160811 | 158452.5 | 1149.4 | 158918 | 155580.17 | 1381.12 | 148742 | 142131.8 | 4115.43 |
| | | 2op | 166047 | 165539.73 | 432.91 | 165516 | 164572.3 | 639.33 | 164575 | 161672.2 | 1455.31 | 153102 | 146991.83 | 4302.39 |
| | 50 | rnd | 161054 | 159941.47 | 716.48 | 161207 | 160180.03 | 656.22 | 159663 | 157430.63 | 1348.38 | 155423 | 151338.47 | 2671.51 |
| | | 2op | 166092 | 165872.73 | 181.67 | 165743 | 164951.3 | 634.61 | 165245 | 163598.03 | 947.12 | 160447 | 155454.6 | 3674.57 |
| 51 | 20 | rnd | 161339 | 159971.13 | 593.82 | 161348 | 160396.2 | 519.38 | 159513 | 157889.07 | 1263.35 | 158709 | 155507.67 | 1839.15 |
| | | 2op | 166040 | 165738.53 | 264.78 | 165806 | 165160.93 | 471.6 | 165649 | 164434.8 | 828.27 | 164277 | 160578.47 | 2567.42 |
| | 50 | rnd | 160923 | 160172.93 | 524.21 | 161769 | 161185.7 | 333.16 | 160620 | 158809.3 | 986.28 | 159825 | 157219.47 | 1452.31 |
| | | 2op | 166151 | 165803.13 | 286.42 | 166076 | 165371.07 | 478.37 | 165758 | 164939.8 | 618.91 | 164203 | 162467.23 | 955.96 |

Table A.1101: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162367 | 160860.9 | 807.83 | 161797 | 160622.27 | 776.28 | 158549 | 151622.4 | 2708.36 | 90236 | 83676.33 | 3696.11 |
| | | 2op | 163515 | 161865.6 | 734.25 | 163485 | 161680.77 | 772.14 | 155811 | 150851.93 | 4097.77 | 87642 | 80785.8 | 2637.79 |
| | 50 | rnd | 162939 | 160881.2 | 845.83 | 162876 | 160780.03 | 838.34 | 158531 | 148100.7 | 8082.7 | 105568 | 94947.27 | 5852.08 |
| | | 2op | 162422 | 161204.87 | 953.33 | 162377 | 161030.07 | 936.06 | 157677 | 148554.33 | 7039.66 | 99965 | 87296.47 | 5741.52 |
| 51 | 20 | rnd | 163447 | 162413.7 | 681.24 | 163446 | 162411.93 | 683.36 | 161622 | 160529.9 | 677.81 | 131497 | 122964.5 | 5354.56 |
| | | 2op | 164487 | 163413.43 | 468.29 | 164487 | 163411.33 | 467.82 | 162595 | 161516.17 | 711.91 | 134928 | 115995.1 | 6146.74 |
| | 50 | rnd | 163648 | 162226.37 | 653.87 | 163648 | 162225.53 | 653.33 | 162363 | 160832.87 | 764.74 | 145171 | 136189.07 | 3766.6 |
| | | 2op | 163908 | 162792.2 | 735.6 | 163908 | 162792.2 | 735.6 | 162888 | 161207.4 | 1082.24 | 145713 | 135231.63 | 6101.18 |

Table A.1102: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161068 | 160379.1 | 441.31 | 160914 | 159998.2 | 641.78 | 159883 | 158048.73 | 1193.72 | 148166 | 140115.53 | 4562.35 |
| | | 2op | 166070 | 165672.37 | 265.73 | 165913 | 165329.87 | 403.64 | 164384 | 162883.17 | 979.33 | 148847 | 143391.7 | 2737.87 |
| | 50 | rnd | 161240 | 160556.27 | 466.9 | 161166 | 160217.87 | 578.78 | 160280 | 158757 | 1114.58 | 156606 | 149747.97 | 3859.48 |
| | | 2op | 166109 | 165933.8 | 120.11 | 165914 | 165635.83 | 164.24 | 165187 | 164038.57 | 700.07 | 159275 | 154142.87 | 3192.81 |
| 51 | 20 | rnd | 161258 | 160493.5 | 498.2 | 161227 | 160405.3 | 540.11 | 160730 | 159757.67 | 607.15 | 157526 | 150966.93 | 2240.6 |
| | | 2op | 166097 | 165856.4 | 192.29 | 165994 | 165774.43 | 210.14 | 165619 | 164992.53 | 510.32 | 158513 | 154230.03 | 1746.81 |
| | 50 | rnd | 161394 | 160757.1 | 385.04 | 161340 | 160616.27 | 415.37 | 160711 | 159878.03 | 557.35 | 159290 | 156222.4 | 2055.63 |
| | | 2op | 166125 | 165983.13 | 85.79 | 166003 | 165805.03 | 115.53 | 165865 | 165078.27 | 503.84 | 163236 | 160428.93 | 2136.75 |

Table A.1103: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158651 | 157695.47 | 417.23 | 156619 | 155118.13 | 895.07 | 144255 | 133276.33 | 4968.48 | 90674 | 82302.37 | 3689.64 |
| | | 2op | 158875 | 158028.67 | 579.77 | 157071 | 155149.97 | 1061.16 | 139724 | 130977.97 | 5914.81 | 89989 | 80456.8 | 4789.04 |
| | 50 | rnd | 158649 | 157713.93 | 542.6 | 157492 | 156261.2 | 731.62 | 151695 | 146233.37 | 3583.41 | 114141 | 97877.2 | 6719.71 |
| | | 2op | 158790 | 158067.73 | 357.6 | 157856 | 156490.23 | 783.13 | 152211 | 146875.8 | 3350.15 | 108460 | 92635.37 | 7924.88 |
| 51 | 20 | rnd | 159003 | 157978.63 | 508.07 | 158380 | 157457.73 | 507.56 | 154893 | 152678.3 | 1513.21 | 126140 | 119979.67 | 4721.84 |
| | | 2op | 159338 | 158553.2 | 474.52 | 159046 | 158085.07 | 556.99 | 155631 | 152694.33 | 1940.5 | 132635 | 118322.17 | 6067.69 |
| | 50 | rnd | 159136 | 158008.2 | 498.91 | 158719 | 157661.33 | 534.94 | 157374 | 155091.27 | 1149.44 | 144888 | 136746.1 | 3480.8 |
| | | 2op | 159502 | 158566.8 | 471.89 | 159383 | 158202.6 | 486.19 | 157280 | 155639.97 | 842.95 | 143805 | 135795.07 | 5355.06 |

Table A.1104: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 153055 | 152448.23 | 494.12 | 154247 | 152273.93 | 732.51 | 152297 | 148991.37 | 1552.69 | 144982 | 139996.23 | 3802.02 |
| | | 2op | 162094 | 161864.83 | 183.09 | 161466 | 160892.47 | 539.31 | 160323 | 158630.73 | 1083.61 | 153127 | 148330.67 | 2673.56 |
| | 50 | rnd | 153342 | 152584.9 | 554.13 | 154075 | 153482.3 | 427.17 | 152362 | 150607 | 1008.83 | 150810 | 146939.53 | 2271.11 |
| | | 2op | 162198 | 161933.3 | 210.24 | 161789 | 161301.6 | 322.67 | 161213 | 160248.53 | 641.49 | 157527 | 155205.03 | 1836.77 |
| 51 | 20 | rnd | 153212 | 152443.9 | 531.66 | 154378 | 153457.8 | 566.54 | 152444 | 150769.67 | 1042.89 | 150423 | 148325.23 | 1537.65 |
| | | 2op | 162068 | 161820.67 | 279.44 | 161948 | 161286.1 | 498.16 | 161496 | 160673.2 | 546.6 | 159558 | 157727.67 | 1067.54 |
| | 50 | rnd | 153337 | 152575.47 | 420.26 | 154198 | 153814.23 | 207.9 | 153312 | 152092.13 | 635.42 | 152190 | 150690.43 | 1012.25 |
| | | 2op | 162297 | 162079.5 | 118.56 | 161996 | 161620.87 | 324.56 | 161702 | 161184.07 | 361.63 | 160483 | 158894.53 | 1054.79 |

Table A.1105: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158650 | 157525.5 | 556.75 | 157052 | 154595.23 | 908.48 | 142188 | 132266.57 | 6116.41 | 90210 | 79971.8 | 5234.65 |
| | | 2op | 158839 | 157909.1 | 523.51 | 157430 | 155275.6 | 1143.87 | 143683 | 133312.07 | 4543.39 | 86297 | 77874.3 | 3742.13 |
| | 50 | rnd | 158527 | 157742.27 | 510.09 | 157050 | 156218.97 | 601.33 | 151294 | 147082.93 | 2476.97 | 114640 | 96305.07 | 7945.53 |
| | | 2op | 158916 | 157892 | 527.42 | 157818 | 156429.33 | 761.94 | 152447 | 145074.87 | 3844.81 | 105619 | 95064.03 | 6674.86 |
| 51 | 20 | rnd | 158837 | 158027.8 | 444.97 | 158393 | 157376.9 | 512.22 | 154906 | 152319.63 | 1534.7 | 130575 | 118141.7 | 6473.63 |
| | | 2op | 159259 | 158435.77 | 468.82 | 158643 | 157948.5 | 461.95 | 156071 | 152801.13 | 2297.89 | 133715 | 116728.57 | 6718.54 |
| | 50 | rnd | 158806 | 157996.03 | 541.14 | 158535 | 157675.33 | 542.48 | 157042 | 155067.7 | 946.91 | 145446 | 137689.07 | 4424.07 |
| | | 2op | 159272 | 158655.53 | 341.76 | 158958 | 158291.97 | 384.31 | 157935 | 156065.53 | 741.33 | 146394 | 134808.37 | 4714.6 |

Table A.1106: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 153144 | 152353.33 | 641.41 | 153828 | 152173.67 | 945.34 | 151097 | 148478.03 | 1584.25 | 146110 | 138900.83 | 3352.83 |
| | | 2op | 162124 | 161804.53 | 225.63 | 161580 | 160955.8 | 477.69 | 160170 | 158467.6 | 1135.37 | 154221 | 146347.7 | 3464.76 |
| | 50 | rnd | 153433 | 152557.97 | 413.99 | 154068 | 153362.73 | 458.35 | 151784 | 150143.9 | 1397.99 | 148632 | 145205.73 | 2534.6 |
| | | 2op | 162237 | 161901.2 | 227.39 | 161850 | 161130.83 | 446.84 | 161335 | 159806.73 | 1025.48 | 157922 | 154765.13 | 1929.2 |
| 51 | 20 | rnd | 153407 | 152451.67 | 545.49 | 154307 | 153614.57 | 360.72 | 152763 | 150736.33 | 1292.97 | 151370 | 148205.5 | 1591.31 |
| | | 2op | 162157 | 161851.4 | 246.6 | 161967 | 161292.37 | 444.23 | 161827 | 160618.13 | 785.89 | 159708 | 157160.4 | 1545.03 |
| | 50 | rnd | 153327 | 152559.3 | 377.06 | 154308 | 153992 | 189.23 | 153044 | 151929.33 | 563.45 | 152345 | 150697.6 | 959.09 |
| | | 2op | 162298 | 162046.23 | 115.61 | 161999 | 161633.87 | 273.92 | 161820 | 161202.73 | 310.9 | 160304 | 158954 | 921.35 |

Table A.1107: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158538 | 157858.23 | 456.79 | 158508 | 157698.53 | 496.53 | 153790 | 150666.7 | 3132.98 | 92734 | 84585.2 | 4065.02 |
| | | 2op | 159382 | 158391.93 | 454.67 | 159299 | 158241.63 | 453.15 | 154089 | 151337.77 | 1984.42 | 85356 | 78876.47 | 2628.56 |
| | 50 | rnd | 158322 | 157637.6 | 562.01 | 158250 | 157521 | 554.21 | 155310 | 149834.83 | 4475.55 | 105110 | 96850.2 | 5242.34 |
| | | 2op | 158988 | 158166.7 | 366.56 | 158948 | 158020.13 | 428.88 | 155090 | 151017.1 | 3681.89 | 101209 | 87323.17 | 6237.08 |
| 51 | 20 | rnd | 158819 | 158195.07 | 399.01 | 158819 | 158195.07 | 399.01 | 157346 | 156142.07 | 563.74 | 137002 | 126904.73 | 6262.43 |
| | | 2op | 159521 | 158959.27 | 362.34 | 159521 | 158959.27 | 362.34 | 157649 | 156998.8 | 460.16 | 134605 | 121605.9 | 7892.64 |
| | 50 | rnd | 158704 | 158133.03 | 362.66 | 158704 | 158133.03 | 362.66 | 157334 | 156437.5 | 504.01 | 147562 | 141813.3 | 3515.63 |
| | | 2op | 159311 | 158651.73 | 377.8 | 159311 | 158651.73 | 377.8 | 157754 | 156942.8 | 520.57 | 144957 | 138384.9 | 4467.91 |

Table A.1108: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 153413 | 152592.83 | 436.19 | 153263 | 152368 | 480.75 | 152207 | 150765.83 | 987.42 | 142455 | 136658.13 | 3141.29 |
| | | 2op | 162166 | 161893.93 | 142.96 | 162166 | 161611.37 | 176.14 | 160277 | 159493.9 | 492.06 | 150776 | 143622.83 | 3506.13 |
| | 50 | rnd | 153360 | 152774.47 | 388.43 | 153268 | 152588.7 | 415.48 | 152362 | 151521.37 | 594.14 | 149208 | 145944.1 | 2360.98 |
| | | 2op | 162244 | 162060.2 | 113.51 | 162019 | 161763.43 | 183.55 | 161016 | 159943.47 | 844.31 | 156682 | 152756.17 | 3428.62 |
| 51 | 20 | rnd | 153421 | 152955.4 | 310.29 | 153289 | 152901.3 | 303.54 | 153020 | 152424.07 | 387.18 | 150492 | 145504.87 | 2255.32 |
| | | 2op | 162153 | 161947.53 | 139.09 | 162070 | 161809.53 | 167.12 | 161461 | 161010.77 | 287.88 | 158295 | 153421.53 | 2508.73 |
| | 50 | rnd | 153380 | 152981.5 | 258.83 | 153349 | 152931.67 | 255.17 | 153139 | 152530.27 | 335.32 | 151489 | 149461.07 | 1640.7 |
| | | 2op | 162228 | 162050.3 | 114.42 | 162132 | 161861.07 | 122.35 | 161618 | 161219.03 | 238.27 | 159531 | 155613.67 | 2534.62 |

Table A.1109: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 174766 | 174390.3 | 312.74 | 173211 | 171774.43 | 913.35 | 153922 | 144206.2 | 6721.54 | 99024 | 89600.47 | 5268.7 |
| | | 2op | 175420 | 174894.93 | 308.96 | 173616 | 172099.77 | 1118.82 | 153138 | 142287.13 | 8680.99 | 95671 | 85548 | 4052.65 |
| | 50 | rnd | 175018 | 174570.5 | 304.31 | 173663 | 173043.83 | 446.99 | 168236 | 162644.8 | 3199.18 | 121401 | 107792.33 | 6860.83 |
| | | 2op | 175412 | 175094.5 | 251.03 | 174219 | 173600.23 | 437.51 | 167942 | 163068.63 | 3430.15 | 120838 | 99332.57 | 7759.19 |
| 51 | 20 | rnd | 174855 | 174374.33 | 289.58 | 174282 | 173868.67 | 308.86 | 172433 | 168898.33 | 1796.16 | 144684 | 133660.93 | 5905.35 |
| | | 2op | 175841 | 175310.83 | 336.16 | 175390 | 174732.33 | 414.55 | 172819 | 169441.43 | 2302.73 | 138782 | 125926.33 | 6422.6 |
| | 50 | rnd | 175032 | 174527 | 376.62 | 174615 | 173998.67 | 381.86 | 172661 | 171605.07 | 728.2 | 161326 | 150967.9 | 5350.36 |
| | | 2op | 175852 | 175510.73 | 187.51 | 175458 | 175004.73 | 287.23 | 173796 | 172431.07 | 761.26 | 163211 | 150163.87 | 6599.4 |

Table A.1110: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166952 | 166141.43 | 782.72 | 167623 | 166210.63 | 990.58 | 165364 | 162028.07 | 1739.82 | 159659 | 153253.13 | 4904.33 |
| | | 2op | 179113 | 178750 | 228.05 | 178580 | 177728.67 | 631.81 | 177128 | 175519.6 | 1170.12 | 167169 | 163159.33 | 3598.83 |
| | 50 | rnd | 166817 | 166466.43 | 371.94 | 168181 | 167526.53 | 344.15 | 166321 | 163958.13 | 1625.19 | 164684 | 159997 | 2306.89 |
| | | 2op | 179242 | 178991.67 | 132.9 | 178902 | 178368.03 | 258.61 | 178020 | 177231.33 | 522.01 | 175210 | 171998.5 | 1972.66 |
| 51 | 20 | rnd | 166791 | 166172.57 | 707.53 | 168501 | 167762.5 | 489.31 | 166784 | 164394.87 | 1219.91 | 165912 | 161984.7 | 1857.04 |
| | | 2op | 179118 | 178869.6 | 159.99 | 178821 | 178373.3 | 385.9 | 178491 | 177557.67 | 713.34 | 175963 | 173852.1 | 1578.86 |
| | 50 | rnd | 166755 | 166477.8 | 159.26 | 168702 | 167793.93 | 306.78 | 166944 | 166085.07 | 428.83 | 166106 | 164366.5 | 1459.18 |
| | | 2op | 179191 | 179031.93 | 102.08 | 179057 | 178661.37 | 277.97 | 178841 | 178143.97 | 405.46 | 177013 | 175653.4 | 905.89 |

Table A.1111: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 174873 | 174314.77 | 388.49 | 173243 | 171302.2 | 1206.79 | 160658 | 146774.8 | 5995.01 | 98974 | 88048.37 | 6189.65 |
| | | 2op | 175207 | 174825.83 | 334.33 | 173585 | 172216.5 | 866.9 | 153736 | 144719.3 | 6803.26 | 92571 | 83134.33 | 4617.05 |
| | 50 | rnd | 174999 | 174556.2 | 298.89 | 173700 | 173079.2 | 455.67 | 168767 | 162567.57 | 3539.85 | 123917 | 104807.53 | 9216.38 |
| | | 2op | 175380 | 174897 | 367.61 | 174236 | 173319.3 | 557.59 | 168079 | 162332 | 4393.18 | 118895 | 94814.53 | 7243.95 |
| 51 | 20 | rnd | 174893 | 174491.33 | 224.98 | 174517 | 173974.17 | 319.09 | 172170 | 169592.47 | 1472.49 | 142293 | 132876.5 | 5754.46 |
| | | 2op | 175764 | 175404.37 | 203.24 | 175262 | 174744.57 | 289.8 | 172745 | 168643.8 | 2599.81 | 139844 | 126794.47 | 5782.52 |
| | 50 | rnd | 174829 | 174487.1 | 306.2 | 174584 | 174005.87 | 317.76 | 172809 | 171572.43 | 865.13 | 157955 | 151872.53 | 4384.18 |
| | | 2op | 175887 | 175496.23 | 255.1 | 175464 | 175051.6 | 282.62 | 173792 | 172402.37 | 1068.11 | 159957 | 149461.23 | 5080.36 |

Table A.1112: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166885 | 166098.17 | 590.53 | 167565 | 166220.43 | 983.31 | 165109 | 161991.17 | 2151.25 | 161228 | 152538.57 | 4164.16 |
| | | 2op | 178991 | 178770.47 | 198.73 | 178485 | 177901.6 | 536.67 | 177042 | 175515.83 | 1098 | 170418 | 163523.87 | 3977.78 |
| | 50 | rnd | 166790 | 166443.33 | 299.06 | 167904 | 167257 | 370.65 | 166217 | 164028.4 | 1557.97 | 164678 | 159939.7 | 3289.03 |
| | | 2op | 179227 | 178933.27 | 243.41 | 178801 | 178233.47 | 441.74 | 177811 | 176686.33 | 956.96 | 174025 | 171650.93 | 1830.43 |
| 51 | 20 | rnd | 166824 | 166090.6 | 690.68 | 168675 | 167470.63 | 581.08 | 166366 | 164506.6 | 1121.38 | 164703 | 161688.73 | 1934.3 |
| | | 2op | 179197 | 178847.67 | 209.99 | 178804 | 178335.6 | 359.65 | 178392 | 177521.53 | 843.14 | 176706 | 174024.73 | 1747.85 |
| | 50 | rnd | 166774 | 166377.87 | 410.78 | 168562 | 167866.63 | 318.56 | 166681 | 165912.77 | 517.88 | 165944 | 164145.97 | 1537.2 |
| | | 2op | 179345 | 179024.1 | 164.02 | 179067 | 178673.1 | 214.9 | 178699 | 178070.27 | 516.92 | 176925 | 175560.87 | 990.39 |

Table A.1113: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 174466 | 174115.67 | 258.01 | 174431 | 174054.4 | 270.34 | 169375 | 166954.27 | 1908.1 | 102822 | 94271.27 | 4771.19 |
| | | 2op | 175400 | 174981.03 | 166.73 | 175219 | 174859.67 | 181.45 | 170759 | 167768.07 | 2245.49 | 97983 | 87156.03 | 3145.09 |
| | 50 | rnd | 174647 | 174317.27 | 264.14 | 174645 | 174243.87 | 294.26 | 170689 | 167140.1 | 4935.36 | 119808 | 105333.1 | 6405.47 |
| | | 2op | 175214 | 174832.97 | 331.82 | 175200 | 174764.33 | 361.23 | 171472 | 168572.63 | 3150.52 | 112305 | 97197.33 | 7233.56 |
| 51 | 20 | rnd | 174461 | 174057 | 256.69 | 174461 | 174057 | 256.69 | 172419 | 171845.43 | 427.65 | 155073 | 143542.4 | 7542.24 |
| | | 2op | 175561 | 175213.93 | 182.87 | 175561 | 175213.93 | 182.87 | 173682 | 172889.33 | 522.01 | 151635 | 137203.33 | 9679.95 |
| | 50 | rnd | 174160 | 173847.63 | 319.46 | 174160 | 173847.63 | 319.46 | 172737 | 171991.73 | 426.79 | 164745 | 157989.13 | 3511.35 |
| | | 2op | 175602 | 174947.2 | 204.38 | 175602 | 174947.2 | 204.38 | 173614 | 173028.53 | 355.07 | 165392 | 154423.5 | 6853.6 |

Table A.1114: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166932 | 166349.23 | 504.66 | 166831 | 166134.83 | 576.57 | 166221 | 164590.03 | 802.62 | 161509 | 152330.53 | 3611.16 |
| | | 2op | 179104 | 178829.43 | 191.97 | 178976 | 178560.03 | 216.19 | 177082 | 176186.33 | 628.56 | 166414 | 161556.17 | 3008.18 |
| | 50 | rnd | 166811 | 166612.7 | 104.85 | 166753 | 166424.1 | 207.52 | 166208 | 165122.37 | 848.36 | 162745 | 159567.37 | 1675.48 |
| | | 2op | 179236 | 179012.53 | 147.13 | 178965 | 178666.03 | 228.07 | 177835 | 176849.57 | 686.29 | 173835 | 169709.77 | 2080.03 |
| 51 | 20 | rnd | 166833 | 166506.27 | 291.92 | 166833 | 166492.27 | 290.92 | 166407 | 165841.17 | 474.91 | 163668 | 158980.43 | 2140.43 |
| | | 2op | 179179 | 178898.97 | 159.48 | 179162 | 178810.57 | 184.73 | 178471 | 177869.2 | 762.87 | 173577 | 169318 | 2716.53 |
| | 50 | rnd | 166754 | 166502.87 | 221.15 | 166715 | 166467.93 | 201.18 | 166408 | 166221.17 | 204.79 | 165592 | 163122.1 | 1881.99 |
| | | 2op | 179302 | 179071.27 | 102.01 | 179196 | 178892.03 | 132.91 | 178621 | 178126.7 | 304.36 | 176073 | 172642.6 | 2418.53 |

Table A.1115: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 329514 | 325175.53 | 2237.16 | 317341 | 309478.93 | 4744.62 | 249011 | 226738.93 | 13889.42 | 161916 | 155233.37 | 4385.66 |
| | | 2op | 330043 | 326389.6 | 1559.98 | 319723 | 309726.73 | 5203.44 | 251328 | 220679.4 | 11200.71 | 165494 | 154250.43 | 4546.74 |
| | 50 | rnd | 330728 | 326317.83 | 2128.39 | 327467 | 318979.13 | 3086.36 | 288551 | 272081.6 | 7804.75 | 182792 | 171523.43 | 5952.15 |
| | | 2op | 331147 | 326127.13 | 1859.66 | 324282 | 318713.43 | 2936.49 | 287123 | 268667.5 | 11185.82 | 176096 | 162413.17 | 7227.1 |
| 51 | 20 | rnd | 329991 | 326955.1 | 1470.57 | 329151 | 324984.77 | 1990.85 | 310553 | 296924.6 | 6441.82 | 222563 | 210824.9 | 6999.95 |
| | | 2op | 331753 | 328663.97 | 1468.84 | 329792 | 326432.4 | 1974.73 | 305715 | 292215.8 | 6979.37 | 217721 | 204117.2 | 6638.76 |
| | 50 | rnd | 330098 | 327683.6 | 1707.05 | 329569 | 326823 | 1597.32 | 319714 | 310940.77 | 4526.68 | 254977 | 241832.63 | 6268.8 |
| | | 2op | 332282 | 329811.67 | 1653.1 | 331590 | 328647 | 1765.82 | 319495 | 311065.73 | 5548.44 | 255724 | 236070.8 | 11344.36 |

Table A.1116: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 330961 | 328746.3 | 1148.33 | 328811 | 326017.03 | 1470.27 | 325524 | 320486.63 | 3451.84 | 297256 | 285665.23 | 6766.92 |
| | | 2op | 341565 | 340494.93 | 709.27 | 340158 | 338165.93 | 1128.92 | 336847 | 332127.53 | 2490.43 | 307467 | 293433.27 | 9684.55 |
| | 50 | rnd | 331115 | 329610.2 | 737.66 | 329473 | 326586.43 | 1644.02 | 328446 | 324382.17 | 1998.38 | 316820 | 308900.63 | 5026.44 |
| | | 2op | 341829 | 340798.1 | 790.6 | 340275 | 338750.83 | 1139.98 | 338816 | 336278.43 | 1710.72 | 328798 | 315795.9 | 7210.74 |
| 51 | 20 | rnd | 330369 | 328778.33 | 1111.44 | 329662 | 327013.3 | 1436.7 | 328888 | 325121.83 | 1688.65 | 321653 | 316933.67 | 3270.26 |
| | | 2op | 341701 | 340585.73 | 705.99 | 340997 | 339345.9 | 1251.86 | 339933 | 337812.3 | 1635.9 | 334964 | 328720.07 | 2829.64 |
| | 50 | rnd | 331070 | 329882.57 | 957.83 | 331658 | 329623.4 | 1096.07 | 330288 | 327102.43 | 1967.9 | 329385 | 322991.93 | 3195.18 |
| | | 2op | 341861 | 341341.8 | 374.05 | 341421 | 340164.1 | 674.24 | 340579 | 339089.27 | 914.19 | 336463 | 333387.47 | 2535.24 |

Table A.1117: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 329842 | 324361.6 | 2127.47 | 316420 | 308856.1 | 4381.31 | 251040 | 229497.8 | 10873.7 | 163007 | 153080.6 | 5287.77 |
| | | 2op | 327764 | 325432.97 | 1484.65 | 318268 | 309660.97 | 4986.78 | 247262 | 226618.9 | 14908.86 | 159247 | 151083.33 | 5050.2 |
| | 50 | rnd | 329239 | 325079.5 | 1626.9 | 322700 | 317753.53 | 2085.46 | 279758 | 267363.57 | 9816.1 | 182068 | 167100.57 | 7511.01 |
| | | 2op | 329671 | 326424.93 | 1583.36 | 323532 | 318850.63 | 2896.03 | 285870 | 269190.7 | 10592.71 | 172332 | 157980.2 | 7685 |
| 51 | 20 | rnd | 330346 | 327130.77 | 1504.34 | 327794 | 325475.13 | 1648.29 | 306554 | 292823.4 | 7916.61 | 222209 | 207964.67 | 6944.52 |
| | | 2op | 332027 | 328543.8 | 1450.82 | 330044 | 326081.07 | 2110.38 | 302575 | 290708.8 | 7656.11 | 212652 | 202218.97 | 6864.29 |
| | 50 | rnd | 330193 | 327411.73 | 1423.9 | 329894 | 326329.9 | 1825.95 | 316357 | 309783.77 | 3987.56 | 263865 | 242626 | 10821.11 |
| | | 2op | 332169 | 329711.43 | 1584.5 | 331285 | 328362.17 | 1697.19 | 322728 | 310517.73 | 5297.33 | 253689 | 233054.43 | 10100.78 |

Table A.1118: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 331505 | 328787.17 | 1154.26 | 329269 | 325438.1 | 1703.96 | 326608 | 319963.1 | 2902.18 | 299676 | 287567.1 | 6843.05 |
| | | 2op | 341500 | 340109.2 | 1124.45 | 340267 | 337975.5 | 1388.43 | 336560 | 331765.4 | 3201.4 | 304874 | 292013.03 | 9721.54 |
| | 50 | rnd | 331922 | 329501.57 | 1039.22 | 329769 | 326710.43 | 1634.91 | 327726 | 324362.1 | 1551.56 | 311540 | 305527.8 | 4294.34 |
| | | 2op | 341550 | 340564.7 | 574.24 | 340396 | 338299.6 | 1305.34 | 338737 | 334824.33 | 2192.52 | 321214 | 313102.93 | 5220.93 |
| 51 | 20 | rnd | 331324 | 329022.9 | 992.17 | 330458 | 327638.13 | 1597.6 | 328066 | 325148 | 2186.4 | 324946 | 316309.53 | 5038.67 |
| | | 2op | 341658 | 340334.5 | 905.89 | 340828 | 338985.2 | 1011.52 | 339639 | 337019.5 | 1360.67 | 332773 | 327041 | 3488.24 |
| | 50 | rnd | 331604 | 330048.83 | 893.78 | 331143 | 329598.8 | 920.16 | 329987 | 327117.77 | 1310.22 | 328507 | 323310.3 | 2293.5 |
| | | 2op | 342008 | 341170.07 | 525.22 | 341212 | 340102.73 | 738.43 | 340928 | 338896.23 | 966.65 | 335988 | 332746.1 | 2161.4 |

Table A.1119: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 329572 | 326361.47 | 1757.88 | 329533 | 326360.17 | 1755.43 | 296312 | 284249.07 | 6605.69 | 174048 | 161595.4 | 5471.24 |
| | | 2op | 332738 | 328492.23 | 1901.06 | 332738 | 328451.03 | 1929.8 | 295502 | 283434.03 | 9746.33 | 169424 | 159068.77 | 3610.11 |
| | 50 | rnd | 329483 | 326382.83 | 1407.27 | 329483 | 326379.93 | 1413.32 | 308770 | 266984.9 | 27182.31 | 182955 | 172954.07 | 6036.49 |
| | | 2op | 331844 | 328172.47 | 1408.01 | 331844 | 328169.5 | 1411.3 | 308130 | 272750.07 | 25231.41 | 172697 | 161057.17 | 4710.6 |
| 51 | 20 | rnd | 330790 | 328474.73 | 1728.18 | 330790 | 328474.73 | 1728.18 | 326411 | 321787.9 | 2885.8 | 238655 | 225862.63 | 8907.7 |
| | | 2op | 334553 | 331650.3 | 1301.37 | 334553 | 331650.3 | 1301.37 | 329212 | 324122.53 | 2771.47 | 230976 | 209538.03 | 11228.89 |
| | 50 | rnd | 331406 | 328024.8 | 1886.31 | 331406 | 328024.8 | 1886.31 | 328595 | 324379.07 | 2602.72 | 265369 | 245645.47 | 12691.55 |
| | | 2op | 332495 | 330842.83 | 1327.47 | 332495 | 330842.83 | 1327.47 | 329424 | 327084.37 | 1747.3 | 262777 | 242835.73 | 12368.12 |

Table A.1120: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 331533 | 329160.3 | 1098.06 | 330771 | 328595.9 | 1141.31 | 326519 | 322728.93 | 2097.24 | 294536 | 277541.47 | 6752.03 |
| | | 2op | 341548 | 340579.73 | 623.91 | 341398 | 339972.6 | 947.09 | 336497 | 332239.33 | 2585.6 | 299957 | 283239.47 | 8644.19 |
| | 50 | rnd | 331486 | 330087.53 | 870.67 | 331081 | 329373.6 | 1030.67 | 328950 | 325720.77 | 1952.26 | 312629 | 302889.17 | 5608.31 |
| | | 2op | 341817 | 341152.1 | 439.24 | 341537 | 340476.2 | 669.59 | 339009 | 335056.67 | 2564.79 | 318165 | 309438.6 | 6655.59 |
| 51 | 20 | rnd | 331237 | 330076.8 | 774.86 | 331224 | 329898.43 | 963.98 | 331032 | 328350.8 | 1352.3 | 312360 | 294238.97 | 8095.41 |
| | | 2op | 341527 | 340802.3 | 465.7 | 341423 | 340665 | 452.01 | 340258 | 338742.87 | 954.5 | 320253 | 301116.97 | 9241.44 |
| | 50 | rnd | 331500 | 330393.17 | 597.41 | 331455 | 330208.23 | 626.62 | 330490 | 328989.5 | 852.08 | 324235 | 311440.03 | 9649.64 |
| | | 2op | 341909 | 341266.87 | 325.5 | 341677 | 340970.77 | 391.27 | 340573 | 339588.6 | 673.34 | 333339 | 316862.07 | 10525.61 |

Table A.1121: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 180129 | 174775.17 | 2603.54 | 171884 | 165190 | 3856.53 | 136972 | 127859.17 | 4398.63 | 84501 | 71974.33 | 7562.37 |
| | | 2op | 213940 | 210620.9 | 1669.27 | 205467 | 199006.2 | 3733.51 | 171280 | 155504.13 | 5539.59 | 152258 | 146647.57 | 3413.58 |
| | 50 | rnd | 179468 | 175262.6 | 2581.52 | 174310 | 170020.53 | 2743.34 | 154974 | 143224.7 | 5265.89 | 98631 | 88538.6 | 5591.35 |
| | | 2op | 214357 | 210500.7 | 2464.32 | 210906 | 205513.2 | 3099.77 | 181816 | 170326.5 | 6866.36 | 150468 | 144849.2 | 3475.55 |
| 51 | 20 | rnd | 180438 | 175321.63 | 2597.49 | 178905 | 173561.57 | 2789.45 | 165473 | 157832.47 | 4122.42 | 125408 | 109581.8 | 7072.22 |
| | | 2op | 220072 | 215535.43 | 1826.36 | 217974 | 213986.3 | 1954.19 | 200887 | 192419.7 | 4205.97 | 171471 | 164735.37 | 3047.45 |
| | 50 | rnd | 177818 | 173642.93 | 2811.84 | 177378 | 172516.47 | 2877.65 | 170135 | 164561.7 | 3732.77 | 137843 | 127637.73 | 4899.05 |
| | | 2op | 220295 | 214932.3 | 2474.83 | 219844 | 214236.9 | 2600.91 | 211030 | 203711.8 | 3392.1 | 170133 | 163410.23 | 3230.03 |

Table A.1122: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 28971 | 26132.4 | 1554.73 | 66954 | 60462.17 | 2998.52 | 53089 | 46252.9 | 3109.91 | 38777 | 33472.9 | 3648.64 |
| | | 2op | 225113 | 224305.13 | 390.68 | 224636 | 223620.43 | 697.52 | 223277 | 220401.93 | 1866.21 | 211320 | 205149.73 | 3517.24 |
| | 50 | rnd | 29677 | 26567.7 | 1502.43 | 70076 | 65577.67 | 2739.55 | 57195 | 51932.23 | 3306.48 | 48453 | 36348.83 | 5649.41 |
| | | 2op | 225191 | 224526.4 | 450.38 | 225090 | 224042.23 | 591.76 | 224112 | 222747.13 | 785.04 | 218287 | 214264.93 | 2550.01 |
| 51 | 20 | rnd | 30092 | 27263.43 | 1733.27 | 46469 | 42147.4 | 1870.54 | 61552 | 54076.27 | 2970.06 | 48575 | 39385.8 | 4952.66 |
| | | 2op | 225257 | 224401.67 | 690.47 | 225235 | 224487.67 | 617.21 | 224578 | 223286.87 | 1075.43 | 221638 | 218823.53 | 1978.18 |
| | 50 | rnd | 31036 | 26975.2 | 1453.86 | 45074 | 42221.03 | 2088.59 | 64892 | 58274.53 | 2659.4 | 53518 | 40197.97 | 4783.27 |
| | | 2op | 225004 | 224468.37 | 293.68 | 225263 | 224969.73 | 272.84 | 224824 | 223986.03 | 443.85 | 223378 | 220876.07 | 1688.11 |

Table A.1123: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 180316 | 174963.3 | 2587.93 | 172276 | 164734.17 | 3438.75 | 136714 | 127073.8 | 5319.35 | 80927 | 70251.87 | 6430.95 |
| | | 2op | 214851 | 209571.17 | 2429.88 | 205927 | 198228.43 | 3771.7 | 164813 | 155807.07 | 4558.05 | 157737 | 146030.7 | 3774.34 |
| | 50 | rnd | 180231 | 174371.6 | 2750.34 | 174954 | 169418.9 | 3392.56 | 150379 | 142154.17 | 4746.93 | 100311 | 91207.03 | 5851.97 |
| | | 2op | 214253 | 209074.17 | 2396.39 | 209705 | 203881.13 | 3534.88 | 174459 | 165768.6 | 4169.5 | 150990 | 144500.63 | 3248.23 |
| 51 | 20 | rnd | 180145 | 174133.97 | 2558.52 | 179295 | 172102.07 | 3196.22 | 165460 | 157038.43 | 4124.6 | 122449 | 108337.77 | 7580.64 |
| | | 2op | 219578 | 215286.17 | 2162.4 | 218236 | 213547.73 | 2259.3 | 199690 | 190824.87 | 6105.1 | 170783 | 164348.8 | 3318.28 |
| | 50 | rnd | 180251 | 174992.1 | 2977.12 | 178846 | 173971 | 2880.75 | 170247 | 164998.03 | 2885.43 | 141668 | 128001.1 | 6736.26 |
| | | 2op | 218745 | 214834.63 | 1910.79 | 218021 | 214157.97 | 1872.45 | 207392 | 203340.4 | 3391.43 | 170852 | 162699.87 | 3825.01 |

Table A.1124: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 28971 | 26533.23 | 1396.65 | 63635 | 59771.6 | 2216.74 | 54775 | 45199.17 | 3645.35 | 37650 | 32181.47 | 3059.34 |
| | | 2op | 225222 | 224363 | 560.99 | 224603 | 223849.67 | 758.36 | 223718 | 221067.4 | 1772.73 | 213901 | 202604.83 | 4315.69 |
| | 50 | rnd | 29201 | 26743.03 | 1080.22 | 68564 | 64715.47 | 2055.69 | 57580 | 51146.93 | 3570.71 | 41867 | 35942.37 | 4182.58 |
| | | 2op | 225040 | 224459.8 | 415.97 | 224798 | 224054.93 | 585.69 | 224491 | 222563.83 | 982.77 | 217938 | 212795.9 | 3319.69 |
| 51 | 20 | rnd | 31150 | 26894.07 | 1228.62 | 45748 | 42775.57 | 1650.6 | 58737 | 54660.3 | 2168.6 | 48660 | 39350.9 | 5150.42 |
| | | 2op | 225060 | 224459.07 | 281.6 | 225228 | 224420.8 | 421.72 | 224349 | 223469.9 | 708.87 | 222602 | 219117.03 | 2280.91 |
| | 50 | rnd | 29699 | 26825.5 | 1449.18 | 46415 | 42488.1 | 1754.67 | 62991 | 57421.8 | 2203.67 | 52765 | 42707.27 | 6510.16 |
| | | 2op | 225257 | 224462.83 | 475.3 | 225260 | 224906.07 | 311.22 | 224592 | 223937.33 | 518.32 | 223016 | 221339.4 | 1202.38 |

Table A.1125: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 181409 | 173935.77 | 2837.45 | 181014 | 173273.57 | 3124.07 | 142836 | 131938.6 | 6209.81 | 74111 | 64218.9 | 5312.53 |
| | | 2op | 223511 | 219452.07 | 1819.04 | 223252 | 218862.4 | 1909.15 | 181275 | 163062.17 | 7392.74 | 154458 | 148838.27 | 1978.29 |
| | 50 | rnd | 181196 | 174937.83 | 2697.78 | 181196 | 174460.33 | 2871.01 | 150587 | 138711.77 | 8263.53 | 90909 | 84449.47 | 4161.65 |
| | | 2op | 221480 | 217377.7 | 2135.4 | 221099 | 217185.73 | 2112.34 | 182198 | 169471.9 | 7170.61 | 153052 | 148072.43 | 1841.87 |
| 51 | 20 | rnd | 182436 | 175882.13 | 2841.27 | 182407 | 175877.57 | 2840.96 | 168326 | 162658.83 | 3369.06 | 109960 | 95142.6 | 9270.67 |
| | | 2op | 225230 | 223954.17 | 837.15 | 225230 | 223939.3 | 840.34 | 216277 | 206738.73 | 5939.31 | 171754 | 165259.93 | 2707.27 |
| | 50 | rnd | 183586 | 178516.67 | 2367.61 | 183586 | 178488.5 | 2373.16 | 175794 | 166435.07 | 4926.09 | 124436 | 110094.73 | 12099.91 |
| | | 2op | 225260 | 223640.83 | 996.21 | 225260 | 223629.57 | 1009.08 | 218370 | 211540.27 | 4501.06 | 165847 | 161390.03 | 2818.59 |

Table A.1126: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 30735 | 27824.2 | 1081.44 | 44859 | 41653.47 | 1615.24 | 43838 | 41917.83 | 1676.53 | 27205 | 24072.33 | 1344.62 |
| | | 2op | 225239 | 224651.2 | 272.02 | 225235 | 224432.73 | 406.84 | 223446 | 221204 | 1151.98 | 205748 | 198779.9 | 4093.54 |
| | 50 | rnd | 31393 | 28482.73 | 1090.33 | 50306 | 44998.5 | 2124.96 | 53378 | 49331.63 | 2157.16 | 31369 | 28256.13 | 2093.11 |
| | | 2op | 225257 | 224653 | 288.4 | 225257 | 224584.57 | 300.85 | 223997 | 222548.7 | 1052.6 | 215843 | 210068.87 | 3062.09 |
| 51 | 20 | rnd | 30227 | 28550.6 | 944.31 | 33584 | 29850.93 | 1588.47 | 55359 | 50664.57 | 1717.9 | 36645 | 32303.03 | 2530.47 |
| | | 2op | 225223 | 224771.6 | 203.37 | 225112 | 224728.97 | 239.28 | 224675 | 224032.6 | 439.87 | 218370 | 214415.27 | 1554.51 |
| | 50 | rnd | 30998 | 28714.53 | 882.45 | 35803 | 32118.7 | 1684.55 | 59543 | 55412.07 | 2313.15 | 37826 | 33294.47 | 3169.64 |
| | | 2op | 225257 | 224828.97 | 204.82 | 225226 | 224712.17 | 220.47 | 224610 | 224028.37 | 365.81 | 222264 | 218556.5 | 2134.4 |

Table A.1127: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342618 | 334220.23 | 3853.83 | 318532 | 305746.3 | 7463.74 | 247191 | 223169.63 | 9908.39 | 138070 | 118563.6 | 9362.43 |
| | | 2op | 430886 | 426413.83 | 2846.44 | 400299 | 389449.67 | 7495.52 | 337837 | 331187.47 | 3915.99 | 337696 | 330088.1 | 4025.58 |
| | 50 | rnd | 342958 | 336362.5 | 4230.1 | 331934 | 321376.7 | 5162.68 | 272182 | 257057.3 | 7837.88 | 177226 | 156656.8 | 12676.84 |
| | | 2op | 430836 | 425918.87 | 3144.51 | 418912 | 408713.8 | 5598.76 | 347155 | 336532.77 | 4572.59 | 340114 | 329756.47 | 4054.02 |
| 51 | 20 | rnd | 342206 | 334492.57 | 3666.96 | 340384 | 330824.8 | 4104.16 | 301015 | 284775.9 | 7663.73 | 208395 | 189460.23 | 13347.82 |
| | | 2op | 433494 | 430119.2 | 2231.47 | 429177 | 423816.2 | 3457.69 | 385404 | 369204.33 | 9486.41 | 357588 | 350991.9 | 4019.99 |
| | 50 | rnd | 343012 | 335226.87 | 4358.04 | 340084 | 331703.53 | 4316 | 316397 | 305368.17 | 5472.08 | 238127 | 224132.23 | 8122.78 |
| | | 2op | 433092 | 429276.13 | 2308.31 | 431272 | 427199.7 | 2638.36 | 402879 | 389140.5 | 6571.87 | 352198 | 344195.77 | 3740.71 |

Table A.1128: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47333 | 43616.63 | 1934.1 | 101536 | 94417.03 | 4281.47 | 85200 | 69096.53 | 7750.08 | 66141 | 49591.93 | 10212.65 |
| | | 2op | 437809 | 437444.43 | 316.88 | 437537 | 436989.3 | 428.88 | 435942 | 434340.77 | 1175.8 | 422599 | 412299.53 | 5524.22 |
| | 50 | rnd | 47418 | 43853.93 | 1928.75 | 112473 | 102864.17 | 3816.95 | 88697 | 76196.3 | 7185.04 | 73132 | 60833.77 | 9739.81 |
| | | 2op | 437939 | 437482.67 | 254.88 | 437713 | 437143.77 | 337.79 | 436672 | 435729.87 | 667.97 | 430020 | 425284.37 | 2901.86 |
| 51 | 20 | rnd | 48331 | 44610.93 | 1643.57 | 69852 | 65179.8 | 2233.75 | 96152 | 84895.87 | 6010.41 | 78951 | 61923.73 | 8650.39 |
| | | 2op | 437794 | 437466.97 | 248.59 | 437696 | 437167.87 | 378.98 | 437403 | 436602.33 | 509.37 | 434209 | 431181.4 | 1980.46 |
| | 50 | rnd | 46919 | 44367.67 | 1382.53 | 68358 | 64518.17 | 2312.7 | 100111 | 89906.33 | 5664.07 | 83208 | 63896.87 | 10189.37 |
| | | 2op | 437908 | 437572.97 | 212.1 | 437852 | 437456.83 | 240.11 | 437548 | 437018.07 | 380.8 | 436397 | 433442.7 | 1470.04 |

Table A.1129: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342807 | 334538.33 | 3733.63 | 321737 | 307129 | 7410.58 | 253111 | 226338.83 | 9701.13 | 137913 | 120855.03 | 8407.45 |
| | | 2op | 430826 | 425304.03 | 2690.94 | 401111 | 390122.33 | 6547.49 | 343183 | 330942.13 | 4642.15 | 341201 | 329793.43 | 4429.91 |
| | 50 | rnd | 344473 | 335355.43 | 4530.88 | 328879 | 319775.4 | 5657.38 | 269724 | 252368.97 | 7956.76 | 168018 | 155007.43 | 8906.43 |
| | | 2op | 430421 | 425802.83 | 2382.25 | 416130 | 406538.23 | 5642.62 | 349160 | 334578.4 | 6378.48 | 336665 | 327743.93 | 4307.64 |
| 51 | 20 | rnd | 339600 | 334079.37 | 2811.84 | 334589 | 328700.23 | 3419.42 | 304411 | 287196.97 | 8336.97 | 206311 | 190464.6 | 10422.94 |
| | | 2op | 433495 | 430406.27 | 1720.99 | 429406 | 424646.37 | 3127.33 | 381133 | 372001.33 | 6627.38 | 356141 | 350315.37 | 4259.99 |
| | 50 | rnd | 341336 | 335210.1 | 3611.49 | 338498 | 331584.43 | 3458.52 | 319432 | 307184.5 | 5992.37 | 240668 | 226002.9 | 10517.91 |
| | | 2op | 433526 | 429622.43 | 2337.34 | 432474 | 426979.73 | 2773.13 | 409119 | 394314.5 | 7736.94 | 354706 | 346574.17 | 3913.88 |

Table A.1130: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47324 | 43731.63 | 1584.12 | 100305 | 92848.73 | 4101.96 | 86768 | 73219.53 | 8568.47 | 65470 | 47325.27 | 10600.07 |
| | | 2op | 437852 | 437533.9 | 192.74 | 437570 | 436940.63 | 409.71 | 435533 | 433571.2 | 1878.15 | 421028 | 411585.5 | 4173.81 |
| | 50 | rnd | 48655 | 43784.87 | 2127.35 | 109598 | 101849.33 | 3789.4 | 88872 | 77842.87 | 7653.76 | 75887 | 57285.9 | 11228.31 |
| | | 2op | 437826 | 437572.37 | 165.58 | 437471 | 437134.3 | 327.61 | 436641 | 435565.03 | 677.06 | 429593 | 423925.9 | 3153.99 |
| 51 | 20 | rnd | 46726 | 44476.6 | 1374.2 | 68018 | 64299.1 | 2262.94 | 95725 | 84611.97 | 4832.84 | 74938 | 62823.77 | 8210.51 |
| | | 2op | 437897 | 437400.57 | 373.92 | 437856 | 437288.97 | 310.53 | 437668 | 436586.03 | 562.28 | 434746 | 431186.6 | 2260.71 |
| | 50 | rnd | 46993 | 43999.77 | 1702.19 | 66846 | 63964.13 | 1514.37 | 99029 | 87650.8 | 5486.21 | 89618 | 65365.03 | 10720.31 |
| | | 2op | 437864 | 437553.23 | 164.75 | 438143 | 437351.2 | 242.51 | 437428 | 436864.9 | 357.82 | 435555 | 433416.7 | 1304.12 |

Table A.1131: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 338100 | 329591.4 | 3779.76 | 338100 | 329428.07 | 3902.54 | 253494 | 233698.1 | 11189.06 | 123254 | 106012.57 | 8080.31 |
| | | 2op | 436690 | 433854.73 | 1558.86 | 436126 | 432338 | 1707.1 | 347993 | 338055.17 | 3440.72 | 338080 | 332645.5 | 2367.68 |
| | 50 | rnd | 338708 | 331901.97 | 2854.31 | 338708 | 331706.27 | 2987.01 | 264846 | 244929.3 | 15120.16 | 157937 | 146326.53 | 7840.94 |
| | | 2op | 436235 | 433870.13 | 1207.55 | 435969 | 433171 | 1437.62 | 358872 | 343678.23 | 7511.4 | 336665 | 331545 | 2028.22 |
| 51 | 20 | rnd | 336468 | 328685.1 | 3746.65 | 336468 | 328685.1 | 3746.65 | 308779 | 295192.1 | 8398.23 | 190333 | 156014.67 | 21879.12 |
| | | 2op | 437605 | 436740.67 | 658.12 | 437594 | 436709.8 | 693.7 | 413072 | 391880.33 | 12498.23 | 358846 | 349970.4 | 3180.53 |
| | 50 | rnd | 336991 | 330584.97 | 3975.73 | 336991 | 330584.97 | 3975.73 | 318121 | 306592.1 | 7244.03 | 222252 | 176717.03 | 23981.78 |
| | | 2op | 438180 | 436675.17 | 733.56 | 438180 | 436631.9 | 738.26 | 423174 | 410074.93 | 7642.36 | 348409 | 345616.77 | 1511.85 |

Table A.1132: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 51328 | 46253.73 | 1537.21 | 66139 | 61726.23 | 3198.68 | 67486 | 63462.17 | 2819.37 | 38681 | 36360.6 | 1189.47 |
| | | 2op | 437901 | 437575.8 | 235.39 | 437758 | 437445.17 | 244.83 | 435201 | 433796.03 | 970.1 | 415432 | 407056.93 | 3906.46 |
| | 50 | rnd | 47995 | 46586.63 | 1193.47 | 73138 | 66998.77 | 3212.01 | 79298 | 75071.77 | 2017.53 | 45080 | 40510.6 | 2094.31 |
| | | 2op | 437859 | 437669.97 | 109.38 | 437789 | 437536.33 | 148.63 | 436750 | 435319.2 | 780.41 | 427857 | 422082 | 2787.85 |
| 51 | 20 | rnd | 50672 | 47000 | 1438.49 | 50672 | 47089.43 | 1411.58 | 85557 | 77988.57 | 2724.46 | 49584 | 45114.73 | 2527.76 |
| | | 2op | 438022 | 437632.03 | 178.68 | 437829 | 437597.43 | 175.66 | 437245 | 436822.5 | 303.37 | 429626 | 422516.13 | 4411.34 |
| | 50 | rnd | 49073 | 47004.73 | 1138.98 | 51997 | 48284.6 | 1593.36 | 91600 | 84536.23 | 3163.82 | 52237 | 46596.73 | 3529.72 |
| | | 2op | 437947 | 437685.97 | 113.49 | 437937 | 437607.57 | 133.89 | 437521 | 436960.5 | 285.78 | 434158 | 428559.5 | 4768.94 |

Table A.1133: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 92248 | 89672.77 | 1396.27 | 88900 | 86082.23 | 1722.94 | 73840 | 69529.13 | 2288.52 | 49825 | 40911.23 | 3331.28 |
| | | 2op | 114835 | 112814.13 | 828.89 | 111498 | 108853.43 | 1463.91 | 96250 | 91568 | 1861.33 | 92664 | 89039.63 | 1719.02 |
| | 50 | rnd | 92087 | 89378.7 | 1435.97 | 89962 | 87298.6 | 1669.67 | 82059 | 77085.7 | 2076.88 | 55594 | 51268.27 | 2762.89 |
| | | 2op | 113900 | 112016.2 | 974.57 | 113349 | 110579.17 | 1214.38 | 100817 | 96803.87 | 2981.64 | 92814 | 88601.4 | 1943.04 |
| 51 | 20 | rnd | 93314 | 89922.33 | 1671.32 | 92707 | 89240.03 | 1794.9 | 86940 | 82502.6 | 2538.72 | 66865 | 60768.57 | 3539.13 |
| | | 2op | 114926 | 113852.2 | 634.21 | 114854 | 113492.93 | 763.6 | 109880 | 106695.57 | 1881.83 | 99327 | 96718.4 | 1257.26 |
| | 50 | rnd | 92370 | 89138.5 | 1473.31 | 91970 | 88459.33 | 1432.92 | 87956 | 85062.9 | 1424.77 | 74478 | 69736.83 | 2964.81 |
| | | 2op | 114827 | 113710.83 | 647.04 | 114805 | 113563.93 | 701.31 | 113103 | 110440.53 | 1512.53 | 98561 | 95053.13 | 1658.08 |

Table A.1134: *j*02459_7: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22540 | 20583.7 | 975.74 | 42815 | 39903.63 | 1592.02 | 36698 | 32091.27 | 2869.77 | 28465 | 23914.17 | 2168.47 |
| | | 2op | 115182 | 114937.83 | 117.74 | 115049 | 114808.03 | 159.63 | 114817 | 114202.23 | 399.59 | 111910 | 109794.87 | 1073.15 |
| | 50 | rnd | 22182 | 20700.73 | 887.12 | 46668 | 43680.9 | 1669.14 | 38481 | 34848.03 | 2370.33 | 30737 | 25382.47 | 3101.36 |
| | | 2op | 115221 | 114955.53 | 137.56 | 115167 | 115061.5 | 78.13 | 115072 | 114580.4 | 237.61 | 113630 | 112563.77 | 603.01 |
| 51 | 20 | rnd | 22707 | 20811.43 | 1004.8 | 35562 | 32004.93 | 1616.15 | 42675 | 37298.87 | 2239.69 | 32584 | 27530.33 | 3088.88 |
| | | 2op | 115157 | 114976.5 | 108.19 | 115317 | 115177.67 | 77.96 | 115032 | 114834.93 | 103.81 | 114339 | 113791.17 | 425.71 |
| | 50 | rnd | 22290 | 20767.6 | 891.24 | 34697 | 31209.77 | 1211.33 | 43576 | 39513.87 | 2172.68 | 35788 | 28245.6 | 3837.11 |
| | | 2op | 115175 | 114953.63 | 117.79 | 115360 | 115253.17 | 64.3 | 115096 | 114846.53 | 154.39 | 114562 | 114252.9 | 257.64 |

Table A.1135: *j*02459_7: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 93014 | 90086.73 | 1576.94 | 90182 | 86285.9 | 1981.96 | 74564 | 69447.43 | 3601.51 | 48599 | 42090.13 | 3405.37 |
| | | 2op | 114754 | 112465.63 | 1112.01 | 111864 | 109369.47 | 1203.27 | 95559 | 91031.83 | 2481.56 | 92474 | 88921.3 | 1998.73 |
| | 50 | rnd | 91877 | 89930.2 | 1254.94 | 90272 | 87598.13 | 1492.27 | 80831 | 76760.8 | 2172.67 | 56740 | 51064.83 | 2780.82 |
| | | 2op | 114184 | 112188.63 | 833.55 | 112174 | 110682.97 | 1074 | 100745 | 96114.7 | 2678.24 | 92188 | 88403.1 | 1764.32 |
| 51 | 20 | rnd | 91632 | 89469.7 | 1388.88 | 91207 | 88776.77 | 1552.05 | 87519 | 82062.37 | 2614.91 | 67963 | 61441.83 | 3358.85 |
| | | 2op | 114688 | 113815.1 | 681.21 | 114361 | 113525.93 | 726.48 | 109408 | 106425.47 | 1393.52 | 98505 | 96016.7 | 1337.73 |
| | 50 | rnd | 91801 | 89313.93 | 1208.32 | 91682 | 88723.83 | 1345.7 | 88911 | 85518.03 | 1537.44 | 73413 | 69078.1 | 3047.24 |
| | | 2op | 114884 | 113488.1 | 741.86 | 114560 | 113304.3 | 717.5 | 112633 | 110273.6 | 1418.61 | 98163 | 94923.53 | 1623.52 |

Table A.1136: *j*02459_7: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22241 | 20455.77 | 816.86 | 43399 | 40398.37 | 1837.71 | 37691 | 32719.1 | 2674.4 | 28396 | 24362.33 | 1948.44 |
| | | 2op | 115121 | 114904.07 | 164.22 | 115079 | 114808.1 | 203.99 | 114822 | 114035.5 | 607.71 | 111133 | 109160 | 1177.88 |
| | 50 | rnd | 22546 | 20589.2 | 906.21 | 46526 | 43160.13 | 1907.02 | 37597 | 33612.47 | 2338.49 | 30548 | 26769.7 | 2375.77 |
| | | 2op | 115120 | 114917.6 | 132.04 | 115203 | 115044.97 | 130.51 | 114860 | 114505.37 | 265.26 | 113825 | 111756.87 | 1094.64 |
| 51 | 20 | rnd | 22265 | 20593.53 | 801.47 | 35256 | 32484.9 | 1501.23 | 40838 | 37183.7 | 2177.95 | 33623 | 26051.77 | 3953.67 |
| | | 2op | 115257 | 114957.8 | 129.63 | 115330 | 115181.07 | 59.25 | 115091 | 114799.93 | 155.54 | 114356 | 113754.63 | 384.19 |
| | 50 | rnd | 21880 | 20704.77 | 772.62 | 34851 | 31443.07 | 1478.1 | 43729 | 39530.7 | 1834.03 | 36516 | 27728.97 | 4546.46 |
| | | 2op | 115140 | 114914.57 | 95.4 | 115373 | 115261.3 | 60.47 | 115070 | 114791.53 | 140.57 | 114774 | 114233.6 | 267.4 |

Table A.1137: *j*02459_7: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 92108 | 89454.63 | 1411.95 | 91657 | 89005.67 | 1438.07 | 75638 | 70665.77 | 3930.71 | 42971 | 39081.7 | 1958.81 |
| | | 2op | 115206 | 114676.83 | 385.25 | 115206 | 114603.27 | 395.88 | 101371 | 95362.73 | 3091.72 | 91490 | 90017.4 | 820.35 |
| | 50 | rnd | 93688 | 89979.43 | 1665.72 | 92924 | 89759.67 | 1604.03 | 80584 | 75012.2 | 3223.81 | 52111 | 47661.1 | 2426.9 |
| | | 2op | 115111 | 114349 | 444.6 | 115111 | 114301.73 | 472.49 | 104335 | 99665.67 | 3233.01 | 91280 | 89346.6 | 843.57 |
| 51 | 20 | rnd | 93133 | 90222.63 | 1439.71 | 93062 | 90194.2 | 1436.83 | 87374 | 84663.27 | 1700.71 | 58911 | 52801.77 | 4398.8 |
| | | 2op | 115245 | 115094.33 | 101.7 | 115245 | 115087.07 | 112.38 | 114221 | 111253.5 | 2261.93 | 97720 | 96445.87 | 798.98 |
| | 50 | rnd | 94820 | 91693.3 | 1680.44 | 94820 | 91603.63 | 1720.7 | 90760 | 87140.2 | 2037.25 | 69776 | 63294.9 | 6018.65 |
| | | 2op | 115305 | 115169.93 | 90.72 | 115305 | 115164.53 | 91.56 | 114272 | 112701.7 | 1191.65 | 98691 | 95482.27 | 1275.48 |

Table A.1138: *j*02459_7: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 23514 | 21774.57 | 618.82 | 33568 | 31142.57 | 1025.77 | 31192 | 28412.9 | 1240.24 | 19040 | 17785.53 | 713.1 |
| | | 2op | 115175 | 115002.4 | 129.61 | 115159 | 114974.57 | 129.77 | 114695 | 114099.4 | 281.4 | 109695 | 107123.53 | 1420.39 |
| | 50 | rnd | 23492 | 21932.63 | 614.98 | 35945 | 33203.43 | 1488.52 | 34979 | 32487.1 | 1254.86 | 22190 | 19493.57 | 1116.73 |
| | | 2op | 115180 | 115020.27 | 115.84 | 115164 | 114992.97 | 117.65 | 114866 | 114533.53 | 182.84 | 112892 | 111562.23 | 917.83 |
| 51 | 20 | rnd | 23798 | 22179.93 | 738.31 | 25253 | 23411.23 | 920.38 | 36405 | 34334.17 | 1127.6 | 23669 | 22057.3 | 1280.4 |
| | | 2op | 115267 | 115095.3 | 92.51 | 115202 | 115090.03 | 85 | 115071 | 114884.5 | 90.83 | 114257 | 112919.1 | 652.53 |
| | 50 | rnd | 23548 | 22111.27 | 755.42 | 26473 | 24476.5 | 822.99 | 39592 | 37455.1 | 1095.38 | 25397 | 22777.23 | 1570.68 |
| | | 2op | 115265 | 115104 | 81.42 | 115204 | 115055.5 | 68.12 | 115052 | 114807.9 | 149.01 | 114239 | 113836.9 | 238.27 |

Table A.1139: *j*02459_7: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 33263 | 32098.63 | 835.49 | 33344 | 31249.4 | 975.02 | 30889 | 27612.93 | 1506.73 | 21170 | 19009.73 | 1371.27 |
| | | 2op | 38405 | 37485.9 | 643.88 | 38368 | 37127.4 | 687.63 | 35505 | 33767.77 | 914.87 | 31060 | 29851.13 | 675.39 |
| | 50 | rnd | 34213 | 33229.67 | 601.61 | 34772 | 33104.27 | 692.4 | 31407 | 29722.17 | 1067.37 | 25166 | 22479.07 | 1538.81 |
| | | 2op | 38355 | 37688.07 | 427.03 | 38270 | 37181.73 | 621.91 | 37785 | 35427.53 | 1069.68 | 32099 | 29929.77 | 779.85 |
| 51 | 20 | rnd | 33208 | 32134.93 | 672.42 | 36012 | 34728.7 | 592.01 | 31675 | 30154.67 | 871.18 | 28040 | 25716.73 | 1263.4 |
| | | 2op | 38429 | 38085.43 | 245.57 | 38434 | 38209.37 | 164.28 | 38354 | 37631.3 | 395.17 | 36109 | 34853.97 | 426.86 |
| | 50 | rnd | 34559 | 33461.4 | 511.76 | 36577 | 35473.8 | 408.48 | 34373 | 31512.2 | 1045.92 | 30229 | 28190.3 | 1280.25 |
| | | 2op | 38430 | 38167.3 | 248.4 | 38411 | 38182.47 | 174.76 | 38347 | 37767.43 | 404.29 | 36573 | 35025.27 | 869.65 |

Table A.1140: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12636 | 11124.7 | 646.67 | 24273 | 21591.97 | 927.31 | 19754 | 17905.1 | 850.76 | 16496 | 14197.43 | 995.65 |
| | | 2op | 38414 | 38353.37 | 73.83 | 38420 | 38401.03 | 21.7 | 38366 | 38185.17 | 120.7 | 37729 | 36720.23 | 606.65 |
| | 50 | rnd | 12711 | 11144.13 | 726.38 | 25837 | 23412.73 | 940.53 | 21751 | 19391.33 | 928.4 | 16469 | 15079.7 | 876.9 |
| | | 2op | 38409 | 38378.8 | 50.69 | 38439 | 38419.73 | 13.04 | 38397 | 38326.77 | 49.05 | 38129 | 37593.27 | 375.76 |
| 51 | 20 | rnd | 12621 | 11220.67 | 590.3 | 21311 | 18965.63 | 1150.87 | 22281 | 20741.07 | 776.06 | 18724 | 16439.2 | 1230.43 |
| | | 2op | 38414 | 38367.8 | 64.48 | 38439 | 38421.33 | 12.96 | 38409 | 38385.27 | 15.47 | 38304 | 38038.23 | 257.54 |
| | 50 | rnd | 12541 | 11329.07 | 636.04 | 21821 | 18552.57 | 1167.82 | 22878 | 21551.37 | 884.63 | 18419 | 16427.3 | 1097.14 |
| | | 2op | 38409 | 38371.83 | 54.27 | 38439 | 38429.1 | 12.63 | 38434 | 38399.9 | 11.11 | 38364 | 38134.3 | 274.46 |

Table A.1141: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 33010 | 31949.3 | 560.09 | 34127 | 31312.07 | 1033.97 | 29237 | 27433.33 | 944.77 | 22898 | 19524.3 | 1726.83 |
| | | 2op | 38202 | 37445.47 | 436.03 | 38202 | 37186.37 | 489.73 | 35912 | 33915.07 | 1048.07 | 30403 | 29544.93 | 650.99 |
| | 50 | rnd | 34581 | 33025.7 | 634.75 | 33823 | 32515.4 | 558.21 | 31902 | 29872.7 | 977.96 | 24702 | 22349.23 | 1381.97 |
| | | 2op | 37990 | 37439.53 | 422.32 | 37811 | 37086.8 | 557.35 | 36390 | 35153.17 | 905.92 | 30738 | 29304.3 | 883.29 |
| 51 | 20 | rnd | 33823 | 32069.83 | 766.54 | 35688 | 34880.2 | 555.29 | 32085 | 30416.63 | 982.5 | 28222 | 25814.77 | 1122.16 |
| | | 2op | 38412 | 38151.8 | 253.37 | 38395 | 38215.53 | 172.54 | 38349 | 37543.47 | 611.83 | 35867 | 34841.93 | 463.61 |
| | 50 | rnd | 34825 | 33463.23 | 713.93 | 36110 | 35330.63 | 530.55 | 32303 | 31074.27 | 719.49 | 29435 | 27774.6 | 812.04 |
| | | 2op | 38434 | 38066.5 | 297.14 | 38419 | 38117.83 | 219.88 | 38286 | 37612 | 495.66 | 36196 | 35054.1 | 785.53 |

Table A.1142: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12206 | 10880.87 | 591.19 | 23222 | 21866.7 | 872.58 | 19457 | 17901.37 | 818.4 | 15931 | 14256.53 | 797.7 |
| | | 2op | 38409 | 38357.77 | 70.61 | 38434 | 38400.63 | 14.7 | 38366 | 38141.67 | 111.08 | 37787 | 36623.87 | 636.15 |
| | 50 | rnd | 12311 | 11131.17 | 645.04 | 25690 | 23416.93 | 1107.52 | 21314 | 19619.7 | 791.27 | 17009 | 15253.9 | 1118.94 |
| | | 2op | 38409 | 38361.13 | 70.19 | 38439 | 38419.43 | 12.52 | 38385 | 38272.63 | 95.11 | 38078 | 37529.77 | 366 |
| 51 | 20 | rnd | 12505 | 11171.17 | 775.28 | 21069 | 19033.97 | 1238.17 | 22847 | 20802.93 | 938.14 | 18509 | 16631.47 | 966.8 |
| | | 2op | 38409 | 38363.97 | 65.07 | 38439 | 38418.13 | 11.62 | 38412 | 38384.2 | 14.45 | 38309 | 37968.67 | 243.03 |
| | 50 | rnd | 12551 | 11273.77 | 717.49 | 22848 | 18654.67 | 1338.66 | 23387 | 21886.33 | 936.28 | 18806 | 16561.77 | 1136.7 |
| | | 2op | 38414 | 38366.33 | 64.76 | 38439 | 38427.23 | 11.65 | 38431 | 38398 | 16 | 38384 | 38182.97 | 128.48 |

Table A.1143: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 34012 | 32407.17 | 787.93 | 34238 | 32049.37 | 913.31 | 30284 | 28519.83 | 1020.75 | 19774 | 16962.3 | 1190.07 |
| | | 2op | 38427 | 38323.13 | 99.64 | 38427 | 38311.43 | 107.36 | 37014 | 35467.33 | 1006.03 | 31222 | 29961.4 | 506.66 |
| | 50 | rnd | 34713 | 33455.77 | 663.36 | 35280 | 32980.63 | 980.97 | 31844 | 29749.9 | 980.52 | 22992 | 20961.83 | 1103.68 |
| | | 2op | 38434 | 38289.53 | 174.65 | 38434 | 38273.7 | 183.72 | 37341 | 35921.63 | 1130.99 | 30814 | 29688 | 549.21 |
| 51 | 20 | rnd | 34689 | 33254.73 | 767.72 | 36405 | 34895 | 644.39 | 33691 | 31903 | 720.92 | 25974 | 24169.07 | 924.6 |
| | | 2op | 38434 | 38411.57 | 13.17 | 38439 | 38429.6 | 8.68 | 38409 | 38246.47 | 146.31 | 35443 | 33977.5 | 565.94 |
| | 50 | rnd | 35238 | 33893.87 | 506.58 | 35700 | 34721.43 | 567.36 | 33488 | 31800.27 | 746.13 | 28535 | 26656.63 | 1107.22 |
| | | 2op | 38439 | 38421.43 | 13.1 | 38439 | 38425.17 | 10.84 | 38409 | 38166.43 | 207.24 | 35241 | 33483.9 | 833.74 |

Table A.1144: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13342 | 11873.27 | 513.53 | 18721 | 17515.93 | 608.19 | 17478 | 16225.7 | 696.16 | 12506 | 11872.1 | 426.02 |
| | | 2op | 38409 | 38401.5 | 9.24 | 38409 | 38399.97 | 9.39 | 38353 | 38158.97 | 163.39 | 37174 | 35787.63 | 940.49 |
| | 50 | rnd | 13043 | 11936.77 | 558.73 | 19060 | 17998.53 | 428.75 | 19553 | 18276.43 | 571.78 | 14151 | 13082.43 | 668.09 |
| | | 2op | 38409 | 38403.8 | 7.36 | 38409 | 38402.3 | 9.29 | 38396 | 38249.93 | 130.4 | 37893 | 37090.57 | 476.98 |
| 51 | 20 | rnd | 13591 | 12217.23 | 519.29 | 15044 | 14133.97 | 428.34 | 19988 | 18907.93 | 661.14 | 16828 | 14182.3 | 743.96 |
| | | 2op | 38434 | 38406.9 | 9.44 | 38434 | 38407.9 | 7.65 | 38406 | 38353.13 | 35.98 | 38093 | 37778.37 | 240 |
| | 50 | rnd | 13016 | 12139.37 | 473.68 | 15140 | 14288.8 | 460.59 | 21158 | 19706.87 | 802.32 | 16094 | 14240.7 | 885.87 |
| | | 2op | 38429 | 38407.9 | 4.53 | 38409 | 38401.47 | 5.5 | 38407 | 38356.23 | 53.16 | 38292 | 38025.43 | 208.02 |

Table A.1145: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38967 | 37407.7 | 749.63 | 38357 | 36415.6 | 926.87 | 33954 | 31864.33 | 1216.86 | 25108 | 21066.77 | 1780.94 |
| | | 2op | 47088 | 46166.17 | 615.28 | 46614 | 45525.97 | 559.49 | 42816 | 39784.87 | 1279.24 | 38638 | 36172.3 | 898.95 |
| | 50 | rnd | 39475 | 37895.63 | 778.85 | 38308 | 36554.57 | 816.51 | 35567 | 33735.23 | 1063.28 | 27447 | 24664.2 | 1438.75 |
| | | 2op | 47341 | 46113.6 | 790.87 | 47091 | 45743.47 | 869.84 | 45153 | 42269.87 | 1471.4 | 37394 | 35915.33 | 925.8 |
| 51 | 20 | rnd | 39660 | 37399.23 | 833.54 | 40842 | 39088.63 | 824.82 | 37078 | 35540.03 | 983.86 | 30479 | 28413.07 | 1411.12 |
| | | 2op | 47394 | 46909.3 | 442.15 | 47394 | 46862.5 | 447.98 | 47007 | 45512.87 | 850.22 | 42306 | 40953.63 | 645.25 |
| | 50 | rnd | 40098 | 38231.1 | 728.32 | 42137 | 40804.97 | 652.61 | 37284 | 35973.2 | 814.52 | 33901 | 31517.5 | 1145.75 |
| | | 2op | 47387 | 46817.13 | 362.84 | 47394 | 46907 | 325.84 | 47085 | 46144.4 | 480.37 | 42478 | 40679.17 | 885.96 |

Table A.1146: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12134 | 11298.33 | 557.04 | 24460 | 22396.6 | 1086.11 | 20770 | 18031.2 | 1317.19 | 15182 | 13322.87 | 739.58 |
| | | 2op | 47386 | 47228 | 56.2 | 47392 | 47365.33 | 37.92 | 47140 | 46936.27 | 175.35 | 46433 | 44824.77 | 730.89 |
| | 50 | rnd | 12841 | 11472 | 652.49 | 25677 | 23964.57 | 967.78 | 22044 | 19652.67 | 1420.55 | 16763 | 14241.13 | 1273.69 |
| | | 2op | 47387 | 47224.53 | 66.9 | 47403 | 47395.07 | 7.07 | 47278 | 47141.7 | 64.32 | 46993 | 46130.27 | 501.04 |
| 51 | 20 | rnd | 13429 | 11760.77 | 569.59 | 21865 | 19648.8 | 1116.6 | 22941 | 20769.53 | 1064.85 | 18622 | 15566.17 | 1368.96 |
| | | 2op | 47402 | 47252.47 | 68.16 | 47403 | 47400.37 | 4.96 | 47376 | 47269.67 | 70.75 | 47118 | 46662.63 | 284.84 |
| | 50 | rnd | 13138 | 11694.63 | 571.01 | 21352 | 18708.63 | 1283.25 | 24062 | 21985.9 | 1065.05 | 19911 | 16087.57 | 1480.48 |
| | | 2op | 47323 | 47215.9 | 43.55 | 47403 | 47402.07 | 2.9 | 47395 | 47342.43 | 57 | 47128 | 46961.93 | 138.32 |

Table A.1147: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38666 | 37117.37 | 763.12 | 37433 | 36112.7 | 801.11 | 33759 | 31880.8 | 1129.14 | 24077 | 20926.4 | 1832.81 |
| | | 2op | 47085 | 45750.2 | 757.42 | 46849 | 45167.4 | 710.94 | 40634 | 39240.8 | 1043.66 | 37770 | 35807.63 | 768.51 |
| | 50 | rnd | 39147 | 37904.67 | 591.86 | 38065 | 36795.43 | 608.94 | 36817 | 33978.03 | 1082.74 | 28281 | 24353.27 | 1482.58 |
| | | 2op | 46887 | 45756.93 | 537.27 | 46500 | 45443.63 | 588.87 | 44143 | 41904.03 | 1329.45 | 37349 | 35476.97 | 842.91 |
| 51 | 20 | rnd | 38441 | 36819.47 | 816.72 | 40904 | 38799.73 | 837.21 | 37788 | 35063.1 | 972.29 | 30968 | 28541.93 | 1500.81 |
| | | 2op | 47378 | 46896.37 | 307.27 | 47378 | 46815.33 | 325.95 | 46818 | 45584.63 | 634.89 | 42590 | 40961.87 | 640.14 |
| | 50 | rnd | 39904 | 38237 | 842.23 | 41651 | 40420.77 | 630.91 | 38109 | 35774.57 | 1059.7 | 33529 | 31131.23 | 1388.13 |
| | | 2op | 47387 | 46812.3 | 412.62 | 47378 | 46832.57 | 350.31 | 47295 | 46303.17 | 489.54 | 43075 | 40901.17 | 990.02 |

Table A.1148: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12153 | 11187.67 | 602.21 | 24537 | 21985.47 | 1078.21 | 20210 | 18027.1 | 1111.8 | 16157 | 13046.13 | 1070.51 |
| | | 2op | 47402 | 47225.43 | 57.23 | 47402 | 47357.13 | 43.88 | 47161 | 46945.93 | 193.36 | 46510 | 44933.77 | 780.59 |
| | 50 | rnd | 12698 | 11390.6 | 462.43 | 25282 | 23591.57 | 1019.37 | 21906 | 18765.93 | 1117.86 | 17114 | 14469.5 | 1258.5 |
| | | 2op | 47401 | 47222.17 | 79.69 | 47402 | 47394.53 | 7.28 | 47315 | 47068.07 | 145.12 | 46703 | 46013.83 | 613.15 |
| 51 | 20 | rnd | 13272 | 11687.03 | 598.92 | 22325 | 19607.6 | 1090.41 | 22767 | 21011.43 | 946.24 | 18226 | 15943.37 | 1193.8 |
| | | 2op | 47386 | 47226.9 | 56.74 | 47403 | 47401.3 | 2.91 | 47399 | 47257.93 | 83.95 | 47106 | 46829.83 | 311.99 |
| | 50 | rnd | 12535 | 11579.13 | 522.99 | 20945 | 18807.57 | 1205.84 | 25343 | 22094.57 | 1280.12 | 18734 | 16282.3 | 1440.72 |
| | | 2op | 47402 | 47234.6 | 69.03 | 47403 | 47402.23 | 2.92 | 47388 | 47355.47 | 41 | 47206 | 47015.8 | 170.61 |

Table A.1149: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38798 | 37590.43 | 682.13 | 38651 | 37316.93 | 705.14 | 34426 | 32220.03 | 1161.36 | 21266 | 19015.13 | 1382.04 |
| | | 2op | 47387 | 47267.07 | 166.87 | 47387 | 47234.83 | 186.05 | 44541 | 41173.87 | 1732.51 | 37579 | 36602 | 403.67 |
| | 50 | rnd | 39265 | 38055.5 | 587.58 | 39025 | 37410.43 | 714.8 | 35747 | 33323.03 | 1162.66 | 25350 | 22803.73 | 1005.98 |
| | | 2op | 47403 | 47144.3 | 256.59 | 47387 | 47123.1 | 303.8 | 45375 | 42996.77 | 1562.82 | 37441 | 36319.1 | 522.59 |
| 51 | 20 | rnd | 39755 | 38558.43 | 628.81 | 41446 | 40280.47 | 600.69 | 38335 | 37115.53 | 795.9 | 28412 | 26079.03 | 1014.25 |
| | | 2op | 47403 | 47368.27 | 47.78 | 47403 | 47395.5 | 7.82 | 47333 | 46809.27 | 472.97 | 42132 | 40666.57 | 663.15 |
| | 50 | rnd | 40120 | 38895.33 | 648.12 | 41491 | 39709.93 | 1041.69 | 37855 | 36927.9 | 539.47 | 31556 | 29656.53 | 930.05 |
| | | 2op | 47403 | 47383.57 | 32.18 | 47403 | 47379.2 | 42.36 | 47316 | 46967.37 | 361.15 | 41267 | 39442.83 | 671.25 |

Table A.1150: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13662 | 12207.07 | 480.26 | 18479 | 17579.73 | 451.12 | 17225 | 16394.93 | 562.21 | 12711 | 11244.67 | 537.41 |
| | | 2op | 47402 | 47264.97 | 65.28 | 47386 | 47256.3 | 62.41 | 47212 | 46943.1 | 165.27 | 45383 | 44244.9 | 655.7 |
| | 50 | rnd | 13325 | 12277.6 | 395.71 | 20933 | 18629.37 | 757.21 | 21605 | 18534.53 | 938.69 | 13100 | 12197.07 | 549.65 |
| | | 2op | 47402 | 47311.27 | 67.68 | 47398 | 47314.1 | 62.74 | 47206 | 47051.9 | 109.54 | 46351 | 45525.67 | 489.57 |
| 51 | 20 | rnd | 12941 | 12397.33 | 383.96 | 15386 | 14106.93 | 445.03 | 20144 | 18995.63 | 565.63 | 15264 | 13760.03 | 818.17 |
| | | 2op | 47402 | 47320.97 | 63.67 | 47402 | 47361.33 | 37.29 | 47360 | 47210.43 | 68.35 | 46941 | 46473.7 | 458.45 |
| | 50 | rnd | 13175 | 12440.17 | 411.38 | 15251 | 14337.47 | 397.22 | 22986 | 20362.5 | 888.52 | 15369 | 13901.47 | 775.51 |
| | | 2op | 47387 | 47312.07 | 60.59 | 47387 | 47346.7 | 40.26 | 47304 | 47182.47 | 41.65 | 47122 | 46798.63 | 195.23 |

Table A.1151: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 45588 | 43527.07 | 963.05 | 44234 | 42329.87 | 1085.33 | 39697 | 37689.9 | 1154.5 | 28489 | 24580.5 | 1967.05 |
| | | 2op | 54567 | 53600.13 | 460.31 | 53850 | 52893 | 508.52 | 49725 | 46232.77 | 1465.36 | 45255 | 43764.6 | 855.57 |
| | 50 | rnd | 45807 | 44273.43 | 818.92 | 44796 | 42984.07 | 983.88 | 42379 | 39984.23 | 1473.44 | 31751 | 29050.77 | 1583.75 |
| | | 2op | 54626 | 53694.1 | 381.71 | 54382 | 53325.1 | 626.19 | 52293 | 49521.5 | 1247.8 | 46287 | 43425.57 | 875.77 |
| 51 | 20 | rnd | 45588 | 43520.93 | 973.87 | 46548 | 45379.53 | 804.48 | 44755 | 41512.7 | 1358.1 | 36992 | 33800.87 | 1527.29 |
| | | 2op | 54636 | 54234.67 | 309.46 | 54609 | 54190.97 | 323.96 | 54212 | 53130.17 | 682.56 | 49556 | 48608.9 | 546.33 |
| | 50 | rnd | 46632 | 44801.53 | 954.05 | 49174 | 47256 | 893.15 | 44969 | 42686.4 | 1111.4 | 41013 | 37087.13 | 1861.08 |
| | | 2op | 54679 | 54191.07 | 318.33 | 54638 | 54258.77 | 232.85 | 54434 | 53460.7 | 529.65 | 50268 | 48197.07 | 1253.62 |

Table A.1152: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15329 | 13732.43 | 837.49 | 28824 | 26326.33 | 1265.38 | 23792 | 21469.27 | 987.18 | 18183 | 15919.03 | 1389.66 |
| | | 2op | 54750 | 54706.2 | 36.11 | 54742 | 54702.73 | 31.36 | 54653 | 54354.53 | 235.67 | 53950 | 52351.63 | 954.82 |
| | 50 | rnd | 14853 | 13614.27 | 619.62 | 30505 | 28252.43 | 1236.75 | 25024 | 23072.4 | 941.64 | 19685 | 16592.43 | 1499.71 |
| | | 2op | 54742 | 54706.03 | 28.43 | 54751 | 54740.77 | 6.02 | 54702 | 54571.07 | 84.71 | 54116 | 53494.87 | 423.3 |
| 51 | 20 | rnd | 15982 | 13991.63 | 879.01 | 25718 | 23458.7 | 1202.06 | 26597 | 24393.7 | 1284.22 | 21307 | 18672.93 | 1342.49 |
| | | 2op | 54742 | 54704.4 | 38.15 | 54760 | 54744.93 | 6.68 | 54742 | 54655.73 | 58.67 | 54520 | 54166.43 | 318.1 |
| | 50 | rnd | 14860 | 13878.33 | 636.66 | 26305 | 23002.2 | 1561.7 | 28399 | 26050.1 | 1188.98 | 23412 | 19392.2 | 1768.1 |
| | | 2op | 54742 | 54723.83 | 23.02 | 54751 | 54747.67 | 4.93 | 54742 | 54687.83 | 55.14 | 54678 | 54459.3 | 128.63 |

Table A.1153: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46181 | 43661.53 | 1044.84 | 44805 | 42464.83 | 960.53 | 40146 | 37496.57 | 1318.14 | 28538 | 24832.37 | 2161.33 |
| | | 2op | 54300 | 53473.9 | 562.96 | 54030 | 53020.17 | 611.3 | 48761 | 46212.03 | 1614.96 | 44947 | 43274.63 | 767.95 |
| | 50 | rnd | 46530 | 44328.57 | 842.69 | 44557 | 42818.3 | 756.17 | 41428 | 39335.9 | 1107.59 | 32071 | 28210.8 | 2226.5 |
| | | 2op | 54560 | 53671.2 | 505.72 | 54315 | 53334.2 | 547.36 | 51585 | 49341.5 | 1259.82 | 44696 | 43380.57 | 790.2 |
| 51 | 20 | rnd | 46248 | 43539.57 | 1198.24 | 47448 | 45715.8 | 1011.99 | 43896 | 41434.27 | 1219.47 | 36932 | 33526.5 | 1662.51 |
| | | 2op | 54644 | 54165.4 | 368.98 | 54605 | 54104.1 | 410.15 | 54082 | 52956.13 | 649.17 | 49793 | 48384.83 | 579.46 |
| | 50 | rnd | 46494 | 44755 | 848.27 | 50170 | 47505.07 | 933.34 | 44208 | 42487.5 | 1199.75 | 39897 | 37016.7 | 1351.02 |
| | | 2op | 54724 | 54263.93 | 305.8 | 54639 | 54261.23 | 251.2 | 54504 | 53603.7 | 590.19 | 50231 | 47985.27 | 867.58 |

Table A.1154: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15279 | 13826.37 | 736.52 | 29123 | 26211.73 | 1146.56 | 24128 | 20812.57 | 1243.98 | 18781 | 15696.47 | 1095.31 |
| | | 2op | 54742 | 54701.27 | 35.64 | 54741 | 54695.83 | 28.56 | 54580 | 54378.97 | 200.8 | 53785 | 52186.03 | 907.53 |
| | 50 | rnd | 16165 | 13911.5 | 795.09 | 30203 | 28280.6 | 1253.9 | 25025 | 22565 | 1348.12 | 19721 | 16701.3 | 1248.45 |
| | | 2op | 54742 | 54708.43 | 22.7 | 54751 | 54737.8 | 9.45 | 54701 | 54501.63 | 149.55 | 54228 | 53384.93 | 570.89 |
| 51 | 20 | rnd | 15576 | 14088.8 | 766.38 | 27003 | 23572.53 | 1407.93 | 25981 | 24311.5 | 875.72 | 20917 | 18520.27 | 1566.44 |
| | | 2op | 54742 | 54676.5 | 115.44 | 54751 | 54740.97 | 11.23 | 54741 | 54651.9 | 65.93 | 54558 | 54146.2 | 319.21 |
| | 50 | rnd | 15497 | 13785.3 | 777.69 | 26007 | 22475.63 | 1601.52 | 27742 | 25624.57 | 1237.13 | 22818 | 18851 | 2014.03 |
| | | 2op | 54742 | 54713.2 | 21 | 54756 | 54747.23 | 4.81 | 54742 | 54694.77 | 36.5 | 54638 | 54394.3 | 186.13 |

Table A.1155: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 45548 | 44001 | 896.14 | 45529 | 43580.27 | 1176.03 | 39710 | 37502.97 | 1388.52 | 24733 | 22730.63 | 1388.1 |
| | | 2op | 54742 | 54562.23 | 136.52 | 54742 | 54553.9 | 147.38 | 52185 | 49011.23 | 1877.81 | 45428 | 44165.5 | 514.79 |
| | 50 | rnd | 46075 | 44864.73 | 562.87 | 45996 | 44159.9 | 786.91 | 41600 | 39437.4 | 1315.28 | 29839 | 27269.87 | 1597.57 |
| | | 2op | 54717 | 54542.1 | 144.21 | 54717 | 54529.63 | 151.45 | 52732 | 50471.47 | 1249.51 | 44934 | 43892.97 | 403.04 |
| 51 | 20 | rnd | 46238 | 44543.27 | 726.13 | 47764 | 46602.97 | 681.45 | 44151 | 42744.6 | 847.85 | 33542 | 30822.93 | 1228.81 |
| | | 2op | 54751 | 54730 | 27.58 | 54751 | 54736.6 | 14.67 | 54601 | 54059.57 | 444.52 | 49284 | 48229 | 452.57 |
| | 50 | rnd | 47374 | 45451.43 | 686.4 | 47986 | 46311.1 | 1136.35 | 45083 | 43322.77 | 893.2 | 37928 | 34911.67 | 1285.8 |
| | | 2op | 54751 | 54738.57 | 12.98 | 54751 | 54734.67 | 21.1 | 54698 | 54334.67 | 336.53 | 49185 | 47075.9 | 733.84 |

Table A.1156: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15648 | 14731.73 | 451.9 | 22157 | 20892.17 | 609.04 | 21437 | 19345.13 | 989.77 | 15416 | 13155.7 | 635.06 |
| | | 2op | 54742 | 54728 | 17.81 | 54742 | 54721.7 | 22.06 | 54605 | 54336.7 | 172.19 | 53011 | 51613.23 | 752.01 |
| | 50 | rnd | 15599 | 14720.9 | 514.95 | 23695 | 22199.53 | 743.13 | 22850 | 21125.67 | 661.11 | 16845 | 14385 | 778.4 |
| | | 2op | 54751 | 54735.23 | 14.5 | 54751 | 54731.5 | 16.39 | 54686 | 54493.93 | 145.91 | 53759 | 53107.43 | 405.19 |
| 51 | 20 | rnd | 16164 | 15008.87 | 543.23 | 18375 | 17000.23 | 538.29 | 25382 | 22396 | 895.6 | 18252 | 16245.9 | 918.63 |
| | | 2op | 54751 | 54739.03 | 10.57 | 54751 | 54738.93 | 10.57 | 54715 | 54640.77 | 64.73 | 54403 | 53899.53 | 289.64 |
| | 50 | rnd | 16014 | 14974.7 | 457.99 | 18091 | 17353.43 | 449.74 | 26113 | 23589.3 | 810.03 | 17648 | 15848.9 | 1028.44 |
| | | 2op | 54751 | 54740.53 | 7.38 | 54742 | 54727.5 | 15.45 | 54740 | 54644.87 | 50.91 | 54585 | 54203 | 221.85 |

Table A.1157: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10672 | 10272.17 | 270.39 | 11328 | 10974.37 | 164.53 | 10931 | 10301.77 | 237.94 | 9975 | 9202.2 | 377.96 |
| | | 2op | 11109 | 10931.9 | 135.35 | 11373 | 11201.5 | 95.14 | 11135 | 10866.27 | 147.13 | 10421 | 9994.63 | 243.35 |
| | 50 | rnd | 10904 | 10323.03 | 289.95 | 11308 | 11048.7 | 144.27 | 11093 | 10734.5 | 182.51 | 10391 | 9627.83 | 385.52 |
| | | 2op | 11256 | 10935.57 | 162.99 | 11373 | 11194.2 | 103.69 | 11256 | 11059.8 | 148.74 | 10526 | 10078.23 | 198.16 |
| 51 | 20 | rnd | 10863 | 10197.2 | 328.96 | 11122 | 10804.03 | 210.14 | 11198 | 10913.3 | 184.7 | 10679 | 10159.73 | 255.55 |
| | | 2op | 11109 | 10987.83 | 73.04 | 11305 | 11121.53 | 47.65 | 11373 | 11194.13 | 84.73 | 11109 | 11017.67 | 63.99 |
| | 50 | rnd | 11103 | 10521.1 | 257.88 | 11303 | 11001.8 | 186.61 | 11311 | 11054.63 | 150.2 | 10887 | 10241.07 | 299.65 |
| | | 2op | 11109 | 11049.23 | 109.95 | 11373 | 11184.33 | 84.08 | 11394 | 11258.17 | 63.92 | 11109 | 10994.5 | 100.39 |

Table A.1158: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6901 | 6020.77 | 449.81 | 10677 | 10155.27 | 431.11 | 10574 | 9500.6 | 501.89 | 9406 | 8373.17 | 547.69 |
| | | 2op | 11101 | 11017.6 | 31.22 | 11205 | 11115.4 | 24.36 | 11109 | 11107.47 | 8.4 | 11172 | 10976.6 | 76.84 |
| | 50 | rnd | 7124 | 6031.77 | 423.28 | 10738 | 9590.57 | 727.02 | 11195 | 10163.43 | 597.71 | 9923 | 8721.77 | 464.09 |
| | | 2op | 11107 | 11023.67 | 32.19 | 11256 | 11123.1 | 36.01 | 11256 | 11120.3 | 35.34 | 11109 | 11032.07 | 43.95 |
| 51 | 20 | rnd | 7144 | 6145.27 | 408.85 | 9274 | 8254.53 | 431.82 | 11105 | 10058.47 | 663.54 | 10324 | 9111.1 | 538.14 |
| | | 2op | 11107 | 11017 | 24.19 | 11256 | 11110.83 | 32.15 | 11256 | 11120.2 | 37.7 | 11109 | 11108.47 | 2.03 |
| | 50 | rnd | 7383 | 6163.23 | 431.4 | 9725 | 8254.67 | 444.03 | 10949 | 9792.7 | 814.73 | 10319 | 9206.83 | 477.17 |
| | | 2op | 11101 | 11015.27 | 21.9 | 11109 | 11109 | 0 | 11256 | 11122.1 | 45.94 | 11109 | 11109 | 0 |

Table A.1159: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10952 | 10295.87 | 335.25 | 11241 | 10946.23 | 182.16 | 10775 | 10346.17 | 222.32 | 9732 | 9167.07 | 243.69 |
| | | 2op | 11127 | 10888.63 | 172.29 | 11305 | 11216.03 | 77.42 | 11101 | 10808.83 | 185.54 | 10705 | 9855.73 | 320.99 |
| | 50 | rnd | 10977 | 10361.47 | 327.82 | 11478 | 11057.93 | 170.77 | 11197 | 10718.77 | 225.05 | 9892 | 9336.9 | 262.22 |
| | | 2op | 11213 | 10878.3 | 220.09 | 11305 | 11198.23 | 83.24 | 11256 | 10982.83 | 194.46 | 10465 | 10027.1 | 245.81 |
| 51 | 20 | rnd | 10837 | 10311.43 | 319.96 | 11136 | 10797.37 | 181.09 | 11259 | 10949.9 | 167.37 | 10925 | 10360.8 | 339.37 |
| | | 2op | 11109 | 11031.43 | 41.25 | 11305 | 11115.87 | 41.49 | 11373 | 11156.63 | 82.44 | 11109 | 11053.07 | 50.46 |
| | 50 | rnd | 11047 | 10547.17 | 276.97 | 11283 | 11017.33 | 152 | 11369 | 11084.67 | 150.89 | 11022 | 10362.87 | 295.11 |
| | | 2op | 11109 | 11013.9 | 97.26 | 11373 | 11174.27 | 93.66 | 11373 | 11255.83 | 68.83 | 11109 | 10950.2 | 100.71 |

Table A.1160: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7096 | 5942.03 | 504.42 | 10653 | 10133.3 | 290.7 | 11072 | 9612.53 | 530.11 | 9506 | 8607.57 | 505.99 |
| | | 2op | 11063 | 11011 | 11.29 | 11256 | 11118.5 | 32.1 | 11109 | 11107.5 | 7.85 | 11059 | 10959 | 59.01 |
| | 50 | rnd | 6937 | 6054.03 | 414.3 | 10875 | 9780.87 | 778.2 | 10714 | 9993.87 | 435.37 | 9815 | 8889.07 | 543.88 |
| | | 2op | 11107 | 11012.73 | 26.8 | 11305 | 11148.4 | 64.13 | 11256 | 11118.8 | 37.3 | 11107 | 11038.83 | 51.23 |
| 51 | 20 | rnd | 6903 | 6160.93 | 326.78 | 9753 | 8283.5 | 540.06 | 10808 | 10083.07 | 555.55 | 10391 | 9277.3 | 698.3 |
| | | 2op | 11095 | 11017.2 | 22.46 | 11109 | 11109 | 0 | 11305 | 11126.83 | 48.75 | 11109 | 11108.87 | 0.51 |
| | 50 | rnd | 6893 | 6107.97 | 380.41 | 8885 | 8054.4 | 445.1 | 11205 | 9932.53 | 828.22 | 10333 | 9223.03 | 540.03 |
| | | 2op | 11095 | 11011.07 | 16.67 | 11109 | 11105.93 | 16.8 | 11256 | 11125.1 | 45.03 | 11109 | 11109 | 0 |

Table A.1161: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10864 | 10440.53 | 255.71 | 11348 | 11034.97 | 123.68 | 10100 | 9596.33 | 252.32 | 9007 | 8425.6 | 288.81 |
| | | 2op | 11109 | 11065.83 | 55.15 | 11373 | 11257.7 | 78.69 | 11088 | 10767.63 | 235.95 | 9704 | 9508.73 | 107.2 |
| | 50 | rnd | 11092 | 10496.53 | 220.49 | 11341 | 11040.2 | 175.86 | 10032 | 9710.37 | 188.98 | 8715 | 8374.7 | 208.39 |
| | | 2op | 11256 | 11082.53 | 54.35 | 11305 | 11205.7 | 82.2 | 11109 | 10783.17 | 231.53 | 9748 | 9407.83 | 167.51 |
| 51 | 20 | rnd | 10968 | 10546.23 | 216.78 | 11326 | 10866.13 | 208.77 | 11002 | 10537.53 | 237.02 | 10369 | 9834.77 | 314.6 |
| | | 2op | 11109 | 11078.33 | 44.11 | 11305 | 11146.2 | 72.24 | 11109 | 11052.17 | 39.47 | 11029 | 10769.57 | 92.28 |
| | 50 | rnd | 11157 | 10643.2 | 223.05 | 11233 | 10886.73 | 187.1 | 11094 | 10474.67 | 194.05 | 10134 | 9401.77 | 247.14 |
| | | 2op | 11213 | 11094.07 | 43.51 | 11305 | 11136.07 | 64.54 | 11180 | 11031.03 | 45.08 | 11017 | 10598.9 | 252.63 |

Table A.1162: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7001 | 6436.83 | 321.39 | 9743 | 8813.57 | 290.7 | 9891 | 9101.7 | 410.11 | 8433 | 7920 | 258.95 |
| | | 2op | 11107 | 11039.93 | 39.47 | 11109 | 11089.67 | 30.32 | 11087 | 10983.57 | 48.74 | 10909 | 10309.73 | 210.22 |
| | 50 | rnd | 7286 | 6518.33 | 330.57 | 9396 | 8889.23 | 226.18 | 10175 | 9460 | 357.55 | 9824 | 8317.57 | 379.92 |
| | | 2op | 11107 | 11044.4 | 39.15 | 11109 | 11107.07 | 8.36 | 11124 | 11046.37 | 41.41 | 11095 | 10759.6 | 165.74 |
| 51 | 20 | rnd | 7286 | 6576.23 | 328.69 | 7983 | 7584.97 | 186.77 | 10197 | 9582.5 | 365.5 | 9695 | 8601.87 | 418.55 |
| | | 2op | 11107 | 11056.47 | 43.47 | 11109 | 11096.73 | 25.51 | 11109 | 11076.47 | 33.73 | 11015 | 10904.47 | 97.86 |
| | 50 | rnd | 7453 | 6730.43 | 285.31 | 7947 | 7683.8 | 147.99 | 10371 | 9665.43 | 387.11 | 9094 | 8362.4 | 382.41 |
| | | 2op | 11107 | 11051 | 43.74 | 11109 | 11080.03 | 40.95 | 11109 | 11098.6 | 24.24 | 11043 | 10956.67 | 57.8 |

Table A.1163: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13611 | 12826.27 | 308.27 | 14055 | 13636.5 | 189.12 | 13293 | 12746 | 312.77 | 12423 | 11342.63 | 449.55 |
| | | 2op | 13967 | 13718.6 | 173.7 | 14064 | 13900.5 | 82.13 | 13868 | 13469.33 | 173.42 | 12957 | 12583.63 | 209.44 |
| | 50 | rnd | 13573 | 13045.53 | 294.64 | 13858 | 13670.97 | 99.82 | 13644 | 13205.27 | 232.24 | 12651 | 11677.87 | 448.06 |
| | | 2op | 13916 | 13735.47 | 142.72 | 14058 | 13933.9 | 51.87 | 13831 | 13665.83 | 112.28 | 13526 | 12833.13 | 259.28 |
| 51 | 20 | rnd | 13880 | 12822.77 | 363.41 | 13917 | 13466.7 | 224.2 | 13858 | 13435 | 187.32 | 13648 | 12649 | 351.47 |
| | | 2op | 13873 | 13766.6 | 53.28 | 13967 | 13877.6 | 46.57 | 13967 | 13880.3 | 44.15 | 13818 | 13681.87 | 69.78 |
| | 50 | rnd | 13377 | 12979.87 | 193.55 | 13832 | 13572.27 | 164.28 | 13918 | 13645.63 | 181.69 | 13105 | 12573.4 | 337.68 |
| | | 2op | 13899 | 13794.83 | 68.07 | 14064 | 13924.33 | 68.8 | 14064 | 13927.1 | 71.42 | 13774 | 13582.3 | 126.65 |

Table A.1164: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8306 | 7528.3 | 483.01 | 13120 | 12001.27 | 547.82 | 12857 | 11246.33 | 616.43 | 11534 | 10026.4 | 632.59 |
| | | 2op | 13764 | 13732.6 | 13.91 | 13967 | 13897.1 | 39.41 | 13874 | 13851.87 | 39.48 | 13752 | 13596.4 | 69.98 |
| | 50 | rnd | 8241 | 7350.1 | 394.03 | 13411 | 11944.03 | 693.07 | 13351 | 11786.63 | 513.56 | 11384 | 10242.03 | 543.27 |
| | | 2op | 13815 | 13737.17 | 19.13 | 13968 | 13891.87 | 34.67 | 13878 | 13870.8 | 10.8 | 13837 | 13675.37 | 54.5 |
| 51 | 20 | rnd | 8385 | 7619.9 | 457.63 | 12005 | 10125.33 | 521.55 | 13016 | 11917.73 | 600.61 | 11606 | 10737.2 | 539.74 |
| | | 2op | 13751 | 13735.2 | 13.03 | 13968 | 13878.37 | 38.58 | 13967 | 13876.47 | 18 | 13869 | 13767.6 | 59.74 |
| | 50 | rnd | 8649 | 7718.5 | 458.54 | 10774 | 9922.87 | 471.68 | 13128 | 12035.17 | 772.15 | 11530 | 10764.23 | 368.08 |
| | | 2op | 13747 | 13727.8 | 10.97 | 13878 | 13862.9 | 33.93 | 14064 | 13901.73 | 54.56 | 13874 | 13792.17 | 64.69 |

Table A.1165: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13260 | 12847.87 | 223.87 | 13923 | 13622.43 | 157.3 | 13347 | 12762.47 | 347.94 | 12093 | 11145.97 | 527.92 |
| | | 2op | 13873 | 13726.73 | 141.06 | 14038 | 13886.1 | 87.56 | 13751 | 13384.63 | 196.87 | 13080 | 12578.53 | 223.77 |
| | 50 | rnd | 13397 | 12873.4 | 286.71 | 14060 | 13661.03 | 187.13 | 13674 | 13023.87 | 249.39 | 12541 | 11482.27 | 484.03 |
| | | 2op | 13916 | 13752.63 | 146.54 | 14038 | 13922.9 | 73.84 | 13846 | 13617.83 | 137.07 | 13215 | 12665.17 | 300.43 |
| 51 | 20 | rnd | 13654 | 12832.8 | 306.68 | 13988 | 13457.93 | 231.95 | 13964 | 13441.57 | 235.91 | 13622 | 12689.2 | 402.8 |
| | | 2op | 13873 | 13757.73 | 58.94 | 13967 | 13893.87 | 45.1 | 13967 | 13881.63 | 56.91 | 13894 | 13654.9 | 97.14 |
| | 50 | rnd | 13688 | 13074.53 | 273.17 | 13956 | 13607.33 | 167.3 | 14001 | 13652.33 | 173.65 | 13330 | 12725.03 | 269.43 |
| | | 2op | 13878 | 13790.3 | 61.43 | 14064 | 13906.67 | 60.29 | 14064 | 13906.23 | 59.04 | 13843 | 13589.07 | 98.14 |

Table A.1166: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8397 | 7580.33 | 542.99 | 13464 | 12150.7 | 567.58 | 12822 | 11252.9 | 619.84 | 11597 | 10094.17 | 557.88 |
| | | 2op | 13764 | 13731.97 | 13.61 | 13968 | 13883.6 | 28.62 | 13874 | 13838 | 49.95 | 13749 | 13578.37 | 76.7 |
| | 50 | rnd | 8502 | 7488.03 | 470.12 | 13664 | 12170.63 | 623.42 | 12756 | 11602.9 | 587.06 | 11090 | 10289.87 | 488.23 |
| | | 2op | 13751 | 13730.37 | 11.66 | 13967 | 13885.17 | 28.53 | 13878 | 13867.8 | 18.12 | 13816 | 13658.27 | 65.87 |
| 51 | 20 | rnd | 8401 | 7592.93 | 407.75 | 11713 | 10195.87 | 490.35 | 13140 | 11899.5 | 726.53 | 12040 | 10669.53 | 584.52 |
| | | 2op | 13815 | 13734.03 | 20.17 | 13967 | 13884.63 | 37.36 | 13878 | 13871.73 | 5.26 | 13861 | 13745.3 | 40.31 |
| | 50 | rnd | 8090 | 7498.23 | 381.27 | 10628 | 9671.9 | 425.96 | 13349 | 12041.73 | 707 | 11711 | 10686.03 | 454.41 |
| | | 2op | 13747 | 13731.23 | 11.95 | 13968 | 13854.83 | 59.21 | 13967 | 13879.8 | 24.27 | 13869 | 13763.23 | 51.58 |

Table A.1167: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13475 | 12913.97 | 293.02 | 13995 | 13650.83 | 180.99 | 12684 | 12153.53 | 270.77 | 11054 | 10375.87 | 348.58 |
| | | 2op | 13878 | 13811.9 | 57.64 | 14064 | 13954.73 | 58.85 | 13867 | 13500.77 | 188.09 | 12652 | 12189.8 | 139.05 |
| | 50 | rnd | 13471 | 13078.4 | 181.58 | 13954 | 13679.97 | 152.72 | 12996 | 12375.67 | 263.87 | 11137 | 10582.1 | 312.17 |
| | | 2op | 13967 | 13842.6 | 48.89 | 14064 | 13909.3 | 56.24 | 13840 | 13547.13 | 170.32 | 12749 | 12081.03 | 242.77 |
| 51 | 20 | rnd | 13768 | 13165.23 | 243.96 | 13768 | 13418.27 | 171.28 | 13603 | 13078.83 | 242.82 | 12839 | 12118.07 | 356.37 |
| | | 2op | 13873 | 13817 | 56.13 | 13968 | 13897.33 | 37.66 | 13851 | 13742.53 | 52.76 | 13621 | 13322.57 | 97.69 |
| | 50 | rnd | 13814 | 13228.27 | 238.53 | 13978 | 13498.33 | 175.93 | 13700 | 13076.93 | 251.18 | 12531 | 11862.73 | 327.37 |
| | | 2op | 13967 | 13858.3 | 32.5 | 13967 | 13887.1 | 35.91 | 13848 | 13709.93 | 65.02 | 13611 | 13215.6 | 183.45 |

Table A.1168: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 8535 | 8023.37 | 285.47 | 11335 | 10486.47 | 307.46 | 11886 | 10661.67 | 417.37 | 10133 | 9290.47 | 328.46 |
| | | 2op | 13869 | 13750.67 | 32.1 | 13862 | 13793.23 | 36.47 | 13755 | 13654.63 | 70.54 | 13581 | 13083.37 | 231.18 |
| | 50 | rnd | 8726 | 8105.3 | 292.67 | 11593 | 10620.9 | 310 | 12134 | 11089.83 | 425.13 | 10612 | 9829.27 | 340.19 |
| | | 2op | 13817 | 13746.5 | 15.5 | 13874 | 13833.23 | 37.88 | 13796 | 13725.3 | 44.33 | 13634 | 13412.13 | 141.98 |
| 51 | 20 | rnd | 8918 | 8210.93 | 294.06 | 9813 | 9412.97 | 222.38 | 11796 | 11240.77 | 316.82 | 11418 | 10064.6 | 559.6 |
| | | 2op | 13817 | 13748.77 | 20.56 | 13872 | 13781.2 | 43.42 | 13852 | 13752.4 | 42.99 | 13688 | 13568.47 | 96.02 |
| | 50 | rnd | 8784 | 8343.17 | 246.53 | 9736 | 9312.23 | 216.78 | 12270 | 11539.07 | 335.44 | 11154 | 10074.6 | 506.46 |
| | | 2op | 13864 | 13754.3 | 24.42 | 13874 | 13775.13 | 36.74 | 13868 | 13787.17 | 46.4 | 13721 | 13635.2 | 67.88 |

Table A.1169: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16965 | 16028.7 | 404.86 | 17423 | 16892.63 | 266.59 | 15825 | 14757.1 | 361.75 | 13412 | 12500.03 | 574.96 |
| | | 2op | 18017 | 17863.37 | 187.81 | 18017 | 17934.7 | 99.47 | 17737 | 17093.33 | 341.99 | 16259 | 15717.6 | 375.74 |
| | 50 | rnd | 17097 | 16277.33 | 372.87 | 17654 | 17324.8 | 223.58 | 16547 | 15613.57 | 456.46 | 14130 | 13026.77 | 602.56 |
| | | 2op | 18017 | 17915.8 | 157.96 | 18017 | 17986.9 | 48.97 | 17993 | 17399.67 | 331.83 | 16748 | 15787.73 | 347.1 |
| 51 | 20 | rnd | 16620 | 15895.33 | 411.27 | 17680 | 17028.3 | 291.67 | 17141 | 16354.13 | 314.31 | 15840 | 14748.9 | 493.76 |
| | | 2op | 18017 | 17986.3 | 43.66 | 18017 | 18017 | 0 | 18017 | 17973.1 | 56.46 | 17866 | 17630.6 | 123.14 |
| | 50 | rnd | 17090 | 16382.73 | 389.92 | 17538 | 17037.47 | 200.56 | 17337 | 16825.33 | 267.53 | 15654 | 14782.3 | 445.73 |
| | | 2op | 18017 | 17999.6 | 30.66 | 18017 | 18017 | 0 | 18017 | 18003.03 | 23.53 | 17901 | 17508.47 | 236.12 |

Table A.1170: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10299 | 9499.87 | 391.72 | 15770 | 14333.5 | 608.28 | 14217 | 13261.63 | 528.49 | 12527 | 11580.9 | 494.48 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18003.33 | 10.44 | 17939 | 17721.43 | 124.22 |
| | 50 | rnd | 10463 | 9429.83 | 546.91 | 15576 | 14531.93 | 547.88 | 14472 | 13679.93 | 399.53 | 12756 | 11964.8 | 472.1 |
| | | 2op | 18017 | 18006.27 | 11.67 | 18017 | 18017 | 0 | 18017 | 18016.97 | 0.18 | 17984 | 17879.43 | 76.31 |
| 51 | 20 | rnd | 10309 | 9538.7 | 429.86 | 14330 | 12998.63 | 606.88 | 15251 | 13935.93 | 540.34 | 13486 | 12526.57 | 552.38 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17976.07 | 27.76 |
| | 50 | rnd | 10364 | 9747.9 | 344.13 | 13694 | 12612.83 | 540.21 | 15145 | 14378.1 | 505.45 | 13903 | 12651.77 | 598.01 |
| | | 2op | 18017 | 18004.73 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18016 | 17979.57 | 20.65 |

Table A.1171: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16837 | 16131.63 | 316.26 | 17385 | 16788.5 | 320.94 | 15444 | 14734.7 | 370.66 | 13984 | 12651.93 | 631.1 |
| | | 2op | 18017 | 17811.7 | 164.42 | 18017 | 17861.37 | 146.87 | 17711 | 16949.6 | 492.38 | 16355 | 15495.17 | 363.71 |
| | 50 | rnd | 16931 | 16151.1 | 378.7 | 17682 | 17179.2 | 274.37 | 16504 | 15499.37 | 533.95 | 13945 | 12929.57 | 441.13 |
| | | 2op | 18017 | 17879.97 | 196.82 | 18017 | 17996 | 33.56 | 17943 | 17420.4 | 338.2 | 16261 | 15606.43 | 385.72 |
| 51 | 20 | rnd | 17000 | 16061.1 | 377.98 | 17536 | 16868.17 | 265.7 | 16981 | 16316.4 | 317.07 | 15634 | 14557.67 | 536.6 |
| | | 2op | 18017 | 17968.87 | 111.2 | 18017 | 18017 | 0 | 18017 | 17979.27 | 40.65 | 17850 | 17585.77 | 117.58 |
| | 50 | rnd | 17519 | 16342.93 | 401.85 | 17603 | 17056.27 | 233.79 | 17595 | 16913.3 | 349.49 | 15981 | 14704.3 | 560.17 |
| | | 2op | 18017 | 17967.9 | 76.27 | 18017 | 18015.8 | 4.57 | 18017 | 18007.37 | 14.24 | 17994 | 17426.87 | 327.53 |

Table A.1172: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10189 | 9319.9 | 358.36 | 15458 | 14362.03 | 679.96 | 13992 | 12985.27 | 604.02 | 12695 | 11713 | 556.6 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18017 | 0 | 18017 | 18000.9 | 10.2 | 17911 | 17681.43 | 121.07 |
| | 50 | rnd | 10019 | 9407.3 | 365.76 | 16037 | 14610.97 | 561.47 | 14809 | 13520.03 | 542.37 | 13200 | 12124.8 | 501.79 |
| | | 2op | 18017 | 18003.97 | 11.59 | 18017 | 18017 | 0 | 18017 | 18016.3 | 2.29 | 17973 | 17856.73 | 88.69 |
| 51 | 20 | rnd | 10264 | 9514.97 | 424.21 | 14817 | 13292.93 | 769.38 | 15072 | 14089.97 | 570.72 | 13238 | 12294.57 | 527.48 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18012 | 17964.63 | 28.42 |
| | 50 | rnd | 10644 | 9747.1 | 413.59 | 13859 | 12626.33 | 558.11 | 15867 | 14429.8 | 661.43 | 13779 | 12710.1 | 554.4 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18014 | 17985.03 | 21.49 |

Table A.1173: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16640 | 16139.7 | 247.11 | 17657 | 16968.47 | 293.69 | 15468 | 14746.5 | 423.72 | 12386 | 11406 | 545.18 |
| | | 2op | 18017 | 18016.4 | 3.29 | 18017 | 18017 | 0 | 17961 | 17462.23 | 387.35 | 15907 | 15428.07 | 183.01 |
| | 50 | rnd | 16933 | 16342.73 | 338.17 | 17581 | 16959.33 | 331.4 | 15737 | 14895.87 | 377.01 | 13277 | 11866.23 | 489.19 |
| | | 2op | 18017 | 18011.83 | 22.61 | 18017 | 18008.3 | 27.14 | 17978 | 17497.33 | 382.65 | 16171 | 15172.3 | 278.52 |
| 51 | 20 | rnd | 16984 | 16335.57 | 252.03 | 17187 | 16749.2 | 259.94 | 16571 | 15745.23 | 331.1 | 15170 | 14072.97 | 512.88 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17994.4 | 33.52 | 17677 | 17103.97 | 203.63 |
| | 50 | rnd | 17104 | 16549.43 | 313.91 | 17483 | 16977.37 | 214.13 | 16591 | 15934.93 | 335.73 | 15408 | 14070.33 | 495.05 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17937.53 | 116.93 | 17534 | 16982.03 | 334.67 |

Table A.1174: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 10782 | 9985.37 | 405.91 | 13264 | 12601.27 | 277.07 | 13746 | 12303.67 | 556.38 | 11260 | 10371.63 | 349.7 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18008 | 17934.47 | 55.78 | 17667 | 17215.07 | 245.59 |
| | 50 | rnd | 10756 | 10207.6 | 300.12 | 14508 | 13018.63 | 377.81 | 13764 | 13026.67 | 370.96 | 11956 | 10827.93 | 429.96 |
| | | 2op | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 17982.57 | 24.12 | 17896 | 17606.1 | 179.49 |
| 51 | 20 | rnd | 10807 | 10093.8 | 282.53 | 12350 | 11600.5 | 320.75 | 13974 | 13196.03 | 433.77 | 12353 | 11452.6 | 503.85 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18002.03 | 16.34 | 17971 | 17853.97 | 84.29 |
| | 50 | rnd | 10890 | 10245.33 | 271.75 | 12130 | 11549.73 | 285.96 | 14734 | 13711.87 | 528.65 | 12161 | 11309.2 | 466.91 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18009.53 | 11.3 | 17994 | 17899.33 | 64.68 |

Table A.1175: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19788 | 18962.63 | 493.28 | 20367 | 19746.33 | 321.99 | 18536 | 17484.83 | 558.67 | 16034 | 14951.13 | 598.88 |
| | | 2op | 20829 | 20630.37 | 191.46 | 20987 | 20733.5 | 110.98 | 20456 | 19762.1 | 457.02 | 18712 | 18072.87 | 415.83 |
| | 50 | rnd | 19876 | 19258.63 | 330.25 | 20740 | 20265.57 | 278.31 | 19454 | 18459.03 | 494.59 | 17099 | 15838.63 | 753.06 |
| | | 2op | 20945 | 20640.13 | 173.46 | 21051 | 20917.4 | 82.33 | 20671 | 20212.6 | 275.19 | 19228 | 18305.3 | 447.1 |
| 51 | 20 | rnd | 19724 | 18924.17 | 378.34 | 20492 | 19931.53 | 315.99 | 20011 | 19337.77 | 334.39 | 18698 | 17500.97 | 530.87 |
| | | 2op | 20829 | 20772.3 | 72.18 | 21057 | 20877.1 | 68.43 | 20829 | 20753.77 | 71.32 | 20558 | 20213 | 131.4 |
| | 50 | rnd | 19709 | 19196.63 | 339.97 | 20829 | 20087.13 | 364.91 | 20579 | 19780.07 | 320.63 | 18290 | 17374.1 | 471.22 |
| | | 2op | 20843 | 20773.4 | 79.03 | 21057 | 20906.87 | 73.3 | 20931 | 20787.97 | 49.35 | 20728 | 20129.9 | 336.11 |

Table A.1176: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12785 | 11705.33 | 468.52 | 17707 | 16810.3 | 480.84 | 16547 | 15571.9 | 433.98 | 14703 | 13682.43 | 594.33 |
| | | 2op | 20829 | 20829 | 0 | 20997 | 20834.6 | 30.67 | 20829 | 20805.9 | 21.07 | 20618 | 20372.4 | 157.35 |
| | 50 | rnd | 12889 | 11761.6 | 551.47 | 18836 | 17039.13 | 693.56 | 17417 | 15979.73 | 649.37 | 15833 | 14354.9 | 619.96 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20828.47 | 1.31 | 20807 | 20635.6 | 86.84 |
| 51 | 20 | rnd | 12756 | 11799.23 | 502.46 | 17679 | 15779 | 907.61 | 17653 | 16300 | 670.42 | 16408 | 14888.13 | 790.26 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20755.6 | 49.29 |
| | 50 | rnd | 12661 | 11844.63 | 522.46 | 16900 | 15057.77 | 697.78 | 18016 | 16705.17 | 671.05 | 16776 | 14715.77 | 629.41 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20827.27 | 9.49 | 20829 | 20827.73 | 6.94 | 20829 | 20784.2 | 34.15 |

Table A.1177: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19682 | 18949.8 | 345.68 | 20728 | 19742.37 | 336.73 | 18680 | 17578.13 | 552.58 | 15962 | 14678.8 | 649.28 |
| | | 2op | 20997 | 20686.23 | 169.27 | 20921 | 20716.27 | 104.1 | 20503 | 19890.93 | 428.74 | 18611 | 18074.2 | 332.92 |
| | 50 | rnd | 20068 | 19139.8 | 451.68 | 20567 | 20103.6 | 257.77 | 19487 | 18328.33 | 525.25 | 16255 | 15409.23 | 482.6 |
| | | 2op | 20880 | 20690.17 | 139.93 | 21051 | 20890.8 | 93.93 | 20682 | 20124.87 | 330.4 | 19434 | 18365.1 | 496.25 |
| 51 | 20 | rnd | 19588 | 18860.97 | 307.73 | 20385 | 19735.93 | 263.68 | 19616 | 19235.77 | 269.64 | 18522 | 17271.13 | 640.67 |
| | | 2op | 20889 | 20787.2 | 83.96 | 21057 | 20882.73 | 67.16 | 20889 | 20739.13 | 103.43 | 20467 | 20208.37 | 170.19 |
| | 50 | rnd | 19943 | 19217.5 | 342.15 | 20542 | 20081.57 | 245.59 | 20313 | 19714.23 | 338.77 | 18249 | 17332.13 | 497.35 |
| | | 2op | 20922 | 20761.4 | 89.55 | 21059 | 20926.2 | 81.66 | 20997 | 20790.93 | 97.15 | 20473 | 20137.37 | 246.64 |

Table A.1178: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 12825 | 11577.2 | 564.28 | 18127 | 16823.6 | 572.83 | 16724 | 15424.37 | 502.58 | 14840 | 13600.13 | 792.47 |
| | | 2op | 20829 | 20827.23 | 9.49 | 20829 | 20829 | 0 | 20829 | 20806.13 | 20.68 | 20610 | 20352.7 | 168.28 |
| | 50 | rnd | 12772 | 11569.7 | 501.25 | 18145 | 17216.53 | 587.51 | 16893 | 15869.03 | 508.8 | 15345 | 13980.37 | 636.15 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20827.43 | 2.76 | 20737 | 20600.03 | 81.27 |
| 51 | 20 | rnd | 12665 | 11937.53 | 458.55 | 17827 | 15989.13 | 1072.48 | 17238 | 16046.8 | 595.46 | 15562 | 14572.07 | 541.72 |
| | | 2op | 20829 | 20821.47 | 41.26 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20818 | 20761.6 | 31.57 |
| | 50 | rnd | 12723 | 11818.4 | 571.48 | 16857 | 15109.97 | 808.07 | 17908 | 16858.37 | 585.09 | 16004 | 14702 | 613.22 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20827.73 | 6.94 | 20829 | 20827.73 | 6.94 | 20829 | 20786.7 | 31.97 |

Table A.1179: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19806 | 19113.13 | 355.25 | 20506 | 19936.07 | 294.36 | 18514 | 17610.5 | 510.68 | 14593 | 13627.5 | 587.02 |
| | | 2op | 20829 | 20806.5 | 33.68 | 21057 | 20863.37 | 66.47 | 20753 | 20220.03 | 346.28 | 18487 | 17721.63 | 212.32 |
| | 50 | rnd | 19934 | 19410.77 | 342.08 | 20813 | 20003.2 | 311.69 | 18626 | 17922.3 | 356.22 | 15465 | 14226.87 | 517.97 |
| | | 2op | 20911 | 20813.73 | 43.85 | 21011 | 20857.27 | 71.54 | 20711 | 20230.63 | 318.98 | 18084 | 17513.47 | 256.13 |
| 51 | 20 | rnd | 20106 | 19252.13 | 411.43 | 20389 | 19749.53 | 350.38 | 19409 | 18648.37 | 334.64 | 17532 | 16564.77 | 454.05 |
| | | 2op | 20889 | 20831 | 10.95 | 20997 | 20875.47 | 59.08 | 20889 | 20808.47 | 50.94 | 20100 | 19645.17 | 173.27 |
| | 50 | rnd | 20071 | 19486.97 | 275.87 | 20402 | 19986.03 | 232.86 | 19489 | 18719.37 | 417.22 | 17655 | 16758.43 | 454.86 |
| | | 2op | 20997 | 20844.3 | 42.09 | 21057 | 20899.3 | 64.8 | 20889 | 20727.5 | 136.68 | 20225 | 19580.63 | 403.67 |

Table A.1180: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 13318 | 12112.6 | 401.65 | 15440 | 14864.03 | 275.46 | 15376 | 14551.77 | 412.22 | 13259 | 12216.83 | 439.05 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.93 | 0.37 | 20829 | 20741.73 | 96.49 | 20296 | 19771.17 | 339.78 |
| | 50 | rnd | 13035 | 12302.43 | 412.54 | 16198 | 15350.33 | 308.81 | 16637 | 15403.5 | 515.34 | 14505 | 12912.03 | 509.01 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20794.67 | 41.2 | 20647 | 20283.2 | 244.8 |
| 51 | 20 | rnd | 13778 | 12364.47 | 505.34 | 14424 | 13757.03 | 261.09 | 17072 | 15632.2 | 618.08 | 14570 | 13443.53 | 523.74 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20820.5 | 14.53 | 20822 | 20611.9 | 122.67 |
| | 50 | rnd | 13727 | 12481.3 | 468.14 | 14360 | 13883.87 | 249.53 | 16828 | 15885.07 | 428.62 | 14337 | 13542.4 | 509.72 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20823.73 | 7.7 | 20810 | 20706.63 | 54.46 |

Table A.1181: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 586.1 | 5.43 | 594 | 592.13 | 1.7 | 595 | 591.07 | 2.24 | 586 | 577.07 | 4.64 |
| | | 2op | 596 | 590.87 | 3.4 | 596 | 593.47 | 1.5 | 595 | 592 | 2.46 | 589 | 580.4 | 4.37 |
| | 50 | rnd | 594 | 586.83 | 4.42 | 596 | 593.6 | 1.5 | 596 | 593.77 | 1.17 | 590 | 580.53 | 3.99 |
| | | 2op | 595 | 590.97 | 3.08 | 596 | 593.67 | 1.47 | 596 | 593.77 | 1.48 | 592 | 582.53 | 3.92 |
| 51 | 20 | rnd | 593 | 585.63 | 4.37 | 595 | 592.3 | 1.66 | 596 | 593.4 | 1.67 | 595 | 591.03 | 2.61 |
| | | 2op | 595 | 592.67 | 3.04 | 596 | 594.23 | 1.3 | 596 | 595.03 | 0.61 | 596 | 594.47 | 1.11 |
| | 50 | rnd | 594 | 588.37 | 4.57 | 595 | 593.43 | 1.19 | 596 | 593.9 | 1.35 | 595 | 591.2 | 2.73 |
| | | 2op | 595 | 592.4 | 3 | 596 | 594.6 | 1.16 | 596 | 595.13 | 0.78 | 596 | 593.33 | 2.04 |

Table A.1182: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 485 | 441.93 | 36.03 | 593 | 576.43 | 22.73 | 596 | 587.47 | 5.42 | 594 | 580.17 | 7.33 |
| | | 2op | 592 | 589.6 | 1.22 | 595 | 594.63 | 0.96 | 595 | 593.77 | 1.28 | 594 | 591.83 | 3.09 |
| | 50 | rnd | 488 | 443.17 | 29.61 | 593 | 552.33 | 31.58 | 596 | 587.03 | 10.68 | 594 | 584.7 | 5.63 |
| | | 2op | 592 | 589.97 | 1.3 | 595 | 594.9 | 0.31 | 595 | 594.87 | 0.35 | 595 | 593.4 | 2.04 |
| 51 | 20 | rnd | 513 | 463 | 28.06 | 586 | 549.6 | 31.08 | 594 | 582.77 | 17.19 | 594 | 585.87 | 4.01 |
| | | 2op | 592 | 589.83 | 1.51 | 595 | 594.27 | 0.94 | 595 | 594.5 | 1.31 | 595 | 594.07 | 0.64 |
| | 50 | rnd | 530 | 473.4 | 28.17 | 588 | 537.2 | 31.67 | 593 | 567 | 29.06 | 593 | 583.2 | 10.3 |
| | | 2op | 592 | 589.9 | 1.16 | 595 | 594.4 | 0.5 | 595 | 594.9 | 0.31 | 595 | 594.03 | 0.61 |

Table A.1183: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 594 | 583.53 | 3.93 | 595 | 592.1 | 1.73 | 596 | 590.6 | 2.43 | 589 | 576.43 | 4.9 |
| | | 2op | 594 | 589.37 | 3.61 | 596 | 593.03 | 2.06 | 595 | 592 | 1.88 | 590 | 578.27 | 4.78 |
| | 50 | rnd | 593 | 587.8 | 3.45 | 596 | 593.03 | 1.88 | 596 | 593.03 | 1.63 | 586 | 580.47 | 3.19 |
| | | 2op | 596 | 591.1 | 3.11 | 596 | 593.67 | 1.6 | 596 | 593.5 | 1.55 | 589 | 581.07 | 3.86 |
| 51 | 20 | rnd | 592 | 585.37 | 4.89 | 595 | 591.57 | 2.39 | 596 | 593.43 | 1.68 | 594 | 591 | 2.67 |
| | | 2op | 595 | 591.9 | 3.34 | 596 | 594.37 | 0.93 | 596 | 594.83 | 0.87 | 596 | 594.13 | 1.55 |
| | 50 | rnd | 595 | 586.93 | 4.02 | 595 | 593.8 | 0.96 | 596 | 593.77 | 1.41 | 595 | 591.4 | 2.22 |
| | | 2op | 595 | 592.87 | 2.6 | 596 | 594.8 | 0.92 | 596 | 594.97 | 0.93 | 596 | 592.7 | 2.09 |

Table A.1184: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 483 | 435.97 | 28.97 | 594 | 574 | 22.77 | 593 | 587.17 | 2.78 | 588 | 578.47 | 5.76 |
| | | 2op | 592 | 590.07 | 1.36 | 595 | 594.37 | 1.27 | 595 | 593.8 | 1.42 | 594 | 588.67 | 3.48 |
| | 50 | rnd | 493 | 438.57 | 30.2 | 593 | 568.13 | 25.34 | 595 | 582.33 | 14.81 | 593 | 582.63 | 6.22 |
| | | 2op | 592 | 590.3 | 1.44 | 595 | 594.63 | 1.13 | 595 | 594.73 | 0.45 | 595 | 593.37 | 1.97 |
| 51 | 20 | rnd | 518 | 453.63 | 29.96 | 587 | 553.97 | 23.6 | 595 | 585.4 | 16.32 | 592 | 584.73 | 4.15 |
| | | 2op | 592 | 589.93 | 1.23 | 595 | 594.53 | 0.51 | 595 | 594.67 | 0.48 | 595 | 594.03 | 0.32 |
| | 50 | rnd | 561 | 467.6 | 31.66 | 588 | 547.23 | 26.53 | 593 | 563.33 | 27.29 | 593 | 582.67 | 7.17 |
| | | 2op | 592 | 590.03 | 1.27 | 595 | 594.3 | 0.47 | 595 | 594.9 | 0.31 | 595 | 594.17 | 0.46 |

Table A.1185: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 593 | 587.23 | 3.2 | 595 | 592.83 | 1.37 | 579 | 573.33 | 3.39 | 568 | 550.73 | 5.64 |
| | | 2op | 596 | 594.23 | 0.94 | 596 | 594.97 | 0.61 | 594 | 582.1 | 4.25 | 569 | 557.7 | 5.41 |
| | 50 | rnd | 594 | 588.97 | 2.95 | 595 | 592.17 | 1.72 | 582 | 577.5 | 2.75 | 575 | 552.57 | 6.66 |
| | | 2op | 595 | 593.8 | 1.58 | 596 | 594.53 | 0.94 | 592 | 583 | 4 | 574 | 558.67 | 7.99 |
| 51 | 20 | rnd | 595 | 588.7 | 2.97 | 595 | 592.97 | 1.35 | 593 | 588.57 | 2.5 | 587 | 578.13 | 4.11 |
| | | 2op | 595 | 594.13 | 0.35 | 596 | 595.03 | 0.41 | 595 | 594.07 | 0.69 | 594 | 587.73 | 3.07 |
| | 50 | rnd | 594 | 591.13 | 2.46 | 595 | 591.8 | 1.79 | 591 | 587.03 | 2.28 | 580 | 568.63 | 5.87 |
| | | 2op | 596 | 594.67 | 0.55 | 596 | 595 | 0.37 | 595 | 591.9 | 2.16 | 592 | 578.4 | 5.41 |

Table A.1186: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 498 | 477.93 | 12.87 | 582 | 572.83 | 5.56 | 584 | 573.33 | 4.51 | 563 | 552.3 | 5.26 |
| | | 2op | 592 | 591.3 | 1.12 | 595 | 593.17 | 1.18 | 592 | 588.97 | 1.94 | 582 | 570.8 | 5.9 |
| | 50 | rnd | 523 | 485.1 | 13.42 | 585 | 577.27 | 4.62 | 587 | 580.7 | 2.94 | 576 | 559.57 | 6.13 |
| | | 2op | 592 | 591.2 | 1.1 | 595 | 594.03 | 0.18 | 595 | 592.03 | 1.99 | 590 | 577 | 6.81 |
| 51 | 20 | rnd | 540 | 489.77 | 13.6 | 581 | 551.87 | 12.09 | 590 | 579.33 | 3.6 | 575 | 561.97 | 6.59 |
| | | 2op | 594 | 591.53 | 1.01 | 594 | 594 | 0 | 594 | 593.53 | 1.01 | 592 | 584.03 | 3.59 |
| | 50 | rnd | 550 | 496.23 | 16.5 | 565 | 545.2 | 13.72 | 585 | 580.17 | 3.45 | 573 | 561.27 | 5.67 |
| | | 2op | 592 | 591.43 | 0.97 | 594 | 594 | 0 | 595 | 594.07 | 0.25 | 592 | 585.57 | 4.19 |

Table A.1187: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 774 | 760.67 | 9.81 | 776 | 772.63 | 2.14 | 776 | 772.27 | 2.05 | 772 | 754.63 | 8.74 |
| | | 2op | 772 | 766.5 | 2.66 | 775 | 772.6 | 2.03 | 776 | 772.3 | 1.9 | 768 | 757.13 | 4.86 |
| | 50 | rnd | 774 | 768.03 | 5.49 | 776 | 774.27 | 1.17 | 777 | 774.47 | 1.74 | 772 | 762.5 | 4.18 |
| | | 2op | 774 | 766.73 | 5.48 | 777 | 774.17 | 1.34 | 777 | 773.77 | 1.52 | 771 | 762.37 | 4 |
| 51 | 20 | rnd | 774 | 761.33 | 10.68 | 775 | 771.33 | 2.96 | 777 | 773.27 | 2.24 | 777 | 769.57 | 3.09 |
| | | 2op | 770 | 767.03 | 2.03 | 774 | 771.73 | 0.98 | 775 | 772.1 | 0.84 | 774 | 771.23 | 1.33 |
| | 50 | rnd | 775 | 768.4 | 6.46 | 777 | 773.77 | 1.61 | 777 | 774.8 | 1.54 | 777 | 772.9 | 2.29 |
| | | 2op | 771 | 767.67 | 2.41 | 775 | 773.13 | 1.57 | 777 | 774 | 1.53 | 774 | 771.27 | 1.96 |

Table A.1188: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 609 | 482.17 | 43.8 | 774 | 764.47 | 8.14 | 775 | 764.8 | 6.71 | 769 | 752.8 | 12.94 |
| | | 2op | 769 | 766.03 | 2.08 | 771 | 769.07 | 0.45 | 773 | 769.4 | 1.22 | 772 | 767.97 | 1.81 |
| | 50 | rnd | 567 | 482.2 | 40.29 | 775 | 739.7 | 38.56 | 777 | 769.43 | 3.32 | 777 | 756.37 | 12.41 |
| | | 2op | 769 | 765.43 | 1.07 | 769 | 768.87 | 0.51 | 771 | 769 | 0.53 | 769 | 768.73 | 0.69 |
| 51 | 20 | rnd | 557 | 499.07 | 26.77 | 761 | 705.9 | 50.68 | 777 | 767.4 | 4.99 | 770 | 760.4 | 10.25 |
| | | 2op | 769 | 766.4 | 2.92 | 769 | 768.47 | 1.28 | 772 | 769.17 | 0.87 | 772 | 768.93 | 0.87 |
| | 50 | rnd | 586 | 523.63 | 34.71 | 738 | 652.97 | 54.95 | 777 | 748 | 21.79 | 777 | 763.7 | 10.38 |
| | | 2op | 769 | 765.97 | 1.59 | 769 | 769 | 0 | 772 | 769.1 | 0.55 | 772 | 768.97 | 0.93 |

Table A.1189: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 774 | 765.53 | 5.05 | 777 | 773.17 | 1.88 | 777 | 771.77 | 2.87 | 767 | 754.5 | 7.03 |
| | | 2op | 771 | 766.13 | 3.6 | 777 | 773.07 | 1.86 | 777 | 771.03 | 2.53 | 764 | 753.17 | 6.5 |
| | 50 | rnd | 777 | 768.2 | 4.84 | 777 | 773.63 | 1.65 | 777 | 773.8 | 1.75 | 767 | 759.23 | 4.99 |
| | | 2op | 774 | 767.83 | 3.1 | 777 | 773.83 | 1.58 | 776 | 774.2 | 1.21 | 767 | 760.37 | 3.9 |
| 51 | 20 | rnd | 776 | 761.7 | 12.04 | 777 | 771.63 | 2.74 | 777 | 773.4 | 1.92 | 777 | 770.8 | 3.9 |
| | | 2op | 769 | 766.37 | 4.54 | 776 | 772.13 | 1.5 | 776 | 772.67 | 1.4 | 775 | 771.67 | 1.4 |
| | 50 | rnd | 775 | 769.2 | 3.75 | 777 | 773.97 | 1.71 | 777 | 775.1 | 1.18 | 775 | 771.43 | 3.15 |
| | | 2op | 775 | 768.67 | 2.58 | 775 | 772.8 | 1.27 | 777 | 774.07 | 1.66 | 777 | 771.67 | 2.15 |

Table A.1190: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 574 | 491.7 | 48.07 | 772 | 763.5 | 7.66 | 773 | 765.7 | 6.14 | 770 | 752.43 | 15.25 |
| | | 2op | 769 | 765.8 | 1.45 | 772 | 768.67 | 1.32 | 771 | 769 | 0.53 | 769 | 767.3 | 2.71 |
| | 50 | rnd | 598 | 488.67 | 41.81 | 771 | 751.03 | 19 | 776 | 768.37 | 3.63 | 773 | 757.27 | 11.06 |
| | | 2op | 769 | 765.77 | 1.52 | 769 | 768.93 | 0.37 | 772 | 769.17 | 0.83 | 769 | 768.17 | 1.93 |
| 51 | 20 | rnd | 594 | 516.03 | 33.69 | 767 | 704.23 | 46.78 | 775 | 765.43 | 11.78 | 771 | 761.67 | 9.2 |
| | | 2op | 769 | 765.8 | 2.27 | 769 | 768.47 | 1.76 | 772 | 769.23 | 0.73 | 772 | 768.83 | 1.05 |
| | 50 | rnd | 571 | 512.4 | 32.92 | 763 | 688.33 | 51.65 | 771 | 738.37 | 30.78 | 777 | 765.13 | 6.66 |
| | | 2op | 769 | 765.9 | 1.47 | 769 | 769 | 0 | 769 | 769 | 0 | 769 | 768.93 | 0.37 |

Table A.1191: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 772 | 765.97 | 4 | 775 | 772.63 | 1.96 | 768 | 753.33 | 6.94 | 734 | 717.97 | 7.33 |
| | | 2op | 772 | 768.07 | 1.93 | 775 | 772.47 | 1.22 | 769 | 758.43 | 5.93 | 741 | 729.77 | 5.99 |
| | 50 | rnd | 776 | 769.6 | 3.33 | 777 | 773.53 | 1.91 | 763 | 757.2 | 3.45 | 739 | 717.23 | 8.84 |
| | | 2op | 775 | 768.73 | 2.89 | 775 | 772.8 | 1.4 | 771 | 761.57 | 4.83 | 756 | 730.13 | 12.08 |
| 51 | 20 | rnd | 772 | 768.07 | 2.32 | 777 | 772.3 | 2.45 | 777 | 768.97 | 3.01 | 767 | 757.2 | 4.45 |
| | | 2op | 771 | 768.67 | 1.27 | 775 | 771.13 | 1.31 | 772 | 770.07 | 1.14 | 769 | 763.1 | 3.51 |
| | 50 | rnd | 775 | 770.7 | 3.05 | 775 | 771.67 | 2.48 | 772 | 768.07 | 1.95 | 760 | 746.1 | 6.48 |
| | | 2op | 772 | 769.7 | 1.24 | 775 | 771.97 | 1.03 | 772 | 769.43 | 1.48 | 765 | 753.33 | 5.32 |

Table A.1192: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 620 | 530.33 | 26.78 | 762 | 748.5 | 9.74 | 765 | 751.87 | 6.91 | 738 | 725.13 | 7.78 |
| | | 2op | 769 | 767.4 | 1.77 | 769 | 768.4 | 1.16 | 769 | 764.63 | 2.3 | 762 | 743.9 | 7.43 |
| | 50 | rnd | 593 | 541.9 | 24.58 | 769 | 739.37 | 19.97 | 766 | 758.6 | 4.12 | 746 | 730.9 | 8.09 |
| | | 2op | 769 | 767.83 | 1.58 | 769 | 768.97 | 0.18 | 769 | 768.17 | 1.26 | 765 | 752.7 | 5.75 |
| 51 | 20 | rnd | 616 | 550.03 | 22.6 | 707 | 644.83 | 28.13 | 769 | 757.47 | 5.71 | 753 | 738.07 | 9.45 |
| | | 2op | 769 | 768.57 | 1.14 | 769 | 768.93 | 0.25 | 769 | 769 | 0 | 769 | 760.67 | 4.84 |
| | 50 | rnd | 632 | 568.93 | 26.69 | 699 | 647.6 | 25.28 | 771 | 759.7 | 4.65 | 755 | 738.83 | 8.89 |
| | | 2op | 769 | 768.63 | 0.93 | 769 | 768.8 | 0.76 | 769 | 769 | 0 | 768 | 761.8 | 4.19 |

Table A.1193: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 916 | 905 | 4.91 | 919 | 914.77 | 2.57 | 921 | 912.7 | 3.64 | 904 | 897.07 | 4.83 |
| | | 2op | 917 | 910.8 | 4.54 | 921 | 916.23 | 1.94 | 921 | 915.83 | 1.97 | 908 | 899.17 | 5.78 |
| | 50 | rnd | 916 | 909.4 | 3.6 | 919 | 916.37 | 2.31 | 921 | 917.13 | 2.13 | 913 | 901.87 | 5.29 |
| | | 2op | 918 | 912.7 | 3.8 | 919 | 916.9 | 1.77 | 921 | 917.67 | 1.65 | 915 | 904.87 | 4.96 |
| 51 | 20 | rnd | 915 | 904.27 | 6.09 | 918 | 913.13 | 2.13 | 919 | 915.63 | 2.24 | 918 | 912 | 2.78 |
| | | 2op | 916 | 913.47 | 2.9 | 917 | 915.9 | 0.92 | 919 | 917.1 | 0.92 | 921 | 915.33 | 2.12 |
| | 50 | rnd | 916 | 907.53 | 3.95 | 919 | 914.57 | 2.56 | 919 | 916.53 | 1.59 | 918 | 911.93 | 2.98 |
| | | 2op | 916 | 914.17 | 2.76 | 921 | 917.1 | 1.35 | 921 | 918 | 1.36 | 918 | 916.07 | 1.23 |

Table A.1194: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 703 | 587.97 | 64.06 | 918 | 888.8 | 26.07 | 915 | 907.67 | 4.38 | 916 | 899.33 | 10.86 |
| | | 2op | 916 | 910.27 | 3.43 | 916 | 915.5 | 1.53 | 916 | 916 | 0 | 916 | 914.7 | 2.48 |
| | 50 | rnd | 678 | 597.2 | 55.91 | 917 | 850.37 | 46.01 | 915 | 909.23 | 3.28 | 917 | 903.27 | 11.02 |
| | | 2op | 916 | 910.9 | 3.79 | 916 | 915.9 | 0.55 | 918 | 916 | 0.53 | 916 | 915.47 | 1.61 |
| 51 | 20 | rnd | 692 | 630.53 | 37.53 | 900 | 792.37 | 56.62 | 916 | 901.33 | 15.68 | 913 | 905.3 | 5.68 |
| | | 2op | 916 | 910.13 | 3.53 | 916 | 915.9 | 0.55 | 916 | 916 | 0 | 916 | 915.97 | 0.18 |
| | 50 | rnd | 737 | 638.2 | 38.74 | 896 | 784.77 | 52.5 | 908 | 834.1 | 42.73 | 913 | 906.27 | 4.15 |
| | | 2op | 916 | 909.33 | 3.09 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 915.97 | 0.18 |

Table A.1195: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 912 | 905.27 | 4.38 | 919 | 915.2 | 2.61 | 919 | 913.3 | 3.15 | 908 | 897.03 | 6.01 |
| | | 2op | 917 | 911.57 | 4.24 | 919 | 916.23 | 1.74 | 921 | 914.97 | 2.57 | 912 | 897.67 | 6.1 |
| | 50 | rnd | 914 | 906.8 | 3.28 | 919 | 915.93 | 1.55 | 921 | 915.77 | 2.3 | 912 | 898.5 | 4.88 |
| | | 2op | 917 | 912.77 | 3.87 | 921 | 917.03 | 1.87 | 921 | 916.67 | 2.04 | 909 | 900.7 | 4.92 |
| 51 | 20 | rnd | 915 | 906.33 | 4.71 | 917 | 913.17 | 2.44 | 919 | 914.8 | 2.47 | 919 | 911.6 | 3.51 |
| | | 2op | 917 | 913.83 | 3.41 | 918 | 915.77 | 1.77 | 921 | 917.13 | 1.25 | 919 | 915.73 | 1.76 |
| | 50 | rnd | 918 | 909.83 | 3.34 | 919 | 915.5 | 2.26 | 919 | 917.4 | 1.69 | 918 | 912.1 | 3.75 |
| | | 2op | 918 | 913.97 | 2.92 | 921 | 917.27 | 1.55 | 921 | 918 | 1.51 | 918 | 915.1 | 2.06 |

Table A.1196: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 650 | 575.67 | 47.99 | 916 | 890.47 | 24.86 | 917 | 907.67 | 4.22 | 914 | 893.67 | 18.66 |
| | | 2op | 916 | 910.93 | 3.8 | 916 | 915.87 | 0.57 | 916 | 915.77 | 0.9 | 916 | 914.63 | 2.53 |
| | 50 | rnd | 695 | 583.97 | 58.68 | 909 | 867.23 | 36.43 | 918 | 911 | 3.28 | 917 | 903.53 | 7.77 |
| | | 2op | 916 | 910 | 3.11 | 916 | 915.87 | 0.57 | 918 | 915.77 | 1.45 | 916 | 915.9 | 0.55 |
| 51 | 20 | rnd | 718 | 631.63 | 45.52 | 889 | 800.93 | 56.42 | 914 | 897.83 | 22.99 | 914 | 906 | 6.5 |
| | | 2op | 916 | 910.2 | 3.2 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 915.9 | 0.55 |
| | 50 | rnd | 705 | 632.13 | 43.41 | 898 | 789.57 | 45.96 | 908 | 825.67 | 47.8 | 919 | 906.7 | 4.99 |
| | | 2op | 916 | 910.07 | 3.69 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.1197: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 916 | 907.27 | 4.29 | 919 | 915.2 | 1.94 | 909 | 892.7 | 7.02 | 871 | 853.97 | 8.2 |
| | | 2op | 917 | 914.03 | 2.72 | 918 | 916.7 | 0.79 | 911 | 901.33 | 6.35 | 886 | 866.87 | 9.37 |
| | 50 | rnd | 914 | 908.77 | 3.02 | 919 | 915.93 | 1.8 | 913 | 898.53 | 4.67 | 874 | 856.13 | 9.71 |
| | | 2op | 916 | 914.5 | 2.22 | 918 | 916.37 | 1.07 | 912 | 903.2 | 5.03 | 889 | 861.13 | 12.18 |
| 51 | 20 | rnd | 917 | 910.1 | 3.71 | 919 | 914.9 | 2.7 | 916 | 910.67 | 2.89 | 906 | 899 | 3.84 |
| | | 2op | 916 | 915.83 | 0.91 | 918 | 916.37 | 0.67 | 917 | 915.87 | 0.68 | 916 | 910.27 | 2.61 |
| | 50 | rnd | 918 | 911.7 | 2.84 | 918 | 913.8 | 2.3 | 915 | 909.57 | 2.45 | 907 | 888.83 | 7.86 |
| | | 2op | 916 | 915.97 | 0.18 | 918 | 916.1 | 0.4 | 917 | 913.6 | 2.18 | 912 | 900.83 | 5.55 |

Table A.1198: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 707 | 657.37 | 28.07 | 906 | 872.9 | 20.93 | 911 | 893.77 | 7.76 | 882 | 859.03 | 16.67 |
| | | 2op | 916 | 913.1 | 2.43 | 916 | 916 | 0 | 916 | 913 | 2.39 | 908 | 888.6 | 9.41 |
| | 50 | rnd | 728 | 677.87 | 26.42 | 904 | 865.07 | 29.61 | 914 | 901.87 | 5.39 | 895 | 871.63 | 10.68 |
| | | 2op | 916 | 913.5 | 2.4 | 916 | 916 | 0 | 916 | 916 | 0 | 907 | 898.43 | 5.82 |
| 51 | 20 | rnd | 774 | 688.97 | 34.22 | 847 | 779.77 | 24.54 | 909 | 897.93 | 6.84 | 892 | 877.57 | 7.86 |
| | | 2op | 916 | 915.87 | 0.73 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 907.47 | 3.55 |
| | 50 | rnd | 771 | 702.23 | 26.25 | 842 | 778.6 | 26.2 | 915 | 900.33 | 5.98 | 894 | 865.23 | 16.7 |
| | | 2op | 916 | 915.3 | 1.6 | 916 | 916 | 0 | 916 | 916 | 0 | 913 | 908.27 | 2.24 |

Table A.1199: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1541 | 1506.77 | 21.61 | 1532 | 1514.83 | 10.15 | 1485 | 1447.47 | 20.31 | 1354 | 1293.67 | 30.66 |
| | | 2op | 1552 | 1529.63 | 13.39 | 1547 | 1521.53 | 11.81 | 1517 | 1464.97 | 20.71 | 1422 | 1339.43 | 32.89 |
| | 50 | rnd | 1543 | 1515.93 | 18.41 | 1540 | 1521.27 | 8.4 | 1513 | 1483.63 | 14.3 | 1424 | 1348.73 | 37.46 |
| | | 2op | 1558 | 1531.1 | 15.38 | 1543 | 1525.37 | 9.71 | 1517 | 1490.13 | 13.68 | 1432 | 1368.03 | 33.01 |
| 51 | 20 | rnd | 1545 | 1513.57 | 16.45 | 1543 | 1518.3 | 11.17 | 1545 | 1513.53 | 14.3 | 1477 | 1434.93 | 28.06 |
| | | 2op | 1558 | 1544.1 | 10.2 | 1558 | 1539.13 | 12.23 | 1553 | 1538.07 | 7.62 | 1536 | 1504.67 | 18.47 |
| | 50 | rnd | 1549 | 1517.77 | 17.61 | 1546 | 1531.17 | 9.2 | 1550 | 1524.7 | 8.66 | 1480 | 1429.87 | 26.75 |
| | | 2op | 1562 | 1544 | 11.76 | 1564 | 1543.17 | 8.49 | 1562 | 1539.8 | 8.71 | 1531 | 1487.5 | 18.87 |

Table A.1200: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1036 | 944.67 | 48.73 | 1519 | 1428.63 | 64.84 | 1488 | 1361.6 | 57.53 | 1346 | 1209.13 | 55.29 |
| | | 2op | 1564 | 1550.77 | 10.92 | 1565 | 1555.9 | 3.7 | 1558 | 1545.67 | 7.37 | 1518 | 1486.23 | 17.85 |
| | 50 | rnd | 1048 | 948.53 | 49.43 | 1535 | 1461.77 | 62.57 | 1525 | 1415.8 | 55.55 | 1364 | 1251.2 | 62.37 |
| | | 2op | 1555 | 1552.33 | 5.04 | 1565 | 1560.93 | 4.15 | 1565 | 1554.87 | 5.11 | 1541 | 1516.9 | 10.58 |
| 51 | 20 | rnd | 1046 | 955.93 | 42.42 | 1491 | 1285.77 | 107.87 | 1494 | 1409.4 | 48.33 | 1420 | 1280.93 | 61.47 |
| | | 2op | 1556 | 1552.07 | 4.46 | 1565 | 1558.27 | 4.68 | 1565 | 1557.17 | 4 | 1561 | 1540.4 | 8.67 |
| | 50 | rnd | 1071 | 947.63 | 48.05 | 1368 | 1200.23 | 72.88 | 1527 | 1450.03 | 42.37 | 1430 | 1301.4 | 62.79 |
| | | 2op | 1556 | 1554 | 1.2 | 1565 | 1559.13 | 4.24 | 1565 | 1560.3 | 4.08 | 1560 | 1545.8 | 6.32 |

Table A.1201: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1543 | 1509.57 | 18.27 | 1528 | 1510.83 | 8.95 | 1502 | 1446.97 | 24.63 | 1346 | 1279.83 | 32.49 |
| | | 2op | 1554 | 1529.13 | 17.27 | 1533 | 1517.43 | 8.36 | 1514 | 1467.2 | 19.2 | 1383 | 1319.77 | 30.78 |
| | 50 | rnd | 1534 | 1508.33 | 18.2 | 1532 | 1517.37 | 7.1 | 1506 | 1476.13 | 14.95 | 1405 | 1332.03 | 33.96 |
| | | 2op | 1560 | 1532.77 | 16.91 | 1546 | 1524.83 | 9.68 | 1524 | 1493.63 | 14.33 | 1455 | 1368.17 | 37.39 |
| 51 | 20 | rnd | 1541 | 1506.53 | 24.55 | 1539 | 1519.1 | 13.05 | 1539 | 1514.87 | 11.35 | 1476 | 1425.27 | 28.44 |
| | | 2op | 1562 | 1543.03 | 15.21 | 1562 | 1542.13 | 9.42 | 1565 | 1541.1 | 11.98 | 1525 | 1505.67 | 12.74 |
| | 50 | rnd | 1558 | 1514.83 | 25.31 | 1546 | 1530.13 | 9.64 | 1543 | 1526.57 | 10.13 | 1460 | 1423.37 | 22.76 |
| | | 2op | 1559 | 1542.5 | 11.58 | 1556 | 1540.77 | 8.63 | 1552 | 1535.23 | 10.32 | 1515 | 1488 | 15.97 |

Table A.1202: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1021 | 951.4 | 39.31 | 1522 | 1428.73 | 47.05 | 1435 | 1334.13 | 63.5 | 1333 | 1197.2 | 50.56 |
| | | 2op | 1556 | 1553.23 | 2.58 | 1565 | 1558.2 | 4.32 | 1561 | 1545.1 | 9.56 | 1530 | 1484.4 | 19.77 |
| | 50 | rnd | 1063 | 958.1 | 41.72 | 1530 | 1434.4 | 94.32 | 1491 | 1419.97 | 53.12 | 1307 | 1230.2 | 40.3 |
| | | 2op | 1556 | 1551.77 | 6.26 | 1565 | 1560 | 5.71 | 1564 | 1553.47 | 5.89 | 1546 | 1514.43 | 17.21 |
| 51 | 20 | rnd | 1038 | 960.13 | 38.28 | 1474 | 1333.53 | 113.95 | 1494 | 1420.6 | 56.67 | 1433 | 1299.83 | 65.87 |
| | | 2op | 1555 | 1552.23 | 6.3 | 1565 | 1560.03 | 4.87 | 1565 | 1556.37 | 3.25 | 1554 | 1540.37 | 8.35 |
| | 50 | rnd | 1061 | 960.4 | 50.2 | 1402 | 1209.93 | 91.12 | 1526 | 1449.43 | 42.43 | 1436 | 1296.67 | 54.08 |
| | | 2op | 1555 | 1553.27 | 3.05 | 1565 | 1559.93 | 4.79 | 1565 | 1559.03 | 4.37 | 1563 | 1545.43 | 7.78 |

Table A.1203: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1549 | 1511.8 | 23.41 | 1541 | 1515.1 | 14.05 | 1459 | 1394.2 | 29.9 | 1238 | 1165.4 | 24.79 |
| | | 2op | 1565 | 1546.83 | 10.96 | 1560 | 1543.27 | 9.16 | 1535 | 1480.17 | 32.64 | 1292 | 1257.2 | 22.76 |
| | 50 | rnd | 1551 | 1518.57 | 14.39 | 1531 | 1516.07 | 9.18 | 1456 | 1411.9 | 23.35 | 1312 | 1220.97 | 38.68 |
| | | 2op | 1557 | 1542.73 | 11.09 | 1556 | 1531.9 | 12.64 | 1521 | 1468.6 | 26.38 | 1373 | 1288.57 | 48.19 |
| 51 | 20 | rnd | 1545 | 1519.7 | 14.11 | 1554 | 1533.17 | 12.19 | 1490 | 1458.2 | 15.88 | 1393 | 1345 | 15.92 |
| | | 2op | 1564 | 1556.03 | 2.24 | 1566 | 1562.7 | 3.46 | 1554 | 1539.67 | 15.54 | 1491 | 1443.57 | 20.05 |
| | 50 | rnd | 1547 | 1530.4 | 10.43 | 1546 | 1527 | 9.35 | 1484 | 1456.3 | 13.18 | 1411 | 1356.03 | 23.81 |
| | | 2op | 1566 | 1555.03 | 6.57 | 1566 | 1555.8 | 4.46 | 1540 | 1503.7 | 19.77 | 1503 | 1443.17 | 32.88 |

Table A.1204: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1064 | 996.7 | 39.06 | 1310 | 1246.3 | 30.83 | 1330 | 1256.33 | 31.38 | 1193 | 1097.4 | 35.48 |
| | | 2op | 1556 | 1553.93 | 1.05 | 1555 | 1553.63 | 1.75 | 1553 | 1512.77 | 25.43 | 1457 | 1379.37 | 35.14 |
| | 50 | rnd | 1037 | 993.27 | 25.61 | 1328 | 1282.53 | 31.08 | 1403 | 1312.7 | 33.18 | 1220 | 1152.13 | 29.63 |
| | | 2op | 1556 | 1554.4 | 0.97 | 1555 | 1553.97 | 1.13 | 1555 | 1532.07 | 14.86 | 1517 | 1439.47 | 38.49 |
| 51 | 20 | rnd | 1086 | 1029.43 | 30.31 | 1155 | 1113.6 | 19.2 | 1379 | 1318.53 | 33.53 | 1279 | 1186.83 | 41.51 |
| | | 2op | 1556 | 1554.27 | 1.01 | 1561 | 1554.83 | 1.97 | 1555 | 1545.63 | 8.37 | 1540 | 1497.4 | 19.28 |
| | 50 | rnd | 1106 | 1030.33 | 34.4 | 1151 | 1116.43 | 20.39 | 1406 | 1336.03 | 31.04 | 1287 | 1146.4 | 49.79 |
| | | 2op | 1563 | 1555.37 | 1.9 | 1564 | 1555.93 | 2.97 | 1555 | 1548.67 | 5.24 | 1553 | 1522.33 | 22.54 |

Table A.1205: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1527 | 1488.17 | 19.65 | 1535 | 1510.43 | 10.9 | 1473 | 1424.27 | 24.4 | 1342 | 1282.53 | 28.69 |
| | | 2op | 1557 | 1513.57 | 20.08 | 1543 | 1514.3 | 12.53 | 1526 | 1456.63 | 29.2 | 1413 | 1317.57 | 32.9 |
| | 50 | rnd | 1526 | 1494.07 | 15.29 | 1532 | 1511.8 | 11.24 | 1505 | 1474.17 | 21.37 | 1369 | 1317.4 | 30.99 |
| | | 2op | 1539 | 1514.43 | 16.82 | 1542 | 1518.4 | 11.53 | 1520 | 1486.8 | 19.27 | 1401 | 1353.63 | 23.55 |
| 51 | 20 | rnd | 1524 | 1488.47 | 21 | 1538 | 1511.07 | 13.44 | 1529 | 1502.6 | 12.73 | 1478 | 1425.57 | 23.84 |
| | | 2op | 1556 | 1526.37 | 13.36 | 1544 | 1530.43 | 10.75 | 1550 | 1530.83 | 10.13 | 1535 | 1492.6 | 14.31 |
| | 50 | rnd | 1531 | 1498.43 | 18.26 | 1548 | 1521.3 | 10.63 | 1539 | 1521.53 | 11.65 | 1477 | 1421.37 | 24.48 |
| | | 2op | 1556 | 1527.67 | 17.32 | 1549 | 1531.5 | 10.15 | 1550 | 1534.9 | 8.58 | 1516 | 1472.2 | 21.34 |

Table A.1206: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 993 | 850.53 | 62.1 | 1485 | 1414.3 | 47.31 | 1405 | 1300.97 | 65.41 | 1283 | 1173.2 | 58.46 |
| | | 2op | 1531 | 1527.73 | 6.79 | 1551 | 1531.67 | 6.46 | 1531 | 1518.03 | 11.01 | 1500 | 1459.67 | 21.34 |
| | 50 | rnd | 977 | 853 | 57.17 | 1485 | 1435.9 | 36.8 | 1450 | 1369.13 | 52.74 | 1352 | 1201.53 | 67.92 |
| | | 2op | 1531 | 1529.87 | 3.04 | 1555 | 1539.77 | 9.59 | 1551 | 1529.27 | 7.88 | 1515 | 1485.53 | 16.68 |
| 51 | 20 | rnd | 1018 | 863.83 | 49.85 | 1428 | 1228.47 | 85.19 | 1492 | 1382.17 | 55.57 | 1388 | 1268.3 | 50.8 |
| | | 2op | 1531 | 1528.13 | 6.81 | 1552 | 1534.27 | 6.44 | 1550 | 1531.07 | 5.49 | 1531 | 1513.03 | 11.18 |
| | 50 | rnd | 955 | 849.03 | 47.55 | 1361 | 1134.6 | 92.56 | 1492 | 1419.93 | 41.7 | 1372 | 1275.63 | 64.45 |
| | | 2op | 1531 | 1530.77 | 1.28 | 1547 | 1531.5 | 4.65 | 1555 | 1533.5 | 7.14 | 1531 | 1521.33 | 8.04 |

Table A.1207: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1522 | 1485.77 | 21.88 | 1533 | 1510.47 | 10.07 | 1470 | 1429.47 | 21.45 | 1332 | 1268.67 | 25.6 |
| | | 2op | 1548 | 1511 | 25.3 | 1534 | 1509.47 | 10.83 | 1486 | 1451.7 | 21 | 1404 | 1317.47 | 34.09 |
| | 50 | rnd | 1534 | 1491.8 | 21.09 | 1533 | 1513.27 | 12.67 | 1510 | 1468.57 | 15.67 | 1375 | 1312 | 30.61 |
| | | 2op | 1549 | 1508.53 | 19.94 | 1541 | 1517.33 | 11.28 | 1503 | 1477.17 | 16.68 | 1434 | 1339.67 | 40.73 |
| 51 | 20 | rnd | 1539 | 1487.33 | 26.02 | 1536 | 1511.9 | 15.66 | 1530 | 1502.87 | 14.35 | 1511 | 1422.33 | 29.33 |
| | | 2op | 1556 | 1521.8 | 16.63 | 1543 | 1530.53 | 8.91 | 1551 | 1532.13 | 9.67 | 1520 | 1491.27 | 14.17 |
| | 50 | rnd | 1539 | 1500.37 | 21.75 | 1543 | 1519.8 | 13.31 | 1541 | 1519 | 11.72 | 1499 | 1424.97 | 27.7 |
| | | 2op | 1552 | 1526.2 | 12.93 | 1552 | 1533.03 | 8.97 | 1549 | 1533.03 | 9.49 | 1506 | 1467.77 | 20.01 |

Table A.1208: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 961 | 857.97 | 52.56 | 1492 | 1403.93 | 51.76 | 1406 | 1311.23 | 51.73 | 1304 | 1178.23 | 58.79 |
| | | 2op | 1531 | 1527.4 | 6.58 | 1552 | 1534.27 | 6.81 | 1537 | 1515.93 | 8.91 | 1496 | 1447.1 | 18.59 |
| | 50 | rnd | 946 | 850.17 | 54.71 | 1504 | 1433.27 | 37.34 | 1426 | 1350.47 | 54.71 | 1357 | 1218.73 | 56.85 |
| | | 2op | 1531 | 1530.5 | 1.91 | 1555 | 1540.53 | 8.14 | 1542 | 1529.37 | 4.81 | 1520 | 1482.7 | 17.06 |
| 51 | 20 | rnd | 960 | 863.67 | 45.84 | 1443 | 1289.27 | 95.14 | 1493 | 1393.13 | 49.71 | 1359 | 1254.23 | 56.25 |
| | | 2op | 1531 | 1529.2 | 4.49 | 1552 | 1534.1 | 6.94 | 1552 | 1530.97 | 6.24 | 1541 | 1515.27 | 10.49 |
| | 50 | rnd | 1006 | 871.9 | 53.92 | 1315 | 1169.23 | 85.59 | 1477 | 1405.3 | 55.63 | 1421 | 1278.27 | 73.93 |
| | | 2op | 1531 | 1530.77 | 1.28 | 1555 | 1533.4 | 6.68 | 1550 | 1534.57 | 6.45 | 1531 | 1521.07 | 6.33 |

Table A.1209: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1520 | 1490.37 | 19.75 | 1548 | 1516.6 | 13.9 | 1446 | 1387.6 | 24.27 | 1205 | 1142.83 | 25.4 |
| | | 2op | 1552 | 1523.9 | 12.66 | 1547 | 1532 | 8.12 | 1502 | 1455.23 | 28.79 | 1319 | 1235.8 | 25.39 |
| | 50 | rnd | 1530 | 1506.87 | 15.38 | 1530 | 1510.7 | 14.22 | 1476 | 1395.5 | 32.78 | 1321 | 1222.03 | 44.14 |
| | | 2op | 1552 | 1530.37 | 10.86 | 1551 | 1526.83 | 10.85 | 1499 | 1450.67 | 31.41 | 1340 | 1254.3 | 37.48 |
| 51 | 20 | rnd | 1536 | 1503.03 | 14.35 | 1544 | 1526.07 | 9.94 | 1474 | 1439.7 | 15.16 | 1375 | 1335.93 | 18.62 |
| | | 2op | 1556 | 1539.87 | 7.64 | 1559 | 1552.93 | 4.41 | 1537 | 1517.4 | 14.71 | 1500 | 1425.07 | 22.83 |
| | 50 | rnd | 1538 | 1511.3 | 16.87 | 1538 | 1517.03 | 13.01 | 1480 | 1443.83 | 14.76 | 1414 | 1351.7 | 28.95 |
| | | 2op | 1556 | 1543.83 | 9.41 | 1556 | 1545.27 | 8.41 | 1531 | 1496 | 17.12 | 1480 | 1434.7 | 30.71 |

Table A.1210: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 986 | 907.57 | 37.21 | 1264 | 1191.13 | 32.89 | 1322 | 1238.93 | 32.65 | 1183 | 1096.23 | 34.49 |
| | | 2op | 1531 | 1530.93 | 0.37 | 1531 | 1530.17 | 2.55 | 1512 | 1488.33 | 18.74 | 1438 | 1337.83 | 44.35 |
| | 50 | rnd | 1043 | 909.63 | 43.25 | 1281 | 1211.8 | 34.04 | 1350 | 1290.17 | 31.09 | 1185 | 1127.57 | 31.63 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1530.67 | 1.3 | 1526 | 1501.1 | 14.04 | 1520 | 1416.1 | 35.42 |
| 51 | 20 | rnd | 1015 | 940.5 | 38.05 | 1144 | 1035.2 | 38.22 | 1341 | 1292.5 | 27.85 | 1303 | 1160.1 | 45 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1521.63 | 9.59 | 1520 | 1474.03 | 24.35 |
| | 50 | rnd | 1009 | 923.9 | 29.87 | 1118 | 1047.67 | 29.11 | 1383 | 1319.17 | 28.89 | 1223 | 1122.53 | 38.18 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1525.4 | 6.68 | 1531 | 1484.93 | 24.61 |

Table A.1211: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1524 | 1485.73 | 17.93 | 1518 | 1501.97 | 9.28 | 1475 | 1432.53 | 19.07 | 1384 | 1301.6 | 38.8 |
| | | 2op | 1540 | 1514.6 | 15.75 | 1536 | 1508.27 | 11.31 | 1493 | 1449.37 | 20.88 | 1387 | 1323.5 | 25.86 |
| | 50 | rnd | 1515 | 1491.27 | 15.27 | 1532 | 1506.6 | 9.42 | 1488 | 1462.07 | 13.44 | 1397 | 1336.83 | 34.21 |
| | | 2op | 1535 | 1507.53 | 17.21 | 1531 | 1509.83 | 8.02 | 1503 | 1475.33 | 15.24 | 1421 | 1352.57 | 26.52 |
| 51 | 20 | rnd | 1523 | 1492.83 | 14.57 | 1523 | 1506.93 | 9.67 | 1520 | 1501 | 9.56 | 1479 | 1442.17 | 17.48 |
| | | 2op | 1548 | 1533.57 | 13.55 | 1549 | 1530.57 | 8.47 | 1549 | 1530.1 | 11.58 | 1527 | 1490.1 | 15.02 |
| | 50 | rnd | 1528 | 1499.57 | 13.37 | 1537 | 1511.83 | 9.17 | 1542 | 1512.57 | 11.66 | 1469 | 1435.1 | 19.66 |
| | | 2op | 1549 | 1529.7 | 13.63 | 1548 | 1527.6 | 10.14 | 1542 | 1522.37 | 11.55 | 1509 | 1474.67 | 21.02 |

Table A.1212: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1073 | 895.53 | 55.38 | 1477 | 1413.1 | 44.09 | 1408 | 1328.33 | 52.66 | 1359 | 1223.87 | 58.18 |
| | | 2op | 1548 | 1544.9 | 7.26 | 1548 | 1546.7 | 3.46 | 1548 | 1538.23 | 7.26 | 1509 | 1474.03 | 23.63 |
| | 50 | rnd | 991 | 891.53 | 51.27 | 1507 | 1439.9 | 35.25 | 1470 | 1370.3 | 50.85 | 1328 | 1247.3 | 41.12 |
| | | 2op | 1548 | 1545.67 | 10.89 | 1549 | 1547.03 | 2.77 | 1548 | 1547.13 | 3.06 | 1538 | 1506.93 | 20.67 |
| 51 | 20 | rnd | 1036 | 927.43 | 53.51 | 1468 | 1290.57 | 81.78 | 1502 | 1406.27 | 48.9 | 1384 | 1281.57 | 49.4 |
| | | 2op | 1548 | 1547 | 3.81 | 1549 | 1545.43 | 8.19 | 1548 | 1546.6 | 3.86 | 1546 | 1527.83 | 14.01 |
| | 50 | rnd | 993 | 919.2 | 32.25 | 1393 | 1204.97 | 63.5 | 1486 | 1423.3 | 30.71 | 1339 | 1276.6 | 41.83 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1547.87 | 0.73 | 1548 | 1537.3 | 7.67 |

Table A.1213: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1517 | 1488.37 | 14.79 | 1520 | 1499.73 | 8.6 | 1468 | 1429.97 | 22.16 | 1332 | 1286.53 | 24.72 |
| | | 2op | 1548 | 1508.4 | 20.22 | 1531 | 1504.47 | 10.51 | 1508 | 1445.8 | 23.38 | 1387 | 1320.6 | 28.54 |
| | 50 | rnd | 1527 | 1487.67 | 20.22 | 1529 | 1508.63 | 10.55 | 1477 | 1455.57 | 12.25 | 1393 | 1326.37 | 35.16 |
| | | 2op | 1544 | 1511.23 | 14.48 | 1534 | 1508.23 | 9.9 | 1507 | 1471.53 | 16.86 | 1426 | 1355.9 | 35.32 |
| 51 | 20 | rnd | 1516 | 1490.1 | 14.55 | 1522 | 1504.03 | 9.69 | 1520 | 1499.93 | 11.74 | 1464 | 1434.33 | 16.39 |
| | | 2op | 1548 | 1530.53 | 13.24 | 1548 | 1525.7 | 10.7 | 1548 | 1528.73 | 9.32 | 1516 | 1485.7 | 17.48 |
| | 50 | rnd | 1523 | 1494.77 | 13.58 | 1526 | 1512.33 | 7.13 | 1530 | 1512 | 8.49 | 1479 | 1428.97 | 21.26 |
| | | 2op | 1548 | 1528.9 | 16.36 | 1550 | 1528.47 | 11.86 | 1548 | 1529.63 | 11.99 | 1526 | 1481.5 | 22.3 |

Table A.1214: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 997 | 897.67 | 47.55 | 1479 | 1415.03 | 48.09 | 1419 | 1344.27 | 38.09 | 1301 | 1203.8 | 48.49 |
| | | 2op | 1548 | 1545.03 | 8.43 | 1548 | 1546.33 | 4.14 | 1548 | 1536.03 | 9.46 | 1513 | 1466.17 | 21.2 |
| | 50 | rnd | 993 | 885.97 | 47.94 | 1509 | 1457.67 | 28.77 | 1436 | 1355.37 | 45.05 | 1346 | 1232.2 | 63.2 |
| | | 2op | 1548 | 1547.13 | 4.75 | 1548 | 1546.63 | 3.4 | 1548 | 1544.3 | 6.55 | 1530 | 1500.97 | 18.19 |
| 51 | 20 | rnd | 1019 | 916.43 | 47.74 | 1428 | 1265.7 | 84.23 | 1464 | 1398.43 | 41.73 | 1363 | 1286.17 | 50.37 |
| | | 2op | 1548 | 1546.37 | 5.16 | 1548 | 1546.63 | 3.76 | 1548 | 1546.37 | 3.6 | 1548 | 1532.47 | 9.94 |
| | 50 | rnd | 1015 | 923.8 | 55.16 | 1435 | 1205.2 | 74.45 | 1495 | 1428.67 | 43.27 | 1373 | 1288.83 | 47.74 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1549 | 1548.03 | 0.18 | 1548 | 1539.1 | 8.1 |

Table A.1215: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1521 | 1492.63 | 12.65 | 1546 | 1504.73 | 13.42 | 1464 | 1401.4 | 33.42 | 1228 | 1147.4 | 27.56 |
| | | 2op | 1548 | 1535.77 | 13.89 | 1548 | 1533.97 | 11.03 | 1520 | 1470.5 | 34.08 | 1283 | 1242.63 | 24.97 |
| | 50 | rnd | 1514 | 1494.73 | 12.77 | 1511 | 1498.53 | 7.81 | 1456 | 1413.93 | 24.35 | 1287 | 1225.53 | 34.97 |
| | | 2op | 1548 | 1530.93 | 8.6 | 1548 | 1525.67 | 9.64 | 1514 | 1464.07 | 34.47 | 1429 | 1270.37 | 54.16 |
| 51 | 20 | rnd | 1526 | 1501.3 | 12.83 | 1539 | 1520.57 | 8.67 | 1483 | 1451.03 | 13.94 | 1380 | 1342.5 | 18.72 |
| | | 2op | 1549 | 1548.03 | 0.18 | 1551 | 1548.67 | 0.71 | 1548 | 1533.87 | 11.79 | 1506 | 1443.37 | 27.55 |
| | 50 | rnd | 1528 | 1508.3 | 9.07 | 1528 | 1508.47 | 10.46 | 1469 | 1446.13 | 10.93 | 1423 | 1356.57 | 30.76 |
| | | 2op | 1549 | 1546.7 | 3.55 | 1549 | 1546.77 | 2.85 | 1548 | 1504.5 | 21.22 | 1501 | 1434.9 | 34.85 |

Table A.1216: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1045 | 959.1 | 35.95 | 1288 | 1235.53 | 26.27 | 1292 | 1241.27 | 25.73 | 1156 | 1100.53 | 30.42 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1536 | 1507.47 | 20.65 | 1493 | 1382.93 | 54.29 |
| | 50 | rnd | 1050 | 961.7 | 40.19 | 1307 | 1250.67 | 24.2 | 1378 | 1297.43 | 31.52 | 1229 | 1150.8 | 29.08 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1547.5 | 2.74 | 1548 | 1528.77 | 14.86 | 1519 | 1446 | 41.65 |
| 51 | 20 | rnd | 1079 | 984.3 | 44.14 | 1184 | 1114.1 | 31.12 | 1352 | 1295.07 | 24.93 | 1254 | 1171.57 | 38.06 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1542.9 | 7.55 | 1548 | 1489.57 | 34.53 |
| | 50 | rnd | 1058 | 996.53 | 28.87 | 1149 | 1112.67 | 20.27 | 1390 | 1326.57 | 35.51 | 1232 | 1157.37 | 36.81 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1544.77 | 5.09 | 1548 | 1520.63 | 16.09 |

Table A.1217: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2606 | 2550.7 | 26.01 | 2563 | 2511.07 | 26.63 | 2452 | 2363.2 | 47.06 | 2255 | 1965.67 | 92.19 |
| | | 2op | 2651 | 2611.07 | 25.99 | 2611 | 2557 | 25.71 | 2515 | 2419.93 | 51.01 | 2219 | 2073.1 | 63.77 |
| | 50 | rnd | 2632 | 2588.1 | 23.76 | 2623 | 2557.1 | 21.44 | 2517 | 2428 | 42.19 | 2280 | 2091.5 | 85.03 |
| | | 2op | 2672 | 2624.67 | 23.01 | 2612 | 2573.7 | 18 | 2568 | 2481.9 | 52.18 | 2290 | 2166.43 | 68.95 |
| 51 | 20 | rnd | 2605 | 2562.47 | 25.86 | 2598 | 2577.67 | 12.82 | 2528 | 2477.17 | 30.22 | 2391 | 2285.97 | 39.23 |
| | | 2op | 2691 | 2652.2 | 22.17 | 2668 | 2634.47 | 19.66 | 2636 | 2593.37 | 28.42 | 2494 | 2400.03 | 36.68 |
| | 50 | rnd | 2644 | 2606.57 | 17.29 | 2614 | 2585.87 | 13.57 | 2561 | 2518.87 | 22.46 | 2486 | 2362.97 | 55.36 |
| | | 2op | 2720 | 2668.63 | 23.35 | 2687 | 2623.1 | 21.88 | 2663 | 2599.57 | 31.37 | 2552 | 2460.43 | 56.2 |

Table A.1218: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1456 | 1393.97 | 46.6 | 2040 | 1928.63 | 57.79 | 1858 | 1760.47 | 44.03 | 1687 | 1621.53 | 41.46 |
| | | 2op | 2762 | 2750.4 | 18.49 | 2762 | 2732.2 | 19.58 | 2737 | 2660.57 | 39.88 | 2630 | 2444.47 | 71.24 |
| | 50 | rnd | 1513 | 1414.87 | 54.22 | 2188 | 2012.23 | 86.83 | 1967 | 1864.5 | 54.56 | 1756 | 1644.73 | 53.4 |
| | | 2op | 2762 | 2753.63 | 11.42 | 2762 | 2748.97 | 14.12 | 2759 | 2701.7 | 34.05 | 2684 | 2534.23 | 78.29 |
| 51 | 20 | rnd | 1534 | 1456.8 | 38.62 | 2069 | 1935.53 | 61.91 | 2039 | 1884.07 | 61.63 | 1887 | 1699.7 | 61.65 |
| | | 2op | 2762 | 2752.03 | 13.54 | 2762 | 2752.4 | 11.22 | 2762 | 2731.87 | 25.12 | 2714 | 2608.5 | 47.45 |
| | 50 | rnd | 1506 | 1440.7 | 38.37 | 2046 | 1887.47 | 86.49 | 2100 | 1935.07 | 69.23 | 1826 | 1710.1 | 58.8 |
| | | 2op | 2762 | 2755.27 | 11.64 | 2762 | 2757.13 | 7.86 | 2762 | 2750.03 | 14.73 | 2759 | 2657.03 | 55.16 |

Table A.1219: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2608 | 2554.4 | 21.99 | 2565 | 2512.23 | 24.87 | 2463 | 2376.4 | 49.42 | 2134 | 1935.83 | 99.69 |
| | | 2op | 2638 | 2590.57 | 28.08 | 2652 | 2546.67 | 34.45 | 2505 | 2415.73 | 59.54 | 2160 | 2021.37 | 64.01 |
| | 50 | rnd | 2617 | 2583.2 | 18.69 | 2588 | 2551.6 | 16.94 | 2532 | 2416.03 | 47.15 | 2242 | 2097.9 | 73.81 |
| | | 2op | 2656 | 2624.97 | 17.14 | 2621 | 2576.53 | 22.72 | 2575 | 2467.2 | 47.45 | 2301 | 2169.93 | 78.07 |
| 51 | 20 | rnd | 2617 | 2563.77 | 30.25 | 2612 | 2577.73 | 14.65 | 2552 | 2475.5 | 33.81 | 2391 | 2298.53 | 55.01 |
| | | 2op | 2700 | 2657.2 | 27.21 | 2692 | 2641.77 | 22.7 | 2662 | 2600.57 | 33.6 | 2525 | 2417.8 | 44.44 |
| | 50 | rnd | 2645 | 2604.33 | 21.11 | 2617 | 2583.77 | 15.48 | 2587 | 2515.83 | 26.46 | 2476 | 2364.27 | 53.18 |
| | | 2op | 2717 | 2674.43 | 24.1 | 2669 | 2623.53 | 21.25 | 2664 | 2591.2 | 36.55 | 2522 | 2444.17 | 56.23 |

Table A.1220: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1507 | 1406.63 | 54.7 | 2067 | 1939.97 | 72.34 | 1951 | 1770.97 | 62.76 | 1782 | 1612.73 | 54.72 |
| | | 2op | 2762 | 2747.07 | 18.26 | 2762 | 2725.6 | 21.02 | 2710 | 2631.97 | 50 | 2573 | 2439.47 | 64.05 |
| | 50 | rnd | 1542 | 1411.37 | 45.88 | 2189 | 2014.2 | 81.07 | 1982 | 1842.97 | 62.66 | 1739 | 1641.13 | 56.31 |
| | | 2op | 2762 | 2756.17 | 9.57 | 2762 | 2746.57 | 15.29 | 2762 | 2698 | 30.23 | 2673 | 2521.77 | 74.14 |
| 51 | 20 | rnd | 1517 | 1440.4 | 49.4 | 2121 | 1945.33 | 83.11 | 2033 | 1879.73 | 69.78 | 1868 | 1713.57 | 63.14 |
| | | 2op | 2762 | 2757.43 | 9.78 | 2762 | 2755.87 | 9.56 | 2762 | 2730.27 | 25.02 | 2736 | 2624.9 | 57.8 |
| | 50 | rnd | 1517 | 1446.2 | 57.93 | 2074 | 1915.47 | 96.89 | 2036 | 1941.83 | 57.76 | 1861 | 1729.33 | 56.44 |
| | | 2op | 2762 | 2758.87 | 8.16 | 2762 | 2757.13 | 8.73 | 2762 | 2749.17 | 12.5 | 2732 | 2660.57 | 44.55 |

Table A.1221: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2609 | 2565.5 | 19.2 | 2593 | 2531.17 | 26.85 | 2486 | 2383.03 | 63.66 | 1942 | 1764.8 | 66.61 |
| | | 2op | 2714 | 2648.93 | 27.1 | 2680 | 2629.17 | 28.69 | 2587 | 2464.97 | 53.63 | 2078 | 1953.03 | 50.5 |
| | 50 | rnd | 2659 | 2606.03 | 19.87 | 2598 | 2543.87 | 22.88 | 2538 | 2419.53 | 48.35 | 2153 | 1968.53 | 85.68 |
| | | 2op | 2698 | 2654.67 | 17.35 | 2683 | 2621.83 | 26.73 | 2583 | 2493.07 | 54.28 | 2207 | 2050.17 | 74.22 |
| 51 | 20 | rnd | 2625 | 2589.53 | 21.02 | 2648 | 2602.43 | 16.21 | 2570 | 2492.77 | 40.58 | 2261 | 2164.47 | 50.32 |
| | | 2op | 2762 | 2744.87 | 16.34 | 2762 | 2746.23 | 14.14 | 2736 | 2680.53 | 30.86 | 2504 | 2338.5 | 58.02 |
| | 50 | rnd | 2658 | 2613.33 | 20.06 | 2651 | 2584.97 | 20.28 | 2551 | 2488.83 | 29 | 2411 | 2281.83 | 54.99 |
| | | 2op | 2744 | 2718.6 | 18.05 | 2739 | 2708.43 | 20.46 | 2679 | 2618.3 | 41.09 | 2477 | 2376.8 | 59.36 |

Table A.1222: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1524 | 1470.17 | 34.2 | 1784 | 1715.53 | 31.85 | 1809 | 1718.57 | 35.77 | 1556 | 1495.63 | 32.3 |
| | | 2op | 2762 | 2758.07 | 8.17 | 2762 | 2754.43 | 11.16 | 2724 | 2627.23 | 53.22 | 2539 | 2317.03 | 90.45 |
| | 50 | rnd | 1543 | 1494.17 | 29.6 | 1856 | 1755.77 | 32.28 | 1948 | 1811.07 | 61.57 | 1603 | 1533.27 | 37.28 |
| | | 2op | 2762 | 2760.17 | 6.05 | 2762 | 2753.2 | 17.2 | 2745 | 2677.67 | 37.44 | 2597 | 2467.5 | 59.43 |
| 51 | 20 | rnd | 1555 | 1511.47 | 23.13 | 1631 | 1579.7 | 20.79 | 1918 | 1811.3 | 48.3 | 1691 | 1586.53 | 40.62 |
| | | 2op | 2762 | 2761.67 | 1.83 | 2762 | 2760.13 | 5.9 | 2762 | 2719.4 | 33.83 | 2640 | 2555.5 | 57.71 |
| | 50 | rnd | 1544 | 1496.67 | 23.48 | 1646 | 1586.47 | 24.15 | 1917 | 1837.3 | 47.1 | 1683 | 1564.67 | 47.52 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2760.07 | 4.22 | 2762 | 2725.37 | 29.52 | 2741 | 2617.7 | 55.15 |

Table A.1223: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2665 | 2618.33 | 26.06 | 2620 | 2576.6 | 27.33 | 2496 | 2408.03 | 63.33 | 2166 | 1963 | 95.42 |
| | | 2op | 2722 | 2661.47 | 25.41 | 2686 | 2615.7 | 34.08 | 2593 | 2461.37 | 63.58 | 2228 | 2082.27 | 64.5 |
| | 50 | rnd | 2706 | 2657.3 | 22.25 | 2666 | 2628.3 | 21.16 | 2590 | 2499.67 | 49.85 | 2315 | 2141.93 | 80.96 |
| | | 2op | 2734 | 2689.4 | 20.43 | 2681 | 2638.97 | 18.78 | 2630 | 2540.67 | 48.33 | 2329 | 2191.2 | 72.77 |
| 51 | 20 | rnd | 2654 | 2607.93 | 26.14 | 2700 | 2653.23 | 21.16 | 2604 | 2526.07 | 34.14 | 2447 | 2321 | 76.41 |
| | | 2op | 2744 | 2700.83 | 22.18 | 2737 | 2685.6 | 18.41 | 2697 | 2646.43 | 25.35 | 2521 | 2458.33 | 38.96 |
| | 50 | rnd | 2706 | 2664.13 | 22.44 | 2692 | 2658.13 | 15.71 | 2666 | 2588 | 36.45 | 2518 | 2406.47 | 59.31 |
| | | 2op | 2771 | 2727.77 | 24.05 | 2724 | 2686.37 | 17.04 | 2724 | 2654.47 | 26.1 | 2607 | 2505.73 | 65.94 |

Table A.1224: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1451 | 1332.4 | 46.95 | 2114 | 2003.2 | 63.64 | 1975 | 1815.2 | 77.35 | 1723 | 1574.7 | 81.73 |
| | | 2op | 2804 | 2792.07 | 14.4 | 2804 | 2780.7 | 15.83 | 2785 | 2709.4 | 35.11 | 2661 | 2491.73 | 77.81 |
| | 50 | rnd | 1447 | 1351.2 | 36.94 | 2257 | 2078.6 | 101.6 | 1984 | 1871.7 | 63.25 | 1753 | 1621.23 | 74.64 |
| | | 2op | 2804 | 2795.2 | 15.41 | 2804 | 2793.8 | 9.87 | 2804 | 2746.27 | 33.62 | 2715 | 2589.23 | 66.66 |
| 51 | 20 | rnd | 1424 | 1352.83 | 38.07 | 2192 | 1976.43 | 107.72 | 2141 | 1943.97 | 81.41 | 1803 | 1691.9 | 78.79 |
| | | 2op | 2804 | 2796.53 | 12.88 | 2804 | 2794.03 | 10.89 | 2804 | 2763.5 | 26.4 | 2764 | 2636.9 | 58.09 |
| | 50 | rnd | 1477 | 1356.63 | 40.08 | 2092 | 1910.8 | 98.61 | 2160 | 1992.07 | 89.07 | 1857 | 1704.17 | 70.2 |
| | | 2op | 2804 | 2802.03 | 4.8 | 2804 | 2799.1 | 8.19 | 2804 | 2790.33 | 12.91 | 2797 | 2706.1 | 48 |

Table A.1225: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2679 | 2617.57 | 35.26 | 2632 | 2574.97 | 29.02 | 2489 | 2389.63 | 68.98 | 2119 | 1941.63 | 77.04 |
| | | 2op | 2710 | 2659.9 | 25.47 | 2705 | 2604.1 | 42.75 | 2600 | 2459 | 73.47 | 2167 | 2063.43 | 68.58 |
| | 50 | rnd | 2679 | 2649.63 | 18.93 | 2664 | 2625.4 | 19.67 | 2590 | 2466.43 | 53.95 | 2264 | 2114.43 | 79.75 |
| | | 2op | 2715 | 2681.8 | 18.38 | 2685 | 2631.1 | 23.88 | 2611 | 2522.03 | 48.91 | 2343 | 2179.87 | 70.66 |
| 51 | 20 | rnd | 2674 | 2625 | 22.42 | 2690 | 2649.03 | 15.46 | 2611 | 2530.87 | 38.33 | 2467 | 2321 | 59.65 |
| | | 2op | 2758 | 2695.03 | 27.46 | 2758 | 2686.87 | 23.63 | 2705 | 2636.73 | 33.61 | 2570 | 2457.7 | 43.15 |
| | 50 | rnd | 2686 | 2659.33 | 18.04 | 2722 | 2660.93 | 16 | 2652 | 2578.3 | 29.01 | 2504 | 2394.07 | 62.75 |
| | | 2op | 2751 | 2713.67 | 20.58 | 2717 | 2678.93 | 16.86 | 2706 | 2646.5 | 32.54 | 2606 | 2502.53 | 59.6 |

Table A.1226: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1430 | 1335.07 | 41.68 | 2101 | 1976.9 | 104.57 | 1894 | 1789.53 | 61.81 | 1719 | 1584.77 | 73.93 |
| | | 2op | 2804 | 2784.8 | 23.2 | 2804 | 2769.67 | 24.95 | 2765 | 2683.53 | 47.43 | 2637 | 2487.1 | 69.05 |
| | 50 | rnd | 1484 | 1345.07 | 56.61 | 2264 | 2058.43 | 81.07 | 2000 | 1868.93 | 84.44 | 1773 | 1623.57 | 78.47 |
| | | 2op | 2804 | 2796.93 | 9.1 | 2804 | 2785.93 | 16.13 | 2796 | 2740.97 | 35.31 | 2702 | 2563.9 | 68.59 |
| 51 | 20 | rnd | 1414 | 1343.53 | 34.6 | 2228 | 1956 | 114.35 | 2056 | 1935.97 | 82.61 | 1783 | 1671 | 67.4 |
| | | 2op | 2804 | 2793.27 | 10.43 | 2804 | 2793.5 | 11.75 | 2801 | 2770.63 | 19.17 | 2750 | 2654.6 | 51.93 |
| | 50 | rnd | 1419 | 1355.77 | 31.47 | 2161 | 1911.63 | 149.21 | 2085 | 1980.93 | 75.08 | 1943 | 1702 | 82.72 |
| | | 2op | 2804 | 2798.53 | 11.11 | 2804 | 2801.4 | 5.88 | 2804 | 2791.03 | 12.57 | 2776 | 2710.47 | 51.31 |

Table A.1227: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2698 | 2629.7 | 29.24 | 2678 | 2602.83 | 32.47 | 2491 | 2420.4 | 38.7 | 1919 | 1748.43 | 76.31 |
| | | 2op | 2773 | 2697.9 | 29.04 | 2761 | 2680.43 | 29.83 | 2596 | 2492.53 | 70.97 | 2097 | 1977.53 | 37.89 |
| | 50 | rnd | 2716 | 2665.47 | 26.56 | 2665 | 2614.87 | 26.14 | 2583 | 2463.57 | 49.47 | 2112 | 1981 | 68.96 |
| | | 2op | 2741 | 2709.43 | 14.51 | 2715 | 2672.33 | 24.99 | 2631 | 2535.3 | 49.23 | 2310 | 2050.53 | 79.8 |
| 51 | 20 | rnd | 2699 | 2645.57 | 24.63 | 2744 | 2677.9 | 22.71 | 2640 | 2565.2 | 35.3 | 2272 | 2167.93 | 57.58 |
| | | 2op | 2804 | 2792.87 | 10.82 | 2804 | 2792.37 | 11.17 | 2764 | 2719.97 | 30.88 | 2561 | 2380.27 | 70.43 |
| | 50 | rnd | 2741 | 2676.23 | 22.6 | 2689 | 2654.7 | 21.72 | 2619 | 2556.2 | 40.18 | 2454 | 2314.57 | 69.3 |
| | | 2op | 2802 | 2761.53 | 19.37 | 2797 | 2750.93 | 22.11 | 2715 | 2669.23 | 30.67 | 2546 | 2431.63 | 55.42 |

Table A.1228: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1452 | 1386.83 | 29.61 | 1786 | 1685.73 | 40.83 | 1796 | 1723.3 | 34.51 | 1554 | 1488.5 | 35.02 |
| | | 2op | 2804 | 2798.4 | 9.96 | 2804 | 2796.77 | 11.06 | 2740 | 2667.33 | 44.91 | 2519 | 2343.5 | 86.78 |
| | 50 | rnd | 1451 | 1397.13 | 24.58 | 1819 | 1723.57 | 39.19 | 1921 | 1818.43 | 50.35 | 1668 | 1542.9 | 47.27 |
| | | 2op | 2804 | 2799.97 | 7.23 | 2804 | 2793.47 | 11.11 | 2781 | 2721.4 | 32.62 | 2640 | 2481.47 | 80.66 |
| 51 | 20 | rnd | 1463 | 1400.77 | 30 | 1539 | 1498.83 | 23.03 | 1931 | 1830.4 | 51.91 | 1709 | 1602.6 | 48.97 |
| | | 2op | 2804 | 2801.87 | 6.69 | 2804 | 2800.9 | 8 | 2804 | 2757.5 | 23.04 | 2692 | 2600.23 | 55.06 |
| | 50 | rnd | 1496 | 1408.23 | 28.47 | 1577 | 1506.87 | 27.65 | 2026 | 1887.9 | 69.76 | 1747 | 1580.03 | 69.82 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2802.63 | 4.68 | 2804 | 2769.9 | 24.44 | 2745 | 2665.43 | 48.25 |

Table A.1229: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2541 | 2492.4 | 23.97 | 2533 | 2468.43 | 29.87 | 2433 | 2285.77 | 68.19 | 1975 | 1882.7 | 58.17 |
| | | 2op | 2610 | 2550.6 | 27.6 | 2555 | 2501.97 | 32.01 | 2463 | 2381.63 | 58.43 | 2152 | 2046.47 | 51.7 |
| | 50 | rnd | 2580 | 2530.07 | 23.32 | 2552 | 2503.1 | 23.09 | 2473 | 2354.87 | 48.55 | 2145 | 2033.93 | 66.57 |
| | | 2op | 2616 | 2567.5 | 25.58 | 2598 | 2521.8 | 22.75 | 2504 | 2410.87 | 36.04 | 2216 | 2091.2 | 69.48 |
| 51 | 20 | rnd | 2569 | 2495.37 | 28.07 | 2553 | 2524 | 14.17 | 2510 | 2424.9 | 38.48 | 2363 | 2207.37 | 55.63 |
| | | 2op | 2640 | 2591.8 | 22.96 | 2623 | 2582.7 | 19.69 | 2611 | 2532.2 | 31.47 | 2451 | 2368.9 | 38.28 |
| | 50 | rnd | 2588 | 2536.9 | 22.18 | 2548 | 2530.97 | 12.21 | 2507 | 2463.47 | 26.25 | 2424 | 2296.37 | 53.15 |
| | | 2op | 2649 | 2610.6 | 25.79 | 2623 | 2582.07 | 16.69 | 2609 | 2543.73 | 32.17 | 2500 | 2415.8 | 48.12 |

Table A.1230: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1490 | 1375.3 | 50.46 | 2213 | 2006.43 | 82.58 | 1947 | 1815.1 | 69.19 | 1813 | 1600.73 | 75.64 |
| | | 2op | 2696 | 2680.2 | 14.42 | 2694 | 2669 | 17.04 | 2665 | 2587.17 | 35.33 | 2497 | 2382.37 | 58.63 |
| | 50 | rnd | 1448 | 1371.87 | 42.69 | 2197 | 2057.93 | 68.05 | 1978 | 1903.27 | 51.19 | 1792 | 1667.33 | 76.33 |
| | | 2op | 2695 | 2684.47 | 11.75 | 2700 | 2681.13 | 13.18 | 2688 | 2632.07 | 31.28 | 2608 | 2472.97 | 65.77 |
| 51 | 20 | rnd | 1461 | 1383.6 | 40.83 | 2185 | 1977.53 | 98.45 | 2067 | 1931.8 | 74.3 | 1826 | 1724.5 | 62.71 |
| | | 2op | 2695 | 2686.77 | 12.08 | 2695 | 2684.97 | 12.84 | 2687 | 2656.43 | 19.81 | 2639 | 2560.87 | 46.41 |
| | 50 | rnd | 1456 | 1374.1 | 34.94 | 2141 | 1961.43 | 111.65 | 2161 | 1994.73 | 75.99 | 1960 | 1731.57 | 84.1 |
| | | 2op | 2695 | 2690.2 | 6.17 | 2696 | 2690.4 | 6.66 | 2696 | 2679.8 | 11.13 | 2663 | 2601.9 | 45.36 |

Table A.1231: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2539 | 2492.87 | 24.16 | 2527 | 2468.9 | 32.65 | 2421 | 2313.73 | 62.52 | 2073 | 1866.1 | 80.54 |
| | | 2op | 2582 | 2532.57 | 26.62 | 2545 | 2488.17 | 31.09 | 2476 | 2370.87 | 58.47 | 2199 | 1992.93 | 67.38 |
| | 50 | rnd | 2578 | 2516.2 | 25.44 | 2547 | 2497.97 | 18.32 | 2411 | 2348.53 | 44.59 | 2168 | 2042.57 | 80.05 |
| | | 2op | 2633 | 2572.7 | 26.38 | 2570 | 2523.9 | 23.23 | 2511 | 2426.2 | 50.71 | 2223 | 2102 | 70.04 |
| 51 | 20 | rnd | 2548 | 2492 | 24.87 | 2559 | 2520.67 | 17.28 | 2490 | 2415.43 | 32.45 | 2312 | 2225.4 | 50.75 |
| | | 2op | 2656 | 2600.27 | 33.04 | 2639 | 2584.17 | 24.17 | 2639 | 2546.2 | 38.98 | 2467 | 2363.47 | 42.85 |
| | 50 | rnd | 2585 | 2538.9 | 25.63 | 2567 | 2528.87 | 13.96 | 2510 | 2457.83 | 29.89 | 2378 | 2299.1 | 37.85 |
| | | 2op | 2654 | 2605.73 | 24.68 | 2615 | 2573.77 | 19.55 | 2615 | 2532.4 | 37.96 | 2511 | 2403.47 | 56.09 |

Table A.1232: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1468 | 1366 | 40.97 | 2110 | 1990.47 | 65.91 | 1954 | 1828 | 70.72 | 1721 | 1610.9 | 59.62 |
| | | 2op | 2695 | 2681.53 | 14.74 | 2693 | 2660.37 | 16.89 | 2667 | 2582.57 | 40.63 | 2514 | 2384.93 | 66.2 |
| | 50 | rnd | 1524 | 1383.73 | 45.2 | 2248 | 2049.2 | 74.79 | 2030 | 1870.47 | 59.96 | 1757 | 1647.93 | 62.28 |
| | | 2op | 2695 | 2685.07 | 11.18 | 2696 | 2682.33 | 12.93 | 2671 | 2632.8 | 23.87 | 2607 | 2472.1 | 73.38 |
| 51 | 20 | rnd | 1476 | 1392.23 | 49.58 | 2159 | 2008.6 | 76.24 | 2085 | 1936.27 | 76.26 | 1908 | 1723.37 | 68.26 |
| | | 2op | 2695 | 2687.7 | 7.58 | 2696 | 2681.93 | 10.62 | 2695 | 2656.57 | 17.65 | 2665 | 2564.7 | 54.49 |
| | 50 | rnd | 1462 | 1381.9 | 32.74 | 2193 | 1959.13 | 112.78 | 2098 | 1994.37 | 65.44 | 1857 | 1713.3 | 66.62 |
| | | 2op | 2695 | 2688.73 | 8.54 | 2696 | 2689.43 | 8.61 | 2695 | 2676.77 | 13.3 | 2647 | 2582.1 | 46.57 |

Table A.1233: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2546 | 2505.83 | 21.67 | 2543 | 2477.4 | 30.09 | 2400 | 2316.03 | 56.3 | 1881 | 1718.4 | 71.87 |
| | | 2op | 2664 | 2609.87 | 29.73 | 2662 | 2593.37 | 35.62 | 2512 | 2425.13 | 58.6 | 2071 | 1957.03 | 45.01 |
| | 50 | rnd | 2579 | 2536.87 | 16.46 | 2528 | 2487.93 | 20.25 | 2486 | 2343.37 | 60.45 | 2055 | 1925.93 | 65.55 |
| | | 2op | 2641 | 2600.03 | 23.92 | 2621 | 2569.03 | 27.86 | 2521 | 2443.63 | 44.31 | 2172 | 2002.67 | 83.3 |
| 51 | 20 | rnd | 2549 | 2521.13 | 15.57 | 2588 | 2546.07 | 16.37 | 2513 | 2449.37 | 26.66 | 2267 | 2098.63 | 52.91 |
| | | 2op | 2696 | 2680.9 | 15.27 | 2696 | 2680.1 | 13.65 | 2692 | 2616.67 | 38.63 | 2414 | 2289.27 | 38.33 |
| | 50 | rnd | 2567 | 2540.8 | 16.19 | 2574 | 2524.9 | 22.13 | 2491 | 2431.7 | 31.06 | 2331 | 2236.7 | 52.97 |
| | | 2op | 2696 | 2661.23 | 21.73 | 2696 | 2654.97 | 25.44 | 2606 | 2563.13 | 25.88 | 2497 | 2358.8 | 49.54 |

Table A.1234: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1480 | 1427.8 | 31.29 | 1835 | 1737.5 | 37.13 | 1867 | 1708.3 | 50.83 | 1555 | 1479.77 | 31.38 |
| | | 2op | 2695 | 2686.4 | 11.7 | 2695 | 2679.43 | 14.13 | 2649 | 2578.03 | 41.65 | 2413 | 2275.1 | 80.71 |
| | 50 | rnd | 1494 | 1430.33 | 33.69 | 1854 | 1776 | 40.36 | 1910 | 1819.07 | 47.06 | 1595 | 1538.33 | 32.99 |
| | | 2op | 2695 | 2694.13 | 2.45 | 2695 | 2688.97 | 6.56 | 2695 | 2613.73 | 42.39 | 2526 | 2417.6 | 56.59 |
| 51 | 20 | rnd | 1506 | 1442.1 | 26.82 | 1671 | 1568.87 | 41.08 | 1874 | 1800.33 | 35.64 | 1703 | 1595.63 | 56.88 |
| | | 2op | 2696 | 2692.17 | 4.69 | 2696 | 2690.9 | 5.94 | 2692 | 2646.4 | 28.02 | 2602 | 2503.63 | 49.64 |
| | 50 | rnd | 1503 | 1444.8 | 33.99 | 1621 | 1560.73 | 31.93 | 1955 | 1864.37 | 46 | 1688 | 1578.97 | 50.88 |
| | | 2op | 2696 | 2695.07 | 0.25 | 2695 | 2690.3 | 7.43 | 2695 | 2661.93 | 20.35 | 2641 | 2559.37 | 43.38 |

Table A.1235: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15604 | 15361.03 | 118.29 | 14872 | 14619.97 | 138.68 | 12498 | 11753.3 | 416.88 | 8534 | 7764.53 | 497.13 |
| | | 2op | 16495 | 16231.73 | 122.22 | 15833 | 15416.4 | 209.63 | 13500 | 12668.53 | 429.39 | 11242 | 10579.63 | 260.13 |
| | 50 | rnd | 15611 | 15355.6 | 155.49 | 15327 | 14978.53 | 173.81 | 13767 | 13115.53 | 359.54 | 10044 | 9171.97 | 463.61 |
| | | 2op | 16448 | 16188.33 | 145.35 | 15964 | 15760.43 | 154.81 | 14731 | 13832.17 | 346.96 | 11324 | 10757.2 | 343.13 |
| 51 | 20 | rnd | 15591 | 15342.7 | 141.37 | 15474 | 15181.3 | 141.6 | 14610 | 14005.47 | 222.92 | 11380 | 10515.6 | 433.36 |
| | | 2op | 16744 | 16459.1 | 169.35 | 16582 | 16293.33 | 177.59 | 15514 | 15020.83 | 336.51 | 13011 | 12309.7 | 339.08 |
| | 50 | rnd | 15568 | 15294.53 | 142.89 | 15560 | 15216.9 | 152.3 | 15071 | 14546.57 | 292.09 | 12909 | 12053.8 | 444.16 |
| | | 2op | 16642 | 16440.7 | 125.28 | 16598 | 16381.33 | 128.4 | 16067 | 15693.23 | 230.37 | 13492 | 13051.57 | 324.22 |

Table A.1236: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5541 | 5458.6 | 45.13 | 6943 | 6515.27 | 196.13 | 6369 | 5888.8 | 192.32 | 5609 | 5027.1 | 202.03 |
| | | 2op | 17766 | 17660.13 | 47.49 | 17652 | 17461.13 | 73.14 | 17319 | 16941.87 | 201.3 | 15569 | 14988.8 | 446.32 |
| | 50 | rnd | 5546 | 5459.23 | 45.51 | 7152 | 6780.13 | 158.15 | 6739 | 6170.27 | 290.21 | 5939 | 5268.47 | 318.72 |
| | | 2op | 17754 | 17679.87 | 49.43 | 17678 | 17533.4 | 72.44 | 17486 | 17272.6 | 138.26 | 16736 | 15851.57 | 375.16 |
| 51 | 20 | rnd | 5553 | 5468.3 | 42.03 | 7194 | 6775.83 | 187.12 | 6729 | 6279.8 | 221.1 | 6189 | 5391.33 | 365.98 |
| | | 2op | 17746 | 17677.83 | 49.43 | 17699 | 17557 | 94.07 | 17633 | 17419.93 | 117.71 | 17087 | 16683.07 | 210.74 |
| | 50 | rnd | 5580 | 5454.97 | 54.36 | 7132 | 6854.27 | 159.66 | 6869 | 6519.13 | 213.85 | 6383 | 5673.97 | 520.81 |
| | | 2op | 17766 | 17706.97 | 35.12 | 17691 | 17580.83 | 75.69 | 17650 | 17512 | 107.49 | 17408 | 16998.97 | 153.07 |

Table A.1237: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15730 | 15341.97 | 140.21 | 15232 | 14590.97 | 228.28 | 12813 | 11903.97 | 488.64 | 8393 | 7744.47 | 347.05 |
| | | 2op | 16521 | 16221.87 | 140.48 | 15825 | 15401.67 | 275.78 | 13282 | 12614.6 | 328.22 | 10926 | 10465.33 | 236.89 |
| | 50 | rnd | 15754 | 15372.63 | 153.46 | 15383 | 14959.3 | 183.56 | 13618 | 13067.9 | 371.42 | 9870 | 9233.47 | 412.41 |
| | | 2op | 16477 | 16165.77 | 135.25 | 16081 | 15714 | 224.03 | 14536 | 13662.83 | 374.51 | 11403 | 10697.83 | 264.3 |
| 51 | 20 | rnd | 15580 | 15338.23 | 108.02 | 15416 | 15185.27 | 117.39 | 14631 | 14052.13 | 273.6 | 11396 | 10520.73 | 451.86 |
| | | 2op | 16624 | 16432.47 | 119.46 | 16495 | 16272 | 131.28 | 15626 | 14934.8 | 362.12 | 13047 | 12339.57 | 306.14 |
| | 50 | rnd | 15673 | 15373.37 | 142.94 | 15523 | 15285.67 | 140.46 | 15189 | 14550.27 | 238.5 | 12855 | 11932.93 | 476.56 |
| | | 2op | 16648 | 16453.83 | 118.37 | 16592 | 16374.07 | 128.57 | 16020 | 15664.63 | 218.08 | 13861 | 13111.03 | 307.29 |

Table A.1238: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5569 | 5459.8 | 50.58 | 6999 | 6469.77 | 217.28 | 6247 | 5871.63 | 169.26 | 5702 | 5057.97 | 234.9 |
| | | 2op | 17749 | 17642.8 | 67.42 | 17694 | 17444 | 136.77 | 17246 | 16899.07 | 190.37 | 15643 | 14856.97 | 364.58 |
| | 50 | rnd | 5542 | 5466.77 | 42.47 | 7166 | 6749.23 | 205.72 | 6505 | 6020.77 | 309.37 | 5904 | 5273.43 | 319.51 |
| | | 2op | 17757 | 17675.2 | 53.69 | 17689 | 17501.13 | 119.98 | 17624 | 17190.73 | 199.3 | 16541 | 15789.83 | 385.48 |
| 51 | 20 | rnd | 5557 | 5471.83 | 44.39 | 7086 | 6783.67 | 147.76 | 6647 | 6254.63 | 172.61 | 6219 | 5490.07 | 403.08 |
| | | 2op | 17761 | 17651.87 | 55.48 | 17673 | 17534.03 | 80.97 | 17586 | 17416.57 | 118.27 | 17133 | 16668 | 232.82 |
| | 50 | rnd | 5540 | 5446.47 | 51.06 | 7131 | 6837.67 | 139.44 | 6953 | 6444.93 | 306.19 | 6325 | 5525.33 | 424 |
| | | 2op | 17761 | 17698.7 | 39.27 | 17699 | 17597.53 | 63.18 | 17621 | 17488.17 | 81.08 | 17260 | 16956.2 | 156.84 |

Table A.1239: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 15635 | 15297.73 | 129.21 | 15617 | 15227.37 | 136.32 | 13175 | 12353.4 | 441.71 | 7945 | 7230.33 | 348.5 |
| | | 2op | 16713 | 16524.83 | 112.38 | 16627 | 16451.63 | 120.36 | 14491 | 13630.17 | 405.58 | 11002 | 10717.33 | 129.39 |
| | 50 | rnd | 15629 | 15399.53 | 144.69 | 15568 | 15371.23 | 140.37 | 13772 | 13066.93 | 460 | 9240 | 8659.9 | 418.36 |
| | | 2op | 16644 | 16378.07 | 145.55 | 16600 | 16349.17 | 138.95 | 14577 | 13877.23 | 333.73 | 10983 | 10691.07 | 152.35 |
| 51 | 20 | rnd | 15639 | 15341.9 | 131.05 | 15639 | 15336.03 | 135.07 | 14775 | 14411.63 | 250.48 | 10413 | 9454.03 | 676.28 |
| | | 2op | 17208 | 17002.6 | 94.73 | 17208 | 16998.77 | 95.33 | 16401 | 15975.2 | 229.03 | 12919 | 12223.77 | 266.29 |
| | 50 | rnd | 15713 | 15457.73 | 110.45 | 15713 | 15453.67 | 113.33 | 15120 | 14698.93 | 189.59 | 11885 | 10831.6 | 794.38 |
| | | 2op | 16975 | 16729.63 | 109.23 | 16975 | 16727.63 | 108.96 | 16294 | 15985.13 | 232.39 | 13253 | 12697.73 | 314.91 |

Table A.1240: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 5608 | 5516.77 | 45.7 | 6158 | 5978.1 | 72.97 | 6020 | 5752.63 | 136.65 | 5089 | 4944.97 | 69.67 |
| | | 2op | 17761 | 17683.63 | 49.06 | 17728 | 17597.77 | 70.18 | 17198 | 16926.4 | 154.55 | 15155 | 14506.97 | 375.45 |
| | 50 | rnd | 5632 | 5518.63 | 46.58 | 6373 | 6139.7 | 82.01 | 6459 | 6042.13 | 142.44 | 5455 | 5159.33 | 97.59 |
| | | 2op | 17766 | 17715.93 | 39.6 | 17753 | 17658.03 | 54.28 | 17412 | 17233.33 | 108.56 | 16087 | 15632.47 | 281.4 |
| 51 | 20 | rnd | 5626 | 5532.67 | 42.23 | 5693 | 5576.77 | 56.55 | 6499 | 6251.07 | 145.4 | 5497 | 5227.8 | 134.07 |
| | | 2op | 17766 | 17697.27 | 53.21 | 17766 | 17667.63 | 61.18 | 17586 | 17457.53 | 76.63 | 16651 | 16056.73 | 243.79 |
| | 50 | rnd | 5598 | 5513.97 | 32.97 | 5734 | 5662.83 | 52.68 | 6577 | 6325.13 | 155.52 | 5512 | 5259.47 | 116.35 |
| | | 2op | 17766 | 17736 | 24.01 | 17749 | 17698.2 | 32.25 | 17654 | 17519.5 | 75.42 | 16937 | 16500.77 | 262.82 |

Table A.1241: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19225 | 19050.37 | 132.01 | 18427 | 17982.2 | 274.37 | 15036 | 14232.83 | 574.53 | 10025 | 9136.87 | 355.72 |
| | | 2op | 20408 | 19989.83 | 149.75 | 19189 | 18852.53 | 245.91 | 15817 | 15129 | 411.22 | 13352 | 12850.9 | 304.65 |
| | 50 | rnd | 19369 | 19058.6 | 167.67 | 18655 | 18366.77 | 184.04 | 16594 | 15729.3 | 491.7 | 12472 | 11004.07 | 621.15 |
| | | 2op | 20213 | 19957.8 | 130.17 | 19724 | 19399.8 | 149.01 | 17257 | 16632.57 | 368.4 | 13936 | 13070.1 | 358.19 |
| 51 | 20 | rnd | 19349 | 19040.03 | 158.13 | 19079 | 18790.47 | 171.54 | 17613 | 17090.47 | 345.28 | 13887 | 12694.43 | 506.01 |
| | | 2op | 20600 | 20272.33 | 130 | 20381 | 19981.2 | 189.05 | 18620 | 18147.9 | 387.98 | 15389 | 14913.27 | 257.13 |
| | 50 | rnd | 19274 | 19042.63 | 124.11 | 19191 | 18895.1 | 142.8 | 18412 | 17986.53 | 229.29 | 15298 | 14366.83 | 542.44 |
| | | 2op | 20525 | 20234.47 | 172.42 | 20430 | 20105.6 | 166.4 | 19401 | 18947.33 | 278.19 | 16716 | 15668 | 418.54 |

Table A.1242: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6802 | 6710 | 37.97 | 8333 | 7824.63 | 304.84 | 7626 | 7288.23 | 150.25 | 6478 | 6029.97 | 112.54 |
| | | 2op | 21981 | 21860.13 | 73.14 | 21857 | 21645.9 | 132.63 | 21289 | 20878.67 | 288.69 | 19321 | 18493.87 | 464.36 |
| | 50 | rnd | 6822 | 6712.73 | 47.03 | 8540 | 8162.13 | 206.11 | 7628 | 7314.07 | 219.98 | 6373 | 6164.27 | 81.18 |
| | | 2op | 22009 | 21897.07 | 70.65 | 21882 | 21714.93 | 92.6 | 21693 | 21352.8 | 147.04 | 20160 | 19584.37 | 437.33 |
| 51 | 20 | rnd | 6795 | 6713.93 | 47.05 | 8513 | 8160.6 | 221.06 | 8150 | 7645.23 | 363.18 | 6439 | 6327.33 | 56.34 |
| | | 2op | 22021 | 21857.87 | 62.99 | 21931 | 21716.9 | 85.41 | 21753 | 21535 | 130.07 | 21206 | 20515.93 | 332.79 |
| | 50 | rnd | 6827 | 6716.07 | 56.59 | 8782 | 8283.47 | 185.01 | 8308 | 7776.03 | 234.15 | 6512 | 6374.93 | 60.86 |
| | | 2op | 22021 | 21932.67 | 51.93 | 21965 | 21808.43 | 75.64 | 21877 | 21686.77 | 94.44 | 21344 | 20910.77 | 233.45 |

Table A.1243: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19325 | 19012 | 135.53 | 18726 | 17918.2 | 316.82 | 15079 | 14100.5 | 616.93 | 9751 | 9198.77 | 343.57 |
| | | 2op | 20347 | 19930.67 | 174.81 | 19424 | 18778.63 | 284.36 | 15895 | 15088.83 | 447.03 | 13244 | 12720.13 | 286.84 |
| | 50 | rnd | 19483 | 19076.5 | 161.7 | 18720 | 18461.13 | 164.33 | 16726 | 15808.57 | 408.08 | 11669 | 10866.37 | 537.93 |
| | | 2op | 20120 | 19891.33 | 148.19 | 19654 | 19222.2 | 211 | 16977 | 16264.07 | 480.69 | 13603 | 12981.43 | 321.08 |
| 51 | 20 | rnd | 19240 | 18961 | 127.6 | 18907 | 18724.17 | 119.56 | 17790 | 17195.5 | 331.82 | 13366 | 12484.17 | 446.25 |
| | | 2op | 20575 | 20282.13 | 144.04 | 20342 | 20034.17 | 206.37 | 19087 | 18176.67 | 501.38 | 15566 | 14868.5 | 405.49 |
| | 50 | rnd | 19306 | 19054.73 | 152.25 | 19186 | 18919.7 | 137.18 | 18506 | 17908.9 | 281.37 | 15701 | 14481.53 | 524.71 |
| | | 2op | 20560 | 20257.17 | 112.44 | 20448 | 20118.57 | 122.17 | 19567 | 18987.53 | 366.16 | 16405 | 15568.57 | 420.09 |

Table A.1244: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6799 | 6718.57 | 43.26 | 8281 | 7767.63 | 318.9 | 7563 | 7252.87 | 241.87 | 6137 | 6033.67 | 68.53 |
| | | 2op | 21981 | 21831.2 | 82.2 | 21733 | 21544.73 | 111.54 | 21208 | 20811.17 | 256.34 | 19164 | 18253.13 | 449.16 |
| | 50 | rnd | 6800 | 6709.3 | 47.78 | 8583 | 8071.57 | 259.96 | 7765 | 7321.27 | 217.65 | 6342 | 6159.6 | 76.04 |
| | | 2op | 21978 | 21890.57 | 52.61 | 21886 | 21707.2 | 101.98 | 21649 | 21312.57 | 201.68 | 19977 | 19334.83 | 356.6 |
| 51 | 20 | rnd | 6825 | 6716.53 | 46.55 | 8489 | 8187.73 | 210.49 | 8043 | 7612.8 | 346.19 | 6496 | 6334.6 | 66.4 |
| | | 2op | 21983 | 21875.27 | 61.35 | 21925 | 21754.47 | 82.11 | 21867 | 21551 | 149.95 | 21103 | 20378.5 | 313.79 |
| | 50 | rnd | 6816 | 6711.93 | 45.42 | 8504 | 8295.03 | 131.35 | 8234 | 7796.63 | 264.26 | 6511 | 6382.03 | 62 |
| | | 2op | 21982 | 21912.53 | 58.95 | 21975 | 21769.83 | 109.29 | 21873 | 21663.73 | 115.18 | 21295 | 20902.5 | 249.72 |

Table A.1245: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 19287 | 18994.33 | 159.67 | 19192 | 18900.3 | 157.52 | 16093 | 15095.53 | 533.39 | 9329 | 8744.7 | 298.84 |
| | | 2op | 20610 | 20344.03 | 164.25 | 20526 | 20246.67 | 162.91 | 16800 | 16095.03 | 481.17 | 13288 | 13003.6 | 157.79 |
| | 50 | rnd | 19289 | 19052.03 | 133.05 | 19190 | 18981.23 | 153.35 | 16294 | 15459.6 | 686.99 | 11213 | 10427.73 | 492.95 |
| | | 2op | 20335 | 20111.73 | 118.71 | 20286 | 20050.17 | 124.99 | 17675 | 16622.4 | 525.96 | 13209 | 12986.17 | 141.07 |
| 51 | 20 | rnd | 19343 | 19054.63 | 121.07 | 19343 | 19054.63 | 121.07 | 18159 | 17668.4 | 402.61 | 12353 | 11173.17 | 725.61 |
| | | 2op | 21068 | 20876.7 | 102.55 | 21068 | 20873.5 | 103 | 20163 | 19403.1 | 452.07 | 15204 | 14750.57 | 256.78 |
| | 50 | rnd | 19348 | 19058.5 | 122.69 | 19348 | 19058.4 | 122.79 | 18466 | 18014.4 | 315.08 | 14070 | 12827.37 | 1016.38 |
| | | 2op | 20839 | 20583.67 | 137.94 | 20839 | 20581.2 | 137.97 | 19953 | 19462.93 | 238.37 | 16184 | 15339.73 | 424.35 |

Table A.1246: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 6859 | 6765.27 | 34.56 | 7527 | 7198.7 | 119.84 | 7110 | 6928.8 | 102.08 | 6218 | 6048.97 | 82.97 |
| | | 2op | 21995 | 21890.83 | 57.48 | 21946 | 21792.93 | 68.49 | 21294 | 20853.87 | 243.74 | 18797 | 17865.9 | 459.97 |
| | 50 | rnd | 6893 | 6775.27 | 41.97 | 7614 | 7391.77 | 90.67 | 7695 | 7316.9 | 143.7 | 6471 | 6226.7 | 109.96 |
| | | 2op | 22021 | 21943.13 | 59.65 | 21983 | 21855.23 | 68.68 | 21575 | 21277.97 | 233.81 | 19837 | 19133.43 | 329.47 |
| 51 | 20 | rnd | 6876 | 6778.8 | 49.03 | 6898 | 6803.1 | 55.26 | 7918 | 7500.7 | 161.73 | 6665 | 6383.97 | 132.07 |
| | | 2op | 21998 | 21923.37 | 48.28 | 21994 | 21891.47 | 64.43 | 21761 | 21570.73 | 139.28 | 20296 | 19446.73 | 296.23 |
| | 50 | rnd | 6821 | 6765.53 | 33.81 | 7102 | 6873.7 | 77.31 | 7929 | 7653.47 | 180.94 | 6899 | 6468.63 | 167.94 |
| | | 2op | 22021 | 21969.93 | 31.46 | 21982 | 21911 | 46.35 | 21893 | 21730 | 79.16 | 20860 | 20126.77 | 503.18 |

Table A.1247: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21621 | 21271.03 | 139.37 | 20414 | 19785.43 | 314.37 | 16387 | 15338.03 | 588.45 | 11229 | 10278.73 | 491.34 |
| | | 2op | 22390 | 22129.3 | 153.13 | 21139 | 20483.7 | 462.28 | 17261 | 16356.8 | 449.03 | 14484 | 13985.7 | 239.86 |
| | 50 | rnd | 21706 | 21343.17 | 147.31 | 21028 | 20488.6 | 272.63 | 18420 | 17254.9 | 540.44 | 13030 | 11884.27 | 466.99 |
| | | 2op | 22357 | 22122.23 | 129.67 | 21613 | 21191.53 | 227.7 | 18993 | 18022.23 | 536.7 | 15270 | 14433.77 | 332.01 |
| 51 | 20 | rnd | 21510 | 21248.8 | 129.22 | 21238 | 20925.07 | 210.57 | 19542 | 18863.4 | 338.66 | 14781 | 13766.57 | 599.73 |
| | | 2op | 22673 | 22354.9 | 136.98 | 22372 | 22037.9 | 178.32 | 20609 | 19967.73 | 384.39 | 16958 | 16220 | 307.39 |
| | 50 | rnd | 21605 | 21333.87 | 130.81 | 21489 | 21126.27 | 148 | 20456 | 19812 | 328.26 | 16661 | 15709 | 490.84 |
| | | 2op | 22606 | 22413.83 | 135.12 | 22531 | 22238.67 | 150.1 | 21451 | 20870.43 | 317.49 | 17799 | 16959.07 | 440.17 |

Table A.1248: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7904 | 7844.47 | 34.08 | 9135 | 8716 | 241.64 | 8658 | 7804.97 | 429.63 | 7239 | 7065.67 | 90.97 |
| | | 2op | 24387 | 24226.27 | 81.96 | 24172 | 23948 | 144.7 | 23569 | 23021.9 | 293.04 | 21084 | 20083.23 | 495.31 |
| | 50 | rnd | 7959 | 7853.6 | 45.35 | 9476 | 9077.13 | 233.02 | 9032 | 8561.27 | 338.03 | 7361 | 7236.47 | 98.49 |
| | | 2op | 24394 | 24269 | 78.9 | 24300 | 24015.3 | 144.34 | 23864 | 23526.17 | 168.07 | 22439 | 21681.07 | 370.61 |
| 51 | 20 | rnd | 8014 | 7865.83 | 63.39 | 9547 | 9126.5 | 221.39 | 8771 | 8380.2 | 233.48 | 7591 | 7414.53 | 72.78 |
| | | 2op | 24348 | 24225.4 | 68.77 | 24265 | 24066.27 | 90.82 | 24059 | 23791.77 | 164.63 | 22942 | 22554.1 | 242.9 |
| | 50 | rnd | 7934 | 7852.5 | 49.49 | 9732 | 9262.73 | 197.15 | 9346 | 8565.5 | 370.68 | 7567 | 7473.4 | 47.3 |
| | | 2op | 24421 | 24302 | 69.39 | 24303 | 24140.23 | 95.24 | 24229 | 23992.33 | 124.66 | 23442 | 23048.4 | 239.57 |

Table A.1249: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21474 | 21223.23 | 131.17 | 20407 | 19818.17 | 336.72 | 16704 | 15509 | 500.82 | 10855 | 10148.17 | 427.54 |
| | | 2op | 22303 | 22082.47 | 155.78 | 21065 | 20511.4 | 350.82 | 16979 | 16354.9 | 391.95 | 14293 | 13892.37 | 212.1 |
| | 50 | rnd | 21739 | 21412.13 | 134.05 | 20903 | 20516.7 | 196.56 | 18135 | 17136.17 | 493.11 | 13038 | 11884.57 | 496.11 |
| | | 2op | 22435 | 22123.9 | 127.1 | 21618 | 21269.13 | 250.64 | 18614 | 17680.23 | 546.46 | 14758 | 14212.5 | 321.94 |
| 51 | 20 | rnd | 21492 | 21211.57 | 155.4 | 21334 | 20919.37 | 191.73 | 19457 | 18936.03 | 376.96 | 14916 | 13695.47 | 663.42 |
| | | 2op | 22725 | 22360.67 | 156.84 | 22323 | 22010.5 | 188.39 | 20637 | 19783.17 | 451.63 | 16845 | 16170.87 | 380.27 |
| | 50 | rnd | 21484 | 21325.9 | 118.51 | 21339 | 21100.63 | 109.45 | 20345 | 19712.63 | 384.61 | 17037 | 15611.43 | 637.05 |
| | | 2op | 22662 | 22422.53 | 141.44 | 22518 | 22246 | 166.7 | 21693 | 21038.53 | 284.17 | 18025 | 16933.3 | 463.29 |

Table A.1250: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7926 | 7846.5 | 41.6 | 9188 | 8785.53 | 239.03 | 8601 | 7728.43 | 408.67 | 7223 | 7105.1 | 81.96 |
| | | 2op | 24364 | 24203.27 | 79.76 | 24205 | 23875.9 | 161.32 | 23695 | 22948.57 | 318.66 | 20979 | 20146.87 | 469.42 |
| | 50 | rnd | 7954 | 7864.7 | 49.98 | 9431 | 9044.03 | 217.77 | 8844 | 8353.73 | 478.09 | 7411 | 7237.03 | 89.5 |
| | | 2op | 24334 | 24240.8 | 83.84 | 24198 | 23997.43 | 142.13 | 23793 | 23401.2 | 205.07 | 22276 | 21320.83 | 436.29 |
| 51 | 20 | rnd | 7982 | 7864.9 | 60.28 | 9586 | 9129.03 | 232.9 | 8824 | 8440.07 | 235.08 | 7560 | 7419.6 | 79 |
| | | 2op | 24363 | 24220.33 | 99.72 | 24268 | 24027.47 | 116.45 | 24155 | 23794.27 | 155.22 | 22978 | 22490.2 | 337.51 |
| | 50 | rnd | 7960 | 7836.4 | 61.68 | 9711 | 9312.53 | 205.78 | 9230 | 8563.53 | 330.42 | 7598 | 7471.37 | 66.31 |
| | | 2op | 24418 | 24300.5 | 63.22 | 24356 | 24162.17 | 94.39 | 24216 | 23987.37 | 181.39 | 23654 | 23052.8 | 294.52 |

Table A.1251: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21405 | 21168.43 | 135.11 | 21314 | 21079.63 | 155.09 | 17359 | 16453.4 | 573.21 | 10351 | 9561.87 | 408.94 |
| | | 2op | 22811 | 22460.4 | 169.61 | 22689 | 22334.67 | 187.35 | 18926 | 17700.3 | 546.47 | 14917 | 14226.8 | 225.8 |
| | 50 | rnd | 21563 | 21275.17 | 140.69 | 21538 | 21198.1 | 161.95 | 18244 | 17319.1 | 569.64 | 12513 | 11473.13 | 406.78 |
| | | 2op | 22505 | 22309.57 | 112.31 | 22433 | 22223.2 | 105.77 | 19303 | 18104.6 | 708 | 14671 | 14247.47 | 202.84 |
| 51 | 20 | rnd | 21425 | 21129.87 | 135.87 | 21425 | 21129.87 | 135.87 | 20118 | 19500.1 | 336.73 | 13589 | 12322.97 | 811.73 |
| | | 2op | 23050 | 22859.43 | 106.73 | 23050 | 22859.43 | 106.73 | 21548 | 21035.73 | 383.2 | 16879 | 15959.03 | 334.88 |
| | 50 | rnd | 21517 | 21229.03 | 159.69 | 21517 | 21229.03 | 159.69 | 20555 | 19900.4 | 298.08 | 15873 | 13693.47 | 1255.91 |
| | | 2op | 22832 | 22633.2 | 127.88 | 22832 | 22633.2 | 127.88 | 21725 | 21312.83 | 252.32 | 17122 | 16744.57 | 237.99 |

Table A.1252: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 7985 | 7909 | 37.13 | 8418 | 8218.6 | 100.71 | 8061 | 7735.33 | 152.31 | 7087 | 6973.4 | 72.1 |
| | | 2op | 24350 | 24234.4 | 76.52 | 24331 | 24123.17 | 98.76 | 23350 | 23033.7 | 221.59 | 20536 | 19680.57 | 388.42 |
| | 50 | rnd | 8005 | 7919 | 44.95 | 8720 | 8419.47 | 99.29 | 8321 | 8012.93 | 192.73 | 7299 | 7177.67 | 53.89 |
| | | 2op | 24401 | 24315.23 | 63.66 | 24367 | 24208.67 | 80.4 | 23917 | 23514.87 | 225.44 | 21647 | 21015.93 | 293.96 |
| 51 | 20 | rnd | 8017 | 7922.7 | 40.49 | 8024 | 7921.3 | 44.32 | 8509 | 8127.9 | 186.43 | 7392 | 7302.17 | 34.92 |
| | | 2op | 24422 | 24297.03 | 64.45 | 24400 | 24264.8 | 73.76 | 24243 | 23868.6 | 164.93 | 22406 | 21239.4 | 398.15 |
| | 50 | rnd | 7993 | 7898.63 | 35.79 | 8161 | 7974.47 | 71.14 | 8725 | 8307.9 | 243.93 | 7468 | 7341.1 | 71.46 |
| | | 2op | 24425 | 24339.47 | 43.89 | 24368 | 24254.6 | 56.92 | 24208 | 23991.03 | 117.49 | 22892 | 22223.2 | 605.65 |

Table A.1253: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 40398 | 39788.93 | 175.1 | 37286 | 36355.03 | 622.02 | 27791 | 26132.3 | 975.49 | 18345 | 17443.53 | 504.26 |
| | | 2op | 42205 | 41669.7 | 229.33 | 39279 | 37777.57 | 873.88 | 31081 | 29515.37 | 680.06 | 27653 | 26770.67 | 393.2 |
| | 50 | rnd | 40943 | 40571.6 | 168.75 | 38875 | 38019.93 | 535.64 | 31771 | 29913.63 | 1195.69 | 21821 | 20129.43 | 740.22 |
| | | 2op | 42875 | 42377.77 | 236.56 | 40521 | 39881.47 | 334.11 | 33188 | 31708.9 | 971.09 | 28118 | 27089.57 | 459.19 |
| 51 | 20 | rnd | 40256 | 39869 | 199.31 | 40186 | 39553.4 | 296.84 | 35274 | 33714.17 | 957.19 | 24542 | 22901.3 | 994.42 |
| | | 2op | 42647 | 42213.8 | 211.94 | 42491 | 41738.87 | 356.07 | 37112 | 35647.37 | 939.36 | 30826 | 29778.77 | 470.61 |
| | 50 | rnd | 40783 | 40495.13 | 193.53 | 40544 | 40093.47 | 246.59 | 37612 | 36446.43 | 664.21 | 28919 | 26707.77 | 1122.24 |
| | | 2op | 43225 | 42837.43 | 200.44 | 42954 | 42344.03 | 381.4 | 39297 | 38400.3 | 694.93 | 31809 | 30938.5 | 419.83 |

Table A.1254: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14411 | 14306.63 | 64.81 | 16319 | 15051.93 | 321.53 | 13835 | 13692.5 | 90.24 | 13054 | 12864.4 | 121.05 |
| | | 2op | 47065 | 46782.43 | 155.72 | 46857 | 46329.13 | 244.23 | 45195 | 44484.23 | 530.99 | 40673 | 38904.93 | 985.15 |
| | 50 | rnd | 14419 | 14285.2 | 68.36 | 16668 | 16064.03 | 316.25 | 14006 | 13822.93 | 90.97 | 13392 | 13119.23 | 138.93 |
| | | 2op | 47138 | 46976.13 | 106.24 | 46880 | 46593.57 | 163.62 | 46329 | 45679.83 | 364.14 | 42881 | 41781.33 | 738.66 |
| 51 | 20 | rnd | 14534 | 14317.53 | 82.42 | 17102 | 16186.73 | 399.15 | 16272 | 14650.8 | 916.39 | 13643 | 13489.27 | 106.7 |
| | | 2op | 46990 | 46816.83 | 103.99 | 46862 | 46615.97 | 174.11 | 46648 | 46192.27 | 273.43 | 44252 | 43603.77 | 441.14 |
| | 50 | rnd | 14413 | 14273.63 | 70.67 | 17074 | 16445.87 | 366.94 | 16673 | 16163.17 | 580.1 | 13755 | 13533.6 | 133.51 |
| | | 2op | 47249 | 47053.6 | 112.44 | 47155 | 46798.97 | 178.02 | 46839 | 46490.33 | 244.44 | 45312 | 44566 | 474.82 |

Table A.1255: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 40044 | 39689.77 | 197.82 | 37486 | 36276.73 | 861.57 | 28312 | 26064.1 | 1082.8 | 18461 | 17159.87 | 597.61 |
| | | 2op | 42188 | 41709.6 | 240.01 | 38975 | 37957.97 | 645.47 | 31000 | 29676.3 | 629.77 | 27771 | 26777.5 | 449.38 |
| | 50 | rnd | 40930 | 40536.1 | 222.81 | 38685 | 38038.3 | 519 | 31903 | 29662.53 | 1193.7 | 21471 | 20076.3 | 683.5 |
| | | 2op | 42770 | 42273.6 | 223.73 | 40527 | 39644.93 | 443.41 | 32821 | 31589.77 | 707.08 | 27750 | 26803.8 | 441.95 |
| 51 | 20 | rnd | 40269 | 39828 | 243.55 | 40266 | 39577.77 | 263 | 34979 | 33488.5 | 886.99 | 24555 | 23179.83 | 1039.96 |
| | | 2op | 42475 | 42107.97 | 220.36 | 42393 | 41506.3 | 462.18 | 37032 | 35617.7 | 790.35 | 30385 | 29542.9 | 485.4 |
| | 50 | rnd | 40954 | 40539.5 | 194.68 | 40757 | 40165.2 | 240.29 | 37340 | 36102.7 | 819.71 | 28603 | 26763.47 | 769.74 |
| | | 2op | 43118 | 42731.67 | 192.55 | 42749 | 42257.23 | 307.15 | 39666 | 38150.67 | 757.7 | 31657 | 30722.9 | 482.86 |

Table A.1256: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14477 | 14316.23 | 86.57 | 16349 | 15101.43 | 343.23 | 13884 | 13688.5 | 85.49 | 13202 | 12864.5 | 119.09 |
| | | 2op | 47137 | 46811.2 | 136.13 | 46681 | 46326.23 | 196.84 | 45663 | 44380.73 | 682.85 | 40187 | 38635.27 | 825.46 |
| | 50 | rnd | 14449 | 14320.3 | 72.09 | 17001 | 16119.13 | 453.18 | 13931 | 13807.47 | 69.07 | 13387 | 13141.73 | 138.03 |
| | | 2op | 47208 | 46948.73 | 109.12 | 46833 | 46579.2 | 132.53 | 46032 | 45555.2 | 380.12 | 42401 | 41106.5 | 865.21 |
| 51 | 20 | rnd | 14462 | 14318.9 | 72.84 | 16774 | 16175.7 | 385.83 | 16240 | 14553.03 | 921.25 | 13648 | 13479.17 | 100.84 |
| | | 2op | 47112 | 46824.73 | 127.03 | 46912 | 46600.77 | 171.94 | 46566 | 46076.03 | 256.27 | 44422 | 43396.43 | 490.8 |
| | 50 | rnd | 14455 | 14253.23 | 74.04 | 17238 | 16468.17 | 318.42 | 16594 | 16141.53 | 446.95 | 13765 | 13526.87 | 116.26 |
| | | 2op | 47175 | 46981.7 | 116.57 | 47007 | 46774.97 | 158.74 | 46704 | 46492.03 | 171.54 | 45341 | 44713.7 | 474.81 |

Table A.1257: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 39458 | 38982.83 | 195.36 | 39458 | 38982.83 | 195.36 | 30046 | 28152.13 | 1116.03 | 17719 | 16646.93 | 571.97 |
| | | 2op | 42498 | 42019.33 | 228.19 | 42498 | 42019.33 | 228.19 | 33545 | 32004.47 | 750.35 | 27621 | 26978.9 | 254.76 |
| | 50 | rnd | 39954 | 39550.03 | 189.74 | 39954 | 39550.03 | 189.74 | 33064 | 30061.47 | 1615.68 | 20542 | 19466.63 | 549.69 |
| | | 2op | 42515 | 42100.97 | 184.07 | 42515 | 42100.97 | 184.07 | 34088 | 32707.87 | 894.05 | 27443 | 26925.8 | 220.58 |
| 51 | 20 | rnd | 38729 | 38425.7 | 138.14 | 38729 | 38425.7 | 138.14 | 37210 | 35688.7 | 779.51 | 23494 | 20052.73 | 2046.09 |
| | | 2op | 43163 | 42584.3 | 283.84 | 43163 | 42584.3 | 283.84 | 39650 | 37985.3 | 914.07 | 31118 | 29603.4 | 498.93 |
| | 50 | rnd | 38995 | 38573.63 | 209.58 | 38995 | 38573.63 | 209.58 | 37974 | 36891.2 | 475.7 | 26487 | 22339.9 | 2436.53 |
| | | 2op | 42802 | 42117.27 | 288.29 | 42802 | 42117.27 | 288.29 | 40289 | 39297.87 | 711.77 | 31983 | 30716.33 | 506.14 |

Table A.1258: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14526 | 14356.7 | 71.36 | 14603 | 14347.93 | 102.32 | 13821 | 13679.23 | 62.58 | 12911 | 12688.23 | 95.91 |
| | | 2op | 47026 | 46851.23 | 97.99 | 46978 | 46724.93 | 150.4 | 45375 | 44604.13 | 427.9 | 39350 | 37695.13 | 940.88 |
| | 50 | rnd | 14592 | 14389.43 | 66.78 | 15589 | 15015.03 | 315.52 | 13979 | 13833.47 | 85.35 | 13244 | 13055.03 | 100.19 |
| | | 2op | 47253 | 47053.1 | 100.26 | 47093 | 46884.8 | 112.28 | 46167 | 45405.07 | 455.16 | 41955 | 40505.4 | 783.29 |
| 51 | 20 | rnd | 14453 | 14358.8 | 46.61 | 14453 | 14358.8 | 46.61 | 14150 | 14061.7 | 51.79 | 13455 | 13063.47 | 162.42 |
| | | 2op | 47117 | 46947.83 | 91.97 | 47084 | 46911.53 | 99.41 | 46675 | 46290.87 | 193.09 | 42611 | 39714.27 | 1274.44 |
| | 50 | rnd | 14417 | 14324.8 | 48.66 | 14477 | 14347.13 | 76.2 | 14650 | 14159.73 | 176.87 | 13538 | 13205.23 | 203.47 |
| | | 2op | 47203 | 47083.97 | 74.83 | 47156 | 47011.2 | 86.24 | 46848 | 46560.73 | 172.93 | 44057 | 41135.1 | 1587.83 |

Table A.1259: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46474 | 45927.63 | 276.23 | 43288 | 41997.53 | 826.25 | 31102 | 29334.4 | 1243.46 | 21820 | 19898.3 | 687.88 |
| | | 2op | 48496 | 48057.87 | 239.8 | 45946 | 43642 | 1090.23 | 36004 | 33966.1 | 770.79 | 31959 | 31114.97 | 437.36 |
| | 50 | rnd | 47792 | 47166.13 | 208.36 | 45196 | 44391.3 | 448.52 | 37217 | 34424.43 | 1361.61 | 25136 | 22998.9 | 860.75 |
| | | 2op | 49631 | 49153.07 | 152.91 | 47088 | 46017.83 | 734.35 | 37867 | 36484.07 | 837.6 | 32153 | 31302.33 | 374.74 |
| 51 | 20 | rnd | 46351 | 46025.53 | 212.79 | 46351 | 45894.37 | 317.07 | 40684 | 38885.47 | 944.37 | 27955 | 26203.77 | 866.73 |
| | | 2op | 49227 | 48683.07 | 250.38 | 49082 | 48394.03 | 403.06 | 42880 | 40808.77 | 992.97 | 35516 | 34348 | 501.39 |
| | 50 | rnd | 47504 | 47117.7 | 221.9 | 47187 | 46799.73 | 278.02 | 43502 | 42079.53 | 846.92 | 33187 | 30492.87 | 1227.8 |
| | | 2op | 50178 | 49807.9 | 201.14 | 49847 | 49284.5 | 342.11 | 46090 | 44096.83 | 761.93 | 37210 | 35608.63 | 732.89 |

Table A.1260: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17024 | 16890.73 | 75.4 | 19082 | 18088.93 | 392.23 | 16352 | 16104.57 | 119.93 | 15446 | 15145.83 | 168.97 |
| | | 2op | 55132 | 54900.83 | 136.41 | 54765 | 54421.63 | 172.24 | 53047 | 52251.17 | 498.65 | 47142 | 45012.67 | 1143.84 |
| | 50 | rnd | 17122 | 16928.93 | 102.62 | 19937 | 19096.13 | 856.96 | 16502 | 16335.2 | 107.35 | 15815 | 15576.67 | 133.21 |
| | | 2op | 55386 | 55147.53 | 126.95 | 55051 | 54736.73 | 180.84 | 54096 | 53573.47 | 365.84 | 49779 | 48770.73 | 955.25 |
| 51 | 20 | rnd | 17052 | 16893.73 | 80.62 | 19790 | 18746.07 | 536.36 | 16657 | 16485.47 | 96.55 | 16073 | 15895.83 | 107.85 |
| | | 2op | 55406 | 54985.03 | 176.88 | 55329 | 54750.4 | 213.34 | 54710 | 54189.17 | 327.62 | 52351 | 50796.2 | 708.94 |
| | 50 | rnd | 17035 | 16846.17 | 77.53 | 19741 | 19100.2 | 390.74 | 19415 | 16979.43 | 1015.59 | 16319 | 16021.1 | 125.27 |
| | | 2op | 55439 | 55227.2 | 108.87 | 55245 | 54991.17 | 128.85 | 55062 | 54685.9 | 193.23 | 53213 | 52404.77 | 498.31 |

Table A.1261: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46690 | 45908.57 | 234.08 | 42958 | 41725.37 | 784.85 | 31808 | 29845.93 | 1179.57 | 21655 | 19898.83 | 809.1 |
| | | 2op | 48548 | 48054.73 | 207.58 | 45356 | 43507.27 | 838.67 | 35191 | 34082.1 | 644.75 | 32005 | 31004.73 | 424.24 |
| | 50 | rnd | 47597 | 47005.77 | 240.76 | 45709 | 44033.57 | 649.46 | 35592 | 33521.77 | 1089.59 | 25406 | 23059.8 | 838.12 |
| | | 2op | 49335 | 48953.9 | 236.37 | 46820 | 45754.1 | 741.37 | 38058 | 36139.07 | 886.49 | 31973 | 31133.13 | 385.58 |
| 51 | 20 | rnd | 46389 | 46066.3 | 199.32 | 46389 | 45938.8 | 306.06 | 39793 | 38380.6 | 943.58 | 28352 | 26435.6 | 814.41 |
| | | 2op | 49580 | 48683.77 | 307.76 | 49383 | 48356.7 | 605.81 | 42387 | 40585.2 | 1009.84 | 35128 | 34318.77 | 430.63 |
| | 50 | rnd | 47724 | 47137.47 | 226.35 | 47380 | 46895.63 | 233.01 | 43353 | 41936.07 | 722.52 | 32007 | 30312.73 | 1136.41 |
| | | 2op | 50172 | 49754.27 | 225.97 | 50020 | 49280.77 | 389.74 | 45376 | 43771.73 | 1047.43 | 37171 | 35609.53 | 656.47 |

Table A.1262: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17090 | 16897.57 | 93.59 | 19045 | 18115.03 | 384.64 | 16392 | 16129.47 | 132.77 | 15360 | 15118.37 | 150.34 |
| | | 2op | 55184 | 54905.7 | 173.09 | 54682 | 54375.7 | 203 | 52987 | 52089.37 | 536.7 | 47075 | 45372.97 | 965.28 |
| | 50 | rnd | 17042 | 16898.87 | 84.95 | 19773 | 18404.4 | 980.44 | 16439 | 16261.53 | 97.97 | 15746 | 15438.63 | 164.51 |
| | | 2op | 55275 | 55018.57 | 157.05 | 54945 | 54594.13 | 194.11 | 54113 | 53352.2 | 335.52 | 49378 | 48326.27 | 948.43 |
| 51 | 20 | rnd | 17057 | 16891.77 | 77.31 | 19330 | 18568.27 | 296.29 | 16648 | 16473.73 | 92.76 | 16146 | 15911.4 | 128.02 |
| | | 2op | 55249 | 54956.37 | 165.02 | 55145 | 54722.03 | 177.37 | 54689 | 54177.6 | 332.96 | 52291 | 50947.07 | 498.75 |
| | 50 | rnd | 16968 | 16830.9 | 87.71 | 19968 | 19026.1 | 433.97 | 19368 | 16883.47 | 936.37 | 16168 | 15949.37 | 127.75 |
| | | 2op | 55391 | 55172.47 | 114.66 | 55196 | 54921.83 | 165.84 | 54941 | 54580 | 209.42 | 53389 | 52418.7 | 459.3 |

Table A.1263: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 45162 | 44734.33 | 239.56 | 45162 | 44734.33 | 239.56 | 34835 | 32286.77 | 1203.51 | 20241 | 19123.33 | 563.28 |
| | | 2op | 48911 | 48338.03 | 251.18 | 48911 | 48338.03 | 251.18 | 38019 | 36705.33 | 1098.27 | 32374 | 31487.13 | 249.27 |
| | 50 | rnd | 45996 | 45470.13 | 269.11 | 45996 | 45470.13 | 269.11 | 37164 | 34060.3 | 1848.13 | 23433 | 22131.9 | 413.14 |
| | | 2op | 49250 | 48659.7 | 275.33 | 49250 | 48659.7 | 275.33 | 39537 | 37614.97 | 1441.55 | 32119 | 31383.9 | 259.74 |
| 51 | 20 | rnd | 44234 | 43832.6 | 231.9 | 44234 | 43832.6 | 231.9 | 42554 | 40577.13 | 987.51 | 26635 | 23464 | 2275.9 |
| | | 2op | 49626 | 49067.57 | 247.16 | 49626 | 49067.57 | 247.16 | 45354 | 44014.4 | 821.42 | 35992 | 34447.37 | 699.91 |
| | 50 | rnd | 44624 | 44124.93 | 244.08 | 44624 | 44124.93 | 244.08 | 43619 | 42584.4 | 747.57 | 30373 | 25162 | 3008.72 |
| | | 2op | 48939 | 48461.07 | 239.19 | 48939 | 48461.07 | 239.19 | 46982 | 45925.23 | 613.23 | 37081 | 35925.4 | 560.47 |

Table A.1264: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17039 | 16920.83 | 80.17 | 17017 | 16873 | 82.5 | 16342 | 16142.07 | 109.46 | 15141 | 14929.57 | 155.06 |
| | | 2op | 55209 | 55007.9 | 108.09 | 55088 | 54864.4 | 136.61 | 52797 | 52119.2 | 478.44 | 45428 | 44303.53 | 751.13 |
| | 50 | rnd | 17114 | 16957.4 | 57.9 | 18426 | 17538.1 | 397.53 | 16430 | 16271.4 | 91.9 | 15549 | 15346.67 | 92.88 |
| | | 2op | 55433 | 55120.07 | 123.36 | 55200 | 54942 | 156.15 | 53943 | 53005.6 | 501.23 | 49229 | 47859 | 719.57 |
| 51 | 20 | rnd | 17074 | 16945.9 | 66.89 | 17074 | 16945.9 | 66.89 | 16733 | 16557.7 | 72.96 | 15649 | 15357.7 | 184.44 |
| | | 2op | 55278 | 55023.07 | 146.7 | 55278 | 54988.6 | 154.14 | 54724 | 54273.57 | 168.65 | 49096 | 45891.07 | 1526.82 |
| | 50 | rnd | 17012 | 16866.93 | 58.61 | 17127 | 16869.93 | 80.55 | 16752 | 16564.2 | 71.65 | 15879 | 15392.93 | 213.68 |
| | | 2op | 55435 | 55243.67 | 105.86 | 55367 | 55164.97 | 116.05 | 55046 | 54644.6 | 189.82 | 51900 | 47301.5 | 2050.19 |

Table A.1265: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

**Results With Post Optimization and Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47286 | 47054.33 | 124.55 | 47270 | 47048.3 | 111.16 | 47365 | 47134.63 | 111.23 | 47370 | 47138.7 | 123.16 |
| | | 2op | 47402 | 47176.53 | 96.34 | 47348 | 47166.23 | 100.99 | 47274 | 47135.6 | 89.8 | 47366 | 47182.4 | 99.28 |
| | 50 | rnd | 47238 | 47043 | 117.89 | 47269 | 47055.97 | 111.47 | 47357 | 47106.9 | 119.7 | 47318 | 47171.6 | 90.7 |
| | | 2op | 47268 | 47130.43 | 92.02 | 47348 | 47122.5 | 88.74 | 47348 | 47169.53 | 98.03 | 47331 | 47141.67 | 103.54 |
| 51 | 20 | rnd | 47333 | 47143.93 | 103.26 | 47339 | 47150.37 | 103.67 | 47392 | 47127.13 | 127.21 | 47348 | 47145.57 | 119.02 |
| | | 2op | 47355 | 47192.7 | 70.1 | 47355 | 47187.97 | 71.13 | 47373 | 47176.6 | 96.28 | 47366 | 47200.17 | 98.2 |
| | 50 | rnd | 47262 | 47118.77 | 97.81 | 47278 | 47119.33 | 113.72 | 47356 | 47144.17 | 126.42 | 47429 | 47174.53 | 84.93 |
| | | 2op | 47304 | 47149.23 | 76.46 | 47304 | 47147.23 | 83.68 | 47377 | 47176.7 | 99.92 | 47372 | 47186.3 | 91.09 |

Table A.1266: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47328 | 47223.07 | 62.12 | 47343 | 47206.77 | 61.74 | 47394 | 47211.87 | 80.39 | 47344 | 47225.17 | 77.3 |
| | | 2op | 47431 | 47310.57 | 40.8 | 47381 | 47297.3 | 41.17 | 47371 | 47293.27 | 40.83 | 47401 | 47272.2 | 56.79 |
| | 50 | rnd | 47337 | 47228.8 | 72.62 | 47443 | 47284.9 | 62.51 | 47336 | 47210.63 | 75.73 | 47321 | 47177.3 | 66.83 |
| | | 2op | 47399 | 47328.07 | 32.66 | 47414 | 47337.07 | 38.69 | 47404 | 47309.37 | 50.72 | 47360 | 47273.1 | 68.6 |
| 51 | 20 | rnd | 47345 | 47230.7 | 74.53 | 47421 | 47308.03 | 53 | 47338 | 47206.13 | 72.12 | 47341 | 47208.73 | 87.12 |
| | | 2op | 47395 | 47320.17 | 34.69 | 47412 | 47345.63 | 30.65 | 47365 | 47286.67 | 42.08 | 47344 | 47265.2 | 43.68 |
| | 50 | rnd | 47322 | 47245.77 | 62.29 | 47442 | 47333.13 | 56.8 | 47386 | 47245.73 | 69.47 | 47359 | 47243.27 | 86.58 |
| | | 2op | 47401 | 47326.03 | 29.33 | 47430 | 47368.3 | 37.92 | 47351 | 47299.53 | 34.46 | 47395 | 47292.5 | 43.83 |

Table A.1267: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47270 | 47088.13 | 102.88 | 47284 | 47078.87 | 131.36 | 47400 | 47174.7 | 112.62 | 47400 | 47167.67 | 137.31 |
| | | 2op | 47354 | 47179 | 91.79 | 47367 | 47171.17 | 106.31 | 47352 | 47151.07 | 115.67 | 47408 | 47147.57 | 116.14 |
| | 50 | rnd | 47354 | 47059.07 | 131.45 | 47271 | 47086.77 | 126.83 | 47325 | 47093.97 | 118.49 | 47311 | 47158.77 | 114.08 |
| | | 2op | 47314 | 47134.5 | 117.04 | 47300 | 47157.63 | 106.79 | 47382 | 47182.53 | 132 | 47403 | 47129.13 | 128.93 |
| 51 | 20 | rnd | 47332 | 47124.53 | 85.24 | 47332 | 47125.33 | 87.53 | 47292 | 47147.83 | 75.87 | 47361 | 47194.37 | 102.82 |
| | | 2op | 47343 | 47193.2 | 102.26 | 47343 | 47196.9 | 100.08 | 47355 | 47175.13 | 97.82 | 47340 | 47174.47 | 103.73 |
| | 50 | rnd | 47278 | 47089.7 | 112.54 | 47286 | 47099.7 | 111.08 | 47358 | 47115.27 | 124.75 | 47307 | 47169.43 | 112.23 |
| | | 2op | 47380 | 47193.5 | 93.11 | 47363 | 47188 | 94.64 | 47350 | 47200 | 102.77 | 47322 | 47197.47 | 72.55 |

Table A.1268: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47329 | 47207.83 | 66.03 | 47344 | 47241.63 | 67.08 | 47365 | 47205.9 | 76.91 | 47429 | 47206.93 | 96.41 |
| | | 2op | 47390 | 47321.07 | 33.74 | 47370 | 47297.6 | 43.77 | 47388 | 47287.37 | 50.01 | 47366 | 47246.67 | 91.66 |
| | 50 | rnd | 47397 | 47227.57 | 51.81 | 47416 | 47268.07 | 77 | 47345 | 47172.8 | 89.31 | 47310 | 47174.8 | 86.64 |
| | | 2op | 47398 | 47333.87 | 34.96 | 47417 | 47330.7 | 40.29 | 47400 | 47301.73 | 43.57 | 47387 | 47287.37 | 66.58 |
| 51 | 20 | rnd | 47336 | 47248.33 | 61.89 | 47388 | 47310.8 | 47.3 | 47340 | 47203.67 | 70.03 | 47356 | 47180.4 | 112.18 |
| | | 2op | 47377 | 47318.7 | 32.26 | 47416 | 47344.4 | 39.2 | 47382 | 47294.13 | 38.3 | 47390 | 47287.77 | 58.06 |
| | 50 | rnd | 47386 | 47252.1 | 59.59 | 47401 | 47337.93 | 43.3 | 47402 | 47253.6 | 67.49 | 47409 | 47242 | 77.51 |
| | | 2op | 47408 | 47321.53 | 39.78 | 47428 | 47362.47 | 31.77 | 47380 | 47298.67 | 49.9 | 47407 | 47296.47 | 57.3 |

Table A.1269: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47303 | 47102.57 | 92.53 | 47310 | 47101.83 | 93.92 | 47291 | 47129.5 | 100.9 | 47362 | 47173.07 | 119.7 |
| | | 2op | 47365 | 47237.03 | 75.9 | 47372 | 47238.57 | 76.72 | 47425 | 47190.77 | 125.7 | 47408 | 47182.23 | 100.05 |
| | 50 | rnd | 47369 | 47154.4 | 118.78 | 47369 | 47155.13 | 117.53 | 47341 | 47168.07 | 90.75 | 47363 | 47173.2 | 155.75 |
| | | 2op | 47430 | 47263.4 | 91.64 | 47430 | 47262.47 | 93.06 | 47330 | 47178.03 | 101.47 | 47322 | 47140.37 | 95.67 |
| 51 | 20 | rnd | 47341 | 47220.13 | 53.08 | 47341 | 47219.53 | 53.68 | 47419 | 47229.07 | 92.89 | 47434 | 47186.23 | 106.34 |
| | | 2op | 47378 | 47317.1 | 35.27 | 47378 | 47317.03 | 35.3 | 47362 | 47289.2 | 50.67 | 47393 | 47199.33 | 104.65 |
| | 50 | rnd | 47355 | 47254.1 | 53.59 | 47355 | 47250.27 | 57.53 | 47367 | 47186.63 | 76.51 | 47364 | 47195.93 | 112.25 |
| | | 2op | 47436 | 47334.97 | 35.74 | 47436 | 47332.67 | 36.33 | 47360 | 47271.67 | 51.49 | 47413 | 47195.23 | 87.21 |

Table A.1270: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47320 | 47218.1 | 55.34 | 47330 | 47200.2 | 72.29 | 47354 | 47209.63 | 74.77 | 47362 | 47197.83 | 71.68 |
| | | 2op | 47371 | 47323.93 | 21.6 | 47366 | 47312.77 | 25.08 | 47397 | 47316.87 | 38.97 | 47409 | 47269.13 | 83.35 |
| | 50 | rnd | 47312 | 47240.9 | 47.77 | 47360 | 47245.27 | 57.75 | 47328 | 47223.47 | 65.37 | 47330 | 47211.03 | 88.71 |
| | | 2op | 47407 | 47339.57 | 27.47 | 47409 | 47328.43 | 34.23 | 47408 | 47316.57 | 42.18 | 47352 | 47271.8 | 59.14 |
| 51 | 20 | rnd | 47321 | 47211.33 | 57.26 | 47376 | 47206.63 | 75.99 | 47320 | 47183.97 | 72.58 | 47399 | 47213.5 | 87.51 |
| | | 2op | 47381 | 47329.63 | 24.62 | 47371 | 47319.1 | 25.99 | 47378 | 47302.1 | 34.99 | 47361 | 47276 | 44.03 |
| | 50 | rnd | 47341 | 47257.03 | 50.53 | 47358 | 47234.77 | 68.27 | 47353 | 47241.8 | 72.55 | 47304 | 47183.93 | 91.43 |
| | | 2op | 47378 | 47330.37 | 20.52 | 47395 | 47316.9 | 26.86 | 47400 | 47311.07 | 40.04 | 47356 | 47289.37 | 39.41 |

Table A.1271: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151224 | 150851.67 | 349.01 | 151256 | 150871.73 | 370.62 | 151264 | 150946.87 | 331.09 | 151252 | 150811.13 | 432.22 |
| | | 2op | 151240 | 150934.53 | 318.53 | 151275 | 150924.43 | 330.71 | 151250 | 150902.6 | 298.73 | 151223 | 150620.13 | 535.7 |
| | 50 | rnd | 151218 | 150922.4 | 296.01 | 151249 | 150891.5 | 353.49 | 151251 | 150861.6 | 369.51 | 151235 | 150843.07 | 450.01 |
| | | 2op | 151228 | 151014.8 | 266.82 | 151223 | 150954.97 | 304.49 | 151268 | 150917.6 | 274.64 | 151202 | 150754.07 | 432.84 |
| 51 | 20 | rnd | 151244 | 150960.1 | 315.25 | 151249 | 150870.53 | 370.68 | 151220 | 150815.37 | 373.81 | 151262 | 150896.73 | 369.35 |
| | | 2op | 151238 | 150993.2 | 330.49 | 151248 | 151082 | 237.62 | 151221 | 150968.3 | 308.39 | 151272 | 150943.23 | 330.46 |
| | 50 | rnd | 151254 | 151058.57 | 231.68 | 151295 | 151063.47 | 239.84 | 151228 | 151000.83 | 266.7 | 151246 | 150975.03 | 293.5 |
| | | 2op | 151269 | 151085.43 | 202.59 | 151260 | 151063.57 | 218.94 | 151281 | 151015.27 | 245.17 | 151225 | 150793.27 | 417.57 |

Table A.1272: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151322 | 151152.63 | 125.35 | 151271 | 151147.33 | 116.02 | 151231 | 151050.23 | 273.23 | 151229 | 150989.23 | 343.73 |
| | | 2op | 151254 | 151181.93 | 39.18 | 151284 | 151191.77 | 43.01 | 151266 | 151141.17 | 192.1 | 151305 | 150956.13 | 391.71 |
| | 50 | rnd | 151254 | 151169.1 | 51.02 | 151291 | 151166.33 | 60.65 | 151261 | 151123.07 | 150.55 | 151276 | 151005.4 | 280.05 |
| | | 2op | 151244 | 151179.67 | 32.62 | 151291 | 151189.2 | 44.75 | 151260 | 151171 | 119.36 | 151257 | 151113.6 | 185.4 |
| 51 | 20 | rnd | 151279 | 151120.77 | 125.61 | 151216 | 151149.03 | 53.11 | 151291 | 151130.13 | 157.29 | 151256 | 151116.43 | 146.89 |
| | | 2op | 151254 | 151191.1 | 36.48 | 151274 | 151189.7 | 49.22 | 151264 | 151120.4 | 168.23 | 151270 | 151149.6 | 164.66 |
| | 50 | rnd | 151249 | 151138.93 | 45.97 | 151229 | 151160.2 | 48.91 | 151279 | 151161.67 | 53.54 | 151250 | 151090.83 | 181.69 |
| | | 2op | 151251 | 151194.23 | 31.81 | 151294 | 151193.63 | 41.61 | 151250 | 151173.3 | 119.69 | 151265 | 151065.87 | 232.43 |

Table A.1273: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151275 | 151024.27 | 242.82 | 151299 | 150963.23 | 287.66 | 151308 | 150980.1 | 451.7 | 151225 | 150781.33 | 434.98 |
| | | 2op | 151275 | 150982.63 | 276.55 | 151223 | 150942.43 | 374.85 | 151254 | 150845.73 | 456.7 | 151265 | 150685.13 | 477.39 |
| | 50 | rnd | 151220 | 150924.4 | 306.58 | 151267 | 150858.43 | 357.52 | 151205 | 150937.6 | 301.52 | 151237 | 150777.43 | 490.75 |
| | | 2op | 151243 | 151047.2 | 263.22 | 151258 | 151028.03 | 225.68 | 151239 | 150856.47 | 363.87 | 151246 | 150684.53 | 471.42 |
| 51 | 20 | rnd | 151280 | 151023.7 | 289.64 | 151306 | 151056.63 | 243.97 | 151250 | 150971.3 | 314.09 | 151254 | 150754.47 | 385.8 |
| | | 2op | 151290 | 150931.5 | 328.57 | 151262 | 150989.43 | 281.08 | 151249 | 150805.37 | 433.38 | 151235 | 150795.03 | 408.7 |
| | 50 | rnd | 151233 | 151026.97 | 219.88 | 151237 | 151032.37 | 277.03 | 151263 | 150934.57 | 320.68 | 151221 | 150907.93 | 284.12 |
| | | 2op | 151243 | 150973.97 | 301.97 | 151234 | 150982.43 | 294.89 | 151271 | 150909.93 | 375.78 | 151255 | 150806.67 | 386.61 |

Table A.1274: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151288 | 151139.57 | 118.36 | 151282 | 151144.9 | 116.59 | 151257 | 151142 | 118.34 | 151244 | 150918.73 | 331.98 |
| | | 2op | 151250 | 151169.43 | 103.41 | 151243 | 151166.9 | 96.96 | 151253 | 151109.57 | 207.93 | 151256 | 150948.1 | 347.01 |
| | 50 | rnd | 151272 | 151151.3 | 47.2 | 151237 | 151156.8 | 51.07 | 151261 | 151107.8 | 178.21 | 151263 | 151073.8 | 229.03 |
| | | 2op | 151255 | 151171.37 | 49.34 | 151265 | 151186.63 | 48.14 | 151268 | 151144.9 | 154.19 | 151280 | 151132.53 | 155.76 |
| 51 | 20 | rnd | 151262 | 151142.3 | 117.27 | 151293 | 151157.63 | 64.83 | 151261 | 151088.67 | 186.34 | 151259 | 151103.8 | 235.81 |
| | | 2op | 151241 | 151186.03 | 36.72 | 151305 | 151193.5 | 40.06 | 151305 | 151175.93 | 63.34 | 151258 | 151089.83 | 212.87 |
| | 50 | rnd | 151236 | 151140.43 | 47.58 | 151249 | 151160.63 | 43.71 | 151273 | 151173.67 | 47.23 | 151223 | 151108.13 | 153.05 |
| | | 2op | 151242 | 151191.57 | 34.45 | 151270 | 151187 | 51.68 | 151269 | 151200.43 | 27.15 | 151267 | 151130.23 | 177.59 |

Table A.1275: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151265 | 151105.13 | 188.01 | 151255 | 151084.87 | 207.61 | 151259 | 150966.6 | 271.67 | 151277 | 150846.67 | 402.61 |
| | | 2op | 151268 | 151037.7 | 275.85 | 151271 | 151013.7 | 320.97 | 151245 | 150909.7 | 399.24 | 151268 | 150825.37 | 457.76 |
| | 50 | rnd | 151266 | 151068.93 | 288.32 | 151227 | 150955.9 | 306.43 | 151271 | 150945.63 | 356.66 | 151242 | 150906.67 | 335.84 |
| | | 2op | 151319 | 151115.53 | 173.57 | 151281 | 151136.77 | 117.81 | 151211 | 150864.3 | 436.94 | 151269 | 150948.07 | 334.03 |
| 51 | 20 | rnd | 151290 | 151109.23 | 210.85 | 151290 | 151112.23 | 210.97 | 151249 | 151107.43 | 171.88 | 151283 | 150900.9 | 368.44 |
| | | 2op | 151329 | 151166.27 | 127.24 | 151329 | 151170.07 | 129.84 | 151274 | 151112.9 | 195.83 | 151243 | 150811.93 | 478.01 |
| | 50 | rnd | 151228 | 151081.07 | 207.51 | 151235 | 151076.93 | 207.62 | 151266 | 151093.37 | 218.88 | 151228 | 150880.87 | 427.42 |
| | | 2op | 151257 | 151117.97 | 144.13 | 151257 | 151120.13 | 144.59 | 151277 | 151058.13 | 276.4 | 151299 | 150967.77 | 306.59 |

Table A.1276: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151241 | 151159.63 | 44.85 | 151263 | 151159.03 | 49.54 | 151228 | 151136.73 | 109.37 | 151275 | 150903.47 | 357.78 |
| | | 2op | 151283 | 151193.47 | 42.06 | 151259 | 151198.7 | 31.36 | 151271 | 151176.43 | 79.45 | 151260 | 150985.7 | 360.2 |
| | 50 | rnd | 151266 | 151165.7 | 46.99 | 151217 | 151126.1 | 104.71 | 151297 | 151119.27 | 178.83 | 151233 | 151030.27 | 222.47 |
| | | 2op | 151270 | 151198.1 | 36.22 | 151300 | 151175 | 116.33 | 151285 | 151189.23 | 124.09 | 151271 | 151126.47 | 189.17 |
| 51 | 20 | rnd | 151240 | 151146.23 | 49.16 | 151238 | 151157.03 | 45.69 | 151256 | 151170.2 | 57.13 | 151201 | 151068.4 | 325.39 |
| | | 2op | 151268 | 151194.37 | 37.25 | 151261 | 151189.77 | 46.32 | 151281 | 151180.97 | 41.15 | 151259 | 151111.47 | 164.97 |
| | 50 | rnd | 151299 | 151167.47 | 51.98 | 151259 | 151159.23 | 58.32 | 151222 | 151151.7 | 43.52 | 151295 | 151142.53 | 87.21 |
| | | 2op | 151273 | 151164.87 | 53.46 | 151241 | 151179.03 | 39.62 | 151254 | 151171.57 | 38.82 | 151228 | 151070.97 | 227.91 |

Table A.1277: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167083 | 166465.67 | 294.78 | 166879 | 166502.87 | 277.57 | 166850 | 166354.6 | 396.63 | 166799 | 166143.5 | 417 |
| | | 2op | 166892 | 166462.57 | 304.13 | 166863 | 166359.8 | 392.94 | 166816 | 166370 | 390.31 | 166898 | 166371.73 | 469.19 |
| | 50 | rnd | 166980 | 166376 | 300.81 | 166903 | 166410.9 | 325.13 | 166910 | 166418.9 | 368.54 | 166945 | 166305.9 | 415.7 |
| | | 2op | 167036 | 166503.97 | 283.09 | 167068 | 166421.77 | 365.9 | 166946 | 166362.47 | 325.5 | 166964 | 166348.97 | 406.69 |
| 51 | 20 | rnd | 167096 | 166520.43 | 344.98 | 166930 | 166509.13 | 287.68 | 166984 | 166468.97 | 316.32 | 167069 | 166512.07 | 326.66 |
| | | 2op | 166838 | 166539 | 195.09 | 166866 | 166492.3 | 288.63 | 166932 | 166501.13 | 315.85 | 166843 | 166366.27 | 350.76 |
| | 50 | rnd | 166921 | 166497.47 | 320.52 | 166768 | 166518.6 | 227.41 | 166911 | 166487.7 | 299.93 | 166944 | 166476.47 | 297.36 |
| | | 2op | 166846 | 166519.7 | 282.64 | 166784 | 166494.03 | 280.45 | 166738 | 166486.07 | 250.65 | 166811 | 166309.33 | 378.74 |

Table A.1278: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167325 | 166955.17 | 205.51 | 167284 | 166868.83 | 248.66 | 167320 | 166875.37 | 244.13 | 167117 | 166577.07 | 433.81 |
| | | 2op | 166640 | 166556.07 | 52.43 | 166715 | 166562.77 | 59.36 | 166669 | 166576.8 | 40.67 | 167000 | 166508 | 281.29 |
| | 50 | rnd | 167309 | 166965.7 | 180.76 | 167416 | 167042.27 | 237.21 | 167304 | 166918.57 | 180.5 | 167256 | 166741.23 | 298.84 |
| | | 2op | 166616 | 166542.63 | 45.48 | 166659 | 166572.37 | 43.29 | 166668 | 166582 | 41.32 | 166814 | 166560 | 130.08 |
| 51 | 20 | rnd | 167332 | 166960.43 | 228.42 | 167331 | 167031.3 | 182.67 | 167335 | 166817.03 | 263.63 | 167216 | 166758 | 255.98 |
| | | 2op | 166665 | 166550.33 | 70.36 | 166704 | 166588.97 | 55.16 | 166684 | 166577.1 | 45.97 | 166819 | 166586 | 99.1 |
| | 50 | rnd | 167363 | 166965.77 | 172.33 | 167351 | 167124.5 | 175.11 | 167282 | 166869.1 | 247.93 | 167235 | 166880.3 | 197.87 |
| | | 2op | 166608 | 166537.93 | 50.06 | 166671 | 166548.83 | 86.93 | 166662 | 166568.7 | 44.1 | 166757 | 166569.8 | 109 |

Table A.1279: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166930 | 166544.23 | 300.66 | 166749 | 166418.17 | 297.94 | 166917 | 166370.27 | 364.28 | 166778 | 166310.03 | 356.11 |
| | | 2op | 166828 | 166280.93 | 352.73 | 166887 | 166370.37 | 367.67 | 166918 | 166299.57 | 467.24 | 166860 | 166413.07 | 306.53 |
| | 50 | rnd | 166976 | 166466.13 | 344.2 | 166876 | 166408 | 317.92 | 166733 | 166364.9 | 342.81 | 166958 | 166375.33 | 416.5 |
| | | 2op | 166890 | 166458.9 | 304.45 | 166954 | 166395.53 | 342.53 | 166818 | 166377.9 | 378.2 | 166843 | 166408.47 | 388.3 |
| 51 | 20 | rnd | 166952 | 166532.33 | 267.19 | 166967 | 166482.87 | 267.92 | 166955 | 166432 | 367.66 | 166974 | 166413.2 | 411.51 |
| | | 2op | 167022 | 166516.03 | 393.47 | 166940 | 166432.53 | 407.88 | 166934 | 166488.27 | 333.31 | 166966 | 166324.5 | 497.01 |
| | 50 | rnd | 166964 | 166578.67 | 336.85 | 167015 | 166527.3 | 314.2 | 166894 | 166542.77 | 217.29 | 166924 | 166383.57 | 358.39 |
| | | 2op | 167029 | 166526.63 | 324.02 | 166960 | 166489.73 | 378.31 | 166860 | 166483.9 | 340.14 | 166950 | 166432.57 | 354.15 |

Table A.1280: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167387 | 166917.97 | 218.43 | 167216 | 166866.37 | 202.21 | 167287 | 166769.6 | 211.08 | 167276 | 166525.97 | 357.56 |
| | | 2op | 166642 | 166557.8 | 42.97 | 166709 | 166538.03 | 139.33 | 166745 | 166535.17 | 166.74 | 166899 | 166553.7 | 251.94 |
| | 50 | rnd | 167403 | 166940.03 | 232.47 | 167337 | 166942.97 | 216.17 | 167350 | 166839.47 | 192.62 | 167147 | 166821.87 | 238.85 |
| | | 2op | 166722 | 166549.93 | 76.03 | 166669 | 166572.2 | 46.72 | 166824 | 166587.7 | 77.52 | 166790 | 166550.9 | 162 |
| 51 | 20 | rnd | 167395 | 166992.37 | 185.38 | 167318 | 167002.63 | 203.72 | 167292 | 166878.47 | 208.76 | 167180 | 166783.4 | 254.57 |
| | | 2op | 166624 | 166537.53 | 44.89 | 166720 | 166590.6 | 60.5 | 166668 | 166539.77 | 130.61 | 166657 | 166575.1 | 56.69 |
| | 50 | rnd | 167314 | 166955.27 | 193.81 | 167404 | 167183.33 | 141.43 | 167284 | 166907.6 | 217.01 | 167156 | 166874.6 | 185.25 |
| | | 2op | 166618 | 166538.17 | 48.5 | 166641 | 166563.9 | 37.31 | 166666 | 166575.6 | 38.31 | 166702 | 166584.7 | 60.38 |

Table A.1281: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166934 | 166528.37 | 295.43 | 166921 | 166517.4 | 318.91 | 166917 | 166458.4 | 305.52 | 167006 | 166379.2 | 444.93 |
| | | 2op | 166950 | 166499.83 | 288.64 | 166966 | 166458.1 | 286.72 | 167063 | 166473.6 | 381.85 | 167082 | 166274.27 | 384.66 |
| | 50 | rnd | 167029 | 166545.23 | 326.64 | 166862 | 166544.97 | 217.39 | 166929 | 166428.23 | 354.96 | 166897 | 166213.93 | 539.31 |
| | | 2op | 166976 | 166534.1 | 321.34 | 167019 | 166519.67 | 307.84 | 167086 | 166538.83 | 290.37 | 167140 | 166319.97 | 395.31 |
| 51 | 20 | rnd | 167068 | 166723.37 | 199.72 | 167124 | 166727.47 | 199.16 | 167149 | 166739.63 | 193.94 | 167007 | 166447.03 | 325.81 |
| | | 2op | 166990 | 166576.83 | 208.42 | 166990 | 166574.7 | 208.97 | 166972 | 166588.5 | 271.99 | 166896 | 166337.43 | 440.77 |
| | 50 | rnd | 167016 | 166713.73 | 187.05 | 167016 | 166715.1 | 187.35 | 166922 | 166696.03 | 179.51 | 166986 | 166464.57 | 359.15 |
| | | 2op | 167142 | 166566.1 | 296.95 | 167142 | 166566.1 | 296.95 | 166897 | 166485.67 | 269.83 | 166995 | 166410.1 | 365.95 |

Table A.1282: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167318 | 167006.8 | 203.65 | 167301 | 166973.4 | 193.54 | 167368 | 166960.43 | 219.45 | 167087 | 166614.93 | 315.22 |
| | | 2op | 166648 | 166532 | 141.56 | 166808 | 166543.3 | 140.23 | 166657 | 166569.97 | 39.25 | 167062 | 166407.13 | 410.91 |
| | 50 | rnd | 167360 | 167025 | 183.2 | 167395 | 167012.03 | 227 | 167321 | 166876.83 | 170.75 | 167161 | 166750.67 | 252.7 |
| | | 2op | 166658 | 166538.6 | 53.58 | 166647 | 166556.6 | 50.11 | 166693 | 166571.07 | 57.91 | 166761 | 166465.6 | 253.54 |
| 51 | 20 | rnd | 167330 | 167008.57 | 155.69 | 167315 | 167003.63 | 168.02 | 167234 | 166925.63 | 200.5 | 167112 | 166738.73 | 333 |
| | | 2op | 166609 | 166533.63 | 45.62 | 166655 | 166546.93 | 49.19 | 166662 | 166571.63 | 45.84 | 166823 | 166565.3 | 188.7 |
| | 50 | rnd | 167373 | 167032.73 | 199.07 | 167413 | 167011.7 | 188.78 | 167363 | 166940.4 | 227.5 | 167245 | 166900.1 | 176.61 |
| | | 2op | 166652 | 166548.23 | 47 | 166673 | 166552.2 | 50.41 | 166650 | 166556.57 | 59.63 | 166787 | 166614.1 | 66.86 |

Table A.1283: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163097 | 162964.47 | 81.77 | 163080 | 162929.63 | 89.01 | 163080 | 162947.83 | 99.28 | 163110 | 162945.3 | 109.3 |
| | | 2op | 163130 | 162968.13 | 85.35 | 163113 | 162921.43 | 85.31 | 163141 | 162949.9 | 101.26 | 163133 | 162978.93 | 77.43 |
| | 50 | rnd | 163171 | 162939.33 | 118.26 | 163114 | 162934.1 | 84.08 | 163093 | 162943.13 | 98.45 | 163097 | 162940.13 | 82.21 |
| | | 2op | 163103 | 162947.17 | 94.43 | 163126 | 162925.4 | 123.23 | 163095 | 162929.63 | 89.56 | 163105 | 162995.33 | 65.89 |
| 51 | 20 | rnd | 163106 | 162983.1 | 75.81 | 163120 | 162955.2 | 111.5 | 163086 | 162917.43 | 101.17 | 163178 | 162981.23 | 82.8 |
| | | 2op | 163140 | 162991.2 | 70.65 | 163122 | 162989.2 | 71.95 | 163206 | 162990.3 | 80.83 | 163120 | 162988.7 | 81.24 |
| | 50 | rnd | 163129 | 162970.5 | 111.37 | 163141 | 162953.2 | 108.07 | 163177 | 162928.1 | 105.23 | 163108 | 162958.93 | 74.79 |
| | | 2op | 163132 | 162961.03 | 105.24 | 163105 | 162981.7 | 78.32 | 163105 | 162968.33 | 90.09 | 163164 | 162967.7 | 84.77 |

Table A.1284: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163162 | 162964 | 82.69 | 163168 | 162983 | 90.22 | 163195 | 162989.53 | 92.14 | 163083 | 162936.97 | 95.74 |
| | | 2op | 163117 | 163023.63 | 54.74 | 163136 | 163010.33 | 75.32 | 163178 | 163039.53 | 68.64 | 163172 | 163027.9 | 85.27 |
| | 50 | rnd | 163191 | 162980.97 | 85.15 | 163085 | 162956.7 | 69.52 | 163112 | 162984.5 | 79.44 | 163163 | 162973.7 | 87.88 |
| | | 2op | 163095 | 163003.4 | 42.68 | 163121 | 163026.3 | 46.05 | 163146 | 163030.67 | 58.5 | 163182 | 163025.4 | 62.28 |
| 51 | 20 | rnd | 163151 | 162984.43 | 88.72 | 163150 | 163015.8 | 69.48 | 163093 | 162972.6 | 73.01 | 163182 | 162974.53 | 80.98 |
| | | 2op | 163137 | 163001.3 | 79.54 | 163167 | 163036.6 | 57.11 | 163149 | 163027.5 | 73.7 | 163138 | 163034.07 | 51.89 |
| | 50 | rnd | 163078 | 162971.73 | 65.78 | 163073 | 162981.23 | 66.59 | 163126 | 162949.43 | 92.28 | 163120 | 162980.43 | 70.72 |
| | | 2op | 163146 | 163006.1 | 68.51 | 163164 | 163027.27 | 60.25 | 163133 | 163040.83 | 51.57 | 163175 | 163050.9 | 71.55 |

Table A.1285: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163070 | 162932.63 | 94.57 | 163100 | 162920.9 | 117.33 | 163065 | 162921.27 | 96.12 | 163066 | 162947.23 | 108.65 |
| | | 2op | 163138 | 162998.9 | 78.18 | 163151 | 162950.47 | 93.23 | 163142 | 162958.53 | 112.84 | 163145 | 162976.93 | 133.1 |
| | 50 | rnd | 163067 | 162925.13 | 113.67 | 163068 | 162937.23 | 102.08 | 163139 | 162947.3 | 104.35 | 163062 | 162941.43 | 93.02 |
| | | 2op | 163127 | 162938.6 | 99.83 | 163091 | 162940.23 | 84.58 | 163102 | 162939.3 | 110.49 | 163146 | 162988.63 | 100.82 |
| 51 | 20 | rnd | 163120 | 162971.23 | 65.97 | 163085 | 162952.1 | 71.66 | 163092 | 162950.57 | 71.54 | 163082 | 162944.97 | 86.75 |
| | | 2op | 163225 | 162985.3 | 89.45 | 163085 | 162961.2 | 82.63 | 163127 | 162951.3 | 75.66 | 163098 | 162955.3 | 95.64 |
| | 50 | rnd | 163124 | 162945.23 | 109.16 | 163167 | 162943.3 | 86.03 | 163075 | 162940.57 | 108.62 | 163103 | 162928.77 | 96.71 |
| | | 2op | 163131 | 162954.47 | 90.21 | 163104 | 162964.27 | 77.87 | 163089 | 162947.1 | 104.33 | 163148 | 162989.97 | 81.3 |

Table A.1286: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163148 | 162965.5 | 68.67 | 163119 | 162971.9 | 75.51 | 163075 | 162962.63 | 65.38 | 163124 | 162949.8 | 101.48 |
| | | 2op | 163163 | 163016.9 | 77.27 | 163168 | 163026.47 | 62.64 | 163207 | 163061.63 | 60.34 | 163129 | 163019.8 | 70.04 |
| | 50 | rnd | 163098 | 162965.7 | 64.09 | 163095 | 162948 | 70.81 | 163100 | 162989.43 | 75.52 | 163102 | 162952.67 | 87.26 |
| | | 2op | 163119 | 163024.8 | 52.95 | 163141 | 163040.1 | 79.53 | 163202 | 163048.7 | 59.6 | 163232 | 163049.07 | 67.37 |
| 51 | 20 | rnd | 163099 | 162990.73 | 76.52 | 163182 | 162995.73 | 73.74 | 163133 | 162968.67 | 70.55 | 163083 | 162961.3 | 66.85 |
| | | 2op | 163102 | 163001.9 | 47.18 | 163164 | 163017.93 | 55.92 | 163159 | 163040.43 | 64.44 | 163124 | 163031.3 | 73.59 |
| | 50 | rnd | 163155 | 162973.47 | 112.53 | 163103 | 162966.57 | 94.87 | 163093 | 162941.97 | 80.95 | 163116 | 162976.83 | 80.34 |
| | | 2op | 163241 | 163009.23 | 72.36 | 163102 | 163014.77 | 47.49 | 163099 | 163011.03 | 52.74 | 163160 | 163043.3 | 58.92 |

Table A.1287: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163047 | 162938.13 | 99.39 | 163116 | 162950.73 | 91.84 | 163056 | 162905.17 | 83.04 | 163113 | 162949 | 98.23 |
| | | 2op | 163140 | 162944.73 | 120.5 | 163171 | 162961.33 | 104.71 | 163084 | 162953.13 | 102.93 | 163186 | 162966.3 | 87.24 |
| | 50 | rnd | 163075 | 162970.9 | 64.49 | 163101 | 162944.57 | 78.29 | 163081 | 162922.63 | 87.01 | 163153 | 162946.1 | 96.28 |
| | | 2op | 163063 | 162943.77 | 106.16 | 163129 | 162974.47 | 94.51 | 163038 | 162928.47 | 81.35 | 163115 | 162972.37 | 97.82 |
| 51 | 20 | rnd | 163043 | 162914.07 | 85.06 | 163043 | 162914.07 | 85.06 | 163047 | 162929.43 | 100.07 | 163087 | 162961.73 | 75.01 |
| | | 2op | 163086 | 162970.4 | 80.52 | 163086 | 162970.4 | 80.52 | 163106 | 162948.17 | 113.23 | 163147 | 162993.77 | 86.47 |
| | 50 | rnd | 163150 | 162967.63 | 89 | 163150 | 162967.63 | 89 | 163144 | 162920.8 | 93.27 | 163073 | 162936.13 | 97.48 |
| | | 2op | 163067 | 162965.27 | 62.64 | 163067 | 162965.27 | 62.64 | 163148 | 162976.23 | 102.44 | 163033 | 162924.93 | 81.67 |

Table A.1288: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163134 | 162978.3 | 80.52 | 163117 | 162984.67 | 79.61 | 163118 | 162947.5 | 78.29 | 163100 | 162948.03 | 96.5 |
| | | 2op | 163174 | 163013.27 | 63.03 | 163123 | 163018.27 | 75.73 | 163157 | 163015.37 | 67.41 | 163144 | 163029.83 | 82.93 |
| | 50 | rnd | 163124 | 162973.1 | 87.98 | 163093 | 162997.8 | 56.61 | 163144 | 162984.17 | 77.96 | 163093 | 162954.13 | 122.46 |
| | | 2op | 163067 | 163003.87 | 35.58 | 163152 | 163005.57 | 79.3 | 163143 | 163051.7 | 55.29 | 163148 | 163020.8 | 65.77 |
| 51 | 20 | rnd | 163161 | 162984.13 | 75.67 | 163133 | 162975.77 | 66.1 | 163154 | 162991.3 | 82.11 | 163129 | 162958.97 | 100.8 |
| | | 2op | 163101 | 162990.4 | 60.17 | 163132 | 163010.53 | 61.9 | 163139 | 163043.27 | 67.91 | 163193 | 163027.23 | 74.37 |
| | 50 | rnd | 163118 | 162985.87 | 71.3 | 163108 | 162977.03 | 91.15 | 163143 | 162997.37 | 64.08 | 163177 | 162980 | 111.85 |
| | | 2op | 163092 | 162988.47 | 59.27 | 163114 | 163014.8 | 54.69 | 163166 | 163046.13 | 58.38 | 163178 | 163038.23 | 65.47 |

Table A.1289: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179812 | 179677.5 | 88.01 | 179815 | 179690.97 | 76.49 | 179849 | 179658.83 | 94.1 | 179836 | 179677.07 | 90.22 |
| | | 2op | 179969 | 179754.2 | 93.77 | 179862 | 179722.97 | 91.29 | 179918 | 179707.7 | 92.99 | 179880 | 179742.07 | 76.32 |
| | 50 | rnd | 179878 | 179699.8 | 92.46 | 179860 | 179671.17 | 101.55 | 179839 | 179651.6 | 92.1 | 179837 | 179680.87 | 87.49 |
| | | 2op | 179873 | 179714.4 | 84.47 | 179930 | 179697.5 | 94.37 | 179832 | 179692.53 | 83.62 | 179876 | 179750.93 | 77.3 |
| 51 | 20 | rnd | 179922 | 179737.67 | 99.98 | 179841 | 179684.13 | 97.48 | 179856 | 179686.1 | 79.61 | 179811 | 179663.53 | 94.53 |
| | | 2op | 179954 | 179772.03 | 89.14 | 179934 | 179752.37 | 94.43 | 179903 | 179731.83 | 89.55 | 179869 | 179737.83 | 75.89 |
| | 50 | rnd | 179874 | 179707.1 | 86.07 | 179970 | 179709.27 | 120.48 | 179901 | 179686.87 | 90.38 | 179842 | 179702.4 | 67.78 |
| | | 2op | 179870 | 179740.53 | 88.32 | 179929 | 179751.2 | 99.76 | 179960 | 179727.53 | 95.38 | 179903 | 179713.43 | 97.52 |

Table A.1290: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179884 | 179702.27 | 91.18 | 179868 | 179687.7 | 90.49 | 179874 | 179690.6 | 98.61 | 179896 | 179671.03 | 104.67 |
| | | 2op | 179933 | 179850.6 | 50.37 | 180018 | 179860.7 | 78.3 | 180063 | 179879.07 | 77.71 | 179956 | 179819.47 | 70.7 |
| | 50 | rnd | 179973 | 179737.87 | 97.25 | 179892 | 179717.17 | 94.65 | 179888 | 179706.53 | 100.9 | 179853 | 179696.53 | 84.38 |
| | | 2op | 180005 | 179824.5 | 85.25 | 179955 | 179859.6 | 63.44 | 180018 | 179879.4 | 63.2 | 180040 | 179856.17 | 88.8 |
| 51 | 20 | rnd | 179881 | 179721.77 | 85.33 | 179893 | 179675.27 | 111.91 | 179921 | 179693.23 | 94.11 | 179866 | 179724.63 | 92.82 |
| | | 2op | 179941 | 179836.1 | 60.32 | 180051 | 179863.7 | 83.6 | 180009 | 179873.87 | 82.24 | 179985 | 179873.07 | 71.86 |
| | 50 | rnd | 179846 | 179703.67 | 74.2 | 179961 | 179702.6 | 121.55 | 179869 | 179711.2 | 73.49 | 179975 | 179718.13 | 96.62 |
| | | 2op | 179975 | 179811.9 | 56.24 | 180056 | 179830.47 | 59.01 | 180037 | 179871.03 | 84.91 | 179989 | 179863.5 | 66.76 |

Table A.1291: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179843 | 179698.07 | 83.7 | 179907 | 179688.4 | 91.56 | 179806 | 179683.3 | 78.46 | 179881 | 179709.17 | 101.07 |
| | | 2op | 179878 | 179738.07 | 74.14 | 179825 | 179685.77 | 86.44 | 179912 | 179718.53 | 93.07 | 179938 | 179736.8 | 86.15 |
| | 50 | rnd | 179870 | 179732.7 | 74.4 | 179892 | 179698.73 | 85 | 179872 | 179672.83 | 76.77 | 179945 | 179726.3 | 86.98 |
| | | 2op | 179922 | 179689.87 | 81.84 | 179844 | 179702.07 | 87.49 | 179886 | 179685 | 108.01 | 179896 | 179701.67 | 98.12 |
| 51 | 20 | rnd | 179927 | 179724.2 | 85.27 | 179900 | 179686.1 | 111.9 | 179888 | 179681.8 | 86.82 | 179861 | 179678.77 | 88.14 |
| | | 2op | 179905 | 179763.77 | 70.02 | 179966 | 179774.57 | 109.19 | 179872 | 179745.3 | 79.49 | 179869 | 179744.83 | 64.54 |
| | 50 | rnd | 179833 | 179681.07 | 92.49 | 179848 | 179702.13 | 84.07 | 179920 | 179682.33 | 85.62 | 179849 | 179703 | 86.91 |
| | | 2op | 179911 | 179747.23 | 88.47 | 179909 | 179733.3 | 88.81 | 179913 | 179720.77 | 111.02 | 179947 | 179740.43 | 81.28 |

Table A.1292: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179865 | 179702.3 | 101.36 | 179891 | 179704.1 | 93.85 | 179937 | 179719.33 | 110.77 | 179887 | 179667.6 | 95.94 |
| | | 2op | 180024 | 179830.2 | 79.8 | 180087 | 179885.1 | 87.72 | 180011 | 179864.87 | 68.02 | 180000 | 179839.43 | 65.58 |
| | 50 | rnd | 179885 | 179702.5 | 87.81 | 179920 | 179702.07 | 87.97 | 179898 | 179730.53 | 86.89 | 179844 | 179694.87 | 92.71 |
| | | 2op | 179934 | 179824.6 | 57.59 | 180067 | 179843.63 | 69.43 | 180017 | 179874.13 | 78.43 | 179939 | 179814.83 | 69.52 |
| 51 | 20 | rnd | 179913 | 179738.73 | 87.62 | 179952 | 179736.13 | 95.88 | 180023 | 179718.3 | 113.46 | 179854 | 179715.83 | 74.4 |
| | | 2op | 180005 | 179854.13 | 74.92 | 179971 | 179828.53 | 77.88 | 180040 | 179881.3 | 82.55 | 179956 | 179833.23 | 77.95 |
| | 50 | rnd | 179949 | 179706.1 | 104.97 | 179836 | 179674.03 | 89.98 | 179931 | 179711.4 | 82.88 | 179932 | 179719.7 | 96.71 |
| | | 2op | 179971 | 179810.2 | 76.36 | 179961 | 179874.63 | 63.78 | 179942 | 179842.07 | 65.53 | 180019 | 179844.33 | 82.8 |

Table A.1293: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179816 | 179685.17 | 86.78 | 179882 | 179677.47 | 89.57 | 179828 | 179680.97 | 87.26 | 179878 | 179703.63 | 94.44 |
| | | 2op | 179962 | 179749.1 | 92.3 | 179838 | 179723.67 | 78.78 | 179865 | 179711.67 | 76.25 | 179903 | 179762 | 65.47 |
| | 50 | rnd | 179901 | 179693.7 | 103.67 | 179958 | 179710.83 | 110.59 | 179872 | 179666.77 | 93.77 | 179872 | 179682.57 | 86.67 |
| | | 2op | 179902 | 179720.57 | 100.62 | 179902 | 179719.6 | 86.84 | 179818 | 179684.93 | 77.71 | 179926 | 179744.47 | 99.15 |
| 51 | 20 | rnd | 179879 | 179695.03 | 85.52 | 179879 | 179695.03 | 85.52 | 179858 | 179678.13 | 98.57 | 179817 | 179649.83 | 92.32 |
| | | 2op | 179890 | 179737.73 | 84.87 | 179890 | 179737.73 | 84.87 | 179874 | 179692.77 | 93.2 | 179896 | 179751.3 | 80.45 |
| | 50 | rnd | 179916 | 179710.17 | 93.31 | 179916 | 179710.17 | 93.31 | 179827 | 179686.13 | 90.2 | 179831 | 179684.53 | 73.26 |
| | | 2op | 179918 | 179750.6 | 98.8 | 179918 | 179750.6 | 98.8 | 179822 | 179712.4 | 67.78 | 179860 | 179719.23 | 85.18 |

Table A.1294: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179831 | 179719 | 80.84 | 179996 | 179707.37 | 90.83 | 179910 | 179710.17 | 85.27 | 179909 | 179692.1 | 102.84 |
| | | 2op | 179975 | 179843.07 | 70.52 | 180015 | 179861.33 | 65.14 | 180027 | 179851.9 | 70.08 | 179991 | 179805.37 | 86.63 |
| | 50 | rnd | 179854 | 179739.67 | 62.47 | 179911 | 179698 | 123.9 | 179854 | 179703.67 | 89.17 | 179845 | 179675.2 | 92.07 |
| | | 2op | 179909 | 179813.27 | 65.83 | 180010 | 179840.5 | 99.1 | 180030 | 179896.33 | 62.84 | 180043 | 179829.27 | 90.23 |
| 51 | 20 | rnd | 179843 | 179709.4 | 89.13 | 179841 | 179686.77 | 81.47 | 179959 | 179708.97 | 82.57 | 179932 | 179673.1 | 107.56 |
| | | 2op | 179973 | 179850.97 | 56.2 | 180040 | 179856.17 | 71.13 | 179952 | 179856.13 | 56.95 | 179952 | 179812.5 | 83.44 |
| | 50 | rnd | 179845 | 179687.6 | 85.28 | 179908 | 179723.3 | 100.13 | 179952 | 179712.87 | 103.4 | 179879 | 179677.37 | 81.12 |
| | | 2op | 179926 | 179832.53 | 58.52 | 180012 | 179837.9 | 68.97 | 180038 | 179844.6 | 82.82 | 179983 | 179817.4 | 72.16 |

Table A.1295: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343090 | 342627.93 | 408.14 | 343033 | 342475.67 | 420.42 | 343029 | 342219.1 | 542.46 | 343153 | 342338.87 | 549 |
| | | 2op | 343133 | 342522.87 | 451.82 | 342971 | 342352.33 | 471.4 | 343152 | 342425.83 | 438.16 | 343025 | 342334.3 | 505.76 |
| | 50 | rnd | 343130 | 342584.93 | 446.18 | 343122 | 342432.83 | 465.93 | 343087 | 342292.5 | 616.8 | 343026 | 342200.47 | 610.16 |
| | | 2op | 343096 | 342567.7 | 373.81 | 343089 | 342498 | 366.16 | 342975 | 342288.97 | 537.5 | 343050 | 342204.53 | 534.36 |
| 51 | 20 | rnd | 343107 | 342631.63 | 402.65 | 343032 | 342629.67 | 374.91 | 343090 | 342537.87 | 412.92 | 343003 | 342249.67 | 479.71 |
| | | 2op | 343145 | 342668.4 | 423.73 | 343023 | 342680.67 | 435.21 | 343041 | 342508.63 | 484.98 | 342980 | 342320.03 | 415.32 |
| | 50 | rnd | 342996 | 342643.97 | 288.44 | 343092 | 342626.77 | 384.89 | 343068 | 342556.8 | 450.33 | 343031 | 342275.6 | 442.18 |
| | | 2op | 343093 | 342654.37 | 343.32 | 343135 | 342656.47 | 357.58 | 343114 | 342576.3 | 415.3 | 343121 | 342371.03 | 523.79 |

Table A.1296: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343123 | 342867.97 | 134.26 | 343158 | 342851.93 | 215.75 | 343012 | 342801.3 | 189.31 | 343052 | 342517.27 | 460.57 |
| | | 2op | 343165 | 342954.57 | 117.47 | 343124 | 342885.67 | 192.85 | 343106 | 342846.77 | 295.53 | 343185 | 342564.63 | 468.73 |
| | 50 | rnd | 343171 | 342878.6 | 134.05 | 343131 | 342833.07 | 243.58 | 343099 | 342755.8 | 290.48 | 343025 | 342576.5 | 345.04 |
| | | 2op | 343279 | 342952.47 | 122.86 | 343139 | 342889.67 | 167.44 | 343104 | 342892.37 | 159.64 | 343086 | 342628 | 533.51 |
| 51 | 20 | rnd | 343011 | 342846 | 122.13 | 343203 | 342882.63 | 168.5 | 343022 | 342814.7 | 173.26 | 343099 | 342778.5 | 266.89 |
| | | 2op | 343162 | 342942.3 | 131.98 | 343080 | 342869.27 | 184.23 | 343150 | 342861.23 | 214.67 | 343128 | 342792.33 | 318.03 |
| | 50 | rnd | 343120 | 342896.7 | 96.94 | 343118 | 342872.3 | 137.17 | 343084 | 342881.3 | 179.5 | 343110 | 342718.73 | 270.77 |
| | | 2op | 343050 | 342921.47 | 87.1 | 343162 | 342931.63 | 88.11 | 343122 | 342910.97 | 137.8 | 343203 | 342889.53 | 209.23 |

Table A.1297: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343093 | 342553.3 | 415.67 | 343080 | 342405.1 | 491.46 | 342985 | 342302.83 | 561.77 | 343008 | 342158.1 | 610.39 |
| | | 2op | 343112 | 342512.73 | 431.2 | 343125 | 342409.77 | 465.34 | 343144 | 342281.53 | 531.24 | 343037 | 342260.8 | 511.89 |
| | 50 | rnd | 343091 | 342580.7 | 393.26 | 343051 | 342451.83 | 436.88 | 343085 | 342308.47 | 585.54 | 343037 | 342208.97 | 582.34 |
| | | 2op | 343114 | 342337.23 | 614.66 | 343089 | 342118.1 | 650.51 | 342998 | 342227.6 | 631.04 | 343015 | 342333.9 | 472.57 |
| 51 | 20 | rnd | 343064 | 342596.8 | 428.76 | 343168 | 342543.17 | 452.8 | 343105 | 342464.77 | 408.02 | 343046 | 342478.1 | 430.59 |
| | | 2op | 343187 | 342539.17 | 408.45 | 343091 | 342519.07 | 417.67 | 343052 | 342199.97 | 602.84 | 343024 | 342251.07 | 597.38 |
| | 50 | rnd | 343111 | 342806 | 235.38 | 343034 | 342764.27 | 252.67 | 343081 | 342624.1 | 361.42 | 343062 | 342292.23 | 682.84 |
| | | 2op | 343137 | 342590.83 | 448.48 | 343156 | 342534.2 | 459.37 | 343075 | 342603.33 | 487.84 | 342918 | 342201.77 | 562.17 |

Table A.1298: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343109 | 342870 | 117.2 | 343163 | 342799.7 | 306.37 | 343051 | 342797.2 | 222.24 | 343066 | 342582.97 | 373.52 |
| | | 2op | 343208 | 342950.7 | 111.63 | 343145 | 342887.7 | 189.53 | 343184 | 342845.8 | 278.01 | 342999 | 342257 | 492.86 |
| | 50 | rnd | 343100 | 342903.2 | 107.83 | 343049 | 342828.03 | 216.63 | 343173 | 342807.57 | 227.55 | 342946 | 342418.6 | 447.09 |
| | | 2op | 343137 | 342926.83 | 93.07 | 343146 | 342895.37 | 150.51 | 343147 | 342849.77 | 257.04 | 343129 | 342561.03 | 402.16 |
| 51 | 20 | rnd | 343049 | 342871.6 | 102.32 | 343156 | 342873.77 | 154.27 | 343126 | 342819.17 | 208.04 | 343150 | 342775.6 | 314.09 |
| | | 2op | 343141 | 342930.07 | 86.18 | 343184 | 342927.6 | 186.44 | 343057 | 342851.63 | 236.51 | 343071 | 342839.97 | 201.23 |
| | 50 | rnd | 343181 | 342884.13 | 133.46 | 343066 | 342787.4 | 276.02 | 343136 | 342845.23 | 256.17 | 343090 | 342830.93 | 245.7 |
| | | 2op | 343126 | 342931.73 | 95.05 | 343115 | 342943.53 | 91.93 | 343055 | 342940.77 | 81.74 | 343110 | 342843.03 | 257.78 |

Table A.1299: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343140 | 342504.6 | 458.31 | 343140 | 342511.6 | 464.4 | 343001 | 342212.53 | 518.13 | 343145 | 342298.53 | 538.74 |
| | | 2op | 343057 | 342570.6 | 422.83 | 343057 | 342575.37 | 412.64 | 343104 | 342311.7 | 498.53 | 343012 | 342468.67 | 326.18 |
| | 50 | rnd | 342994 | 342546.4 | 432.62 | 342994 | 342524.03 | 428.31 | 343110 | 342302.27 | 504.3 | 342938 | 342260.37 | 481.82 |
| | | 2op | 343130 | 342581.6 | 484.41 | 343130 | 342560.33 | 507.48 | 343088 | 342351.83 | 577.89 | 343126 | 342105.07 | 487.57 |
| 51 | 20 | rnd | 343079 | 342748.17 | 305.22 | 343079 | 342748.17 | 305.22 | 343067 | 342693 | 302.12 | 343178 | 342431.43 | 493.64 |
| | | 2op | 343165 | 342583.67 | 433.7 | 343165 | 342583.67 | 433.7 | 343178 | 342585.37 | 525.59 | 343121 | 342310.13 | 563.82 |
| | 50 | rnd | 343074 | 342683 | 321.63 | 343074 | 342683 | 321.63 | 343087 | 342526.27 | 413.22 | 343068 | 342423.43 | 522.24 |
| | | 2op | 343137 | 342662.1 | 274 | 343137 | 342662.1 | 274 | 343130 | 342649.53 | 337.42 | 343084 | 342358.43 | 626.07 |

Table A.1300: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343125 | 342898.8 | 104.66 | 343129 | 342886.23 | 152.23 | 343091 | 342736.47 | 298.47 | 343079 | 342398.87 | 443.49 |
| | | 2op | 343170 | 342967.07 | 109.58 | 343125 | 342907.13 | 170.26 | 343098 | 342773.27 | 306.65 | 343126 | 342501.97 | 433.12 |
| | 50 | rnd | 343147 | 342945.97 | 91.11 | 343169 | 342926.93 | 94.31 | 343118 | 342766.63 | 247.2 | 343059 | 342661.03 | 299.3 |
| | | 2op | 343054 | 342910.43 | 81.28 | 343092 | 342912.53 | 75.77 | 343144 | 342844.33 | 257.87 | 343127 | 342626.43 | 508.51 |
| 51 | 20 | rnd | 343118 | 342905 | 141.81 | 343092 | 342881.43 | 154.54 | 343208 | 342836.2 | 264.59 | 342958 | 342481.33 | 364.71 |
| | | 2op | 343136 | 342904.5 | 157.37 | 343163 | 342904.3 | 151.28 | 343143 | 342935.1 | 154.94 | 343220 | 342531.53 | 467.01 |
| | 50 | rnd | 343114 | 342874.8 | 108.34 | 343126 | 342884.17 | 100.63 | 343089 | 342893.83 | 133.37 | 343060 | 342720.73 | 289.41 |
| | | 2op | 343084 | 342922.07 | 89.88 | 343175 | 342954.67 | 73.2 | 343133 | 342929.63 | 91.06 | 343052 | 342788.1 | 296.76 |

Table A.1301: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226996 | 225497.37 | 835.16 | 226232 | 225417.97 | 617.72 | 226732 | 225243.57 | 791.22 | 226468 | 225211 | 738.34 |
| | | 2op | 227135 | 225989.2 | 485.67 | 226913 | 225759.57 | 583.87 | 226911 | 225806.73 | 688.68 | 226877 | 225900 | 630.83 |
| | 50 | rnd | 227264 | 225345.53 | 793.51 | 226685 | 225411.77 | 681.01 | 226798 | 225190.73 | 780.58 | 227269 | 225514.2 | 941.39 |
| | | 2op | 226837 | 225865.23 | 551.66 | 226855 | 225869.73 | 580.39 | 226894 | 225909.33 | 578.67 | 226841 | 225719.07 | 568.83 |
| 51 | 20 | rnd | 226415 | 225618.3 | 500.43 | 226633 | 225497.7 | 739.51 | 226681 | 225059.1 | 878.83 | 226622 | 225269.9 | 790.65 |
| | | 2op | 227165 | 225931.07 | 679.29 | 226739 | 225949.93 | 592.98 | 227081 | 226202.3 | 453.38 | 227188 | 226049.83 | 595.92 |
| | 50 | rnd | 226770 | 225514.73 | 617.17 | 227096 | 225392.13 | 817.39 | 226665 | 225187.33 | 666.87 | 226606 | 225125.97 | 887.35 |
| | | 2op | 226684 | 225737.63 | 482.71 | 226888 | 225855 | 493.83 | 227015 | 225876.4 | 626.92 | 227053 | 225926.03 | 551.35 |

Table A.1302: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226223 | 225146.3 | 706.13 | 226756 | 225249.67 | 895.19 | 226217 | 224996.4 | 643.26 | 226451 | 225242.47 | 790.03 |
| | | 2op | 226596 | 225835.2 | 291.01 | 226609 | 225958.13 | 398.2 | 227127 | 225956.63 | 532.28 | 227009 | 226006.6 | 513.55 |
| | 50 | rnd | 226629 | 224966.53 | 876.61 | 226304 | 225159.87 | 611.93 | 226616 | 225261.5 | 622.12 | 227086 | 225248.2 | 898.4 |
| | | 2op | 226539 | 225905.2 | 327.18 | 226634 | 225973.67 | 355.99 | 226708 | 226013.57 | 384.15 | 226742 | 226028.9 | 528.96 |
| 51 | 20 | rnd | 226717 | 225011.93 | 778.71 | 226523 | 225191.5 | 604.25 | 226529 | 225150.3 | 700.12 | 226476 | 225048.53 | 676.18 |
| | | 2op | 226364 | 225877.17 | 341.61 | 226919 | 226122.77 | 402.46 | 226528 | 226011.73 | 362.94 | 226726 | 226006.07 | 428.31 |
| | 50 | rnd | 226542 | 225019.7 | 902.9 | 227430 | 225435.2 | 834.72 | 226510 | 225319.83 | 825 | 226693 | 225005.33 | 850.79 |
| | | 2op | 226768 | 225747.8 | 438.02 | 226691 | 226176.7 | 284.23 | 226696 | 225902.2 | 425.41 | 226843 | 226050.6 | 512.06 |

Table A.1303: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226800 | 225637.37 | 683.45 | 226883 | 225426.57 | 684.01 | 226884 | 225486.57 | 681.11 | 226456 | 225038.6 | 690.35 |
| | | 2op | 226492 | 225630.83 | 599.3 | 227075 | 225748.73 | 765.02 | 226725 | 225778.7 | 622.59 | 227043 | 225631.73 | 781.1 |
| | 50 | rnd | 226436 | 225362.17 | 671.57 | 226792 | 225280.23 | 848.65 | 226874 | 225221.33 | 865.92 | 226134 | 225097.23 | 671.09 |
| | | 2op | 226975 | 225911.87 | 638.25 | 226910 | 225943.23 | 626.61 | 227119 | 225650.57 | 692.06 | 226842 | 225744.3 | 775.25 |
| 51 | 20 | rnd | 226995 | 225515.9 | 767.23 | 226910 | 225464.63 | 742.02 | 227383 | 225321.47 | 647.89 | 226387 | 224877.07 | 969.09 |
| | | 2op | 227071 | 226026.2 | 479.36 | 226862 | 226003.3 | 553.7 | 226933 | 225763.07 | 753.9 | 226774 | 225855.37 | 529.53 |
| | 50 | rnd | 226858 | 225455.57 | 728.53 | 226335 | 225388.67 | 572.2 | 226785 | 225252.7 | 838.63 | 226633 | 225154.33 | 873.97 |
| | | 2op | 226808 | 225824.37 | 646.2 | 227117 | 225753.6 | 720.9 | 226613 | 225796.27 | 611.85 | 227168 | 225722.1 | 636.37 |

Table A.1304: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226793 | 225139.63 | 1001.81 | 226537 | 225078.2 | 852.16 | 227010 | 225286.23 | 869.92 | 226654 | 225032 | 824.1 |
| | | 2op | 226736 | 226014.83 | 315.1 | 226602 | 225953.67 | 306.4 | 226769 | 226068.17 | 438.3 | 227109 | 226257.77 | 499.24 |
| | 50 | rnd | 226635 | 225297.83 | 592.26 | 226531 | 225231.33 | 670.52 | 227570 | 225494.2 | 831.67 | 226312 | 224948.63 | 929.61 |
| | | 2op | 226844 | 225904.57 | 398.67 | 226582 | 225844.63 | 397.03 | 226525 | 225910.73 | 403.28 | 226841 | 225968.37 | 499.78 |
| 51 | 20 | rnd | 226733 | 225230.2 | 829.31 | 226558 | 225145.87 | 625.6 | 227135 | 225109.67 | 734.67 | 226609 | 224999.33 | 851.49 |
| | | 2op | 226624 | 225834.5 | 368.61 | 226885 | 225956.2 | 439.13 | 226840 | 225816.1 | 480.26 | 226798 | 225958.57 | 410.17 |
| | 50 | rnd | 226840 | 225052.83 | 919.62 | 226399 | 225157.37 | 848.99 | 226733 | 225232.13 | 824.8 | 226723 | 225197.03 | 752.23 |
| | | 2op | 226319 | 225836.47 | 326.37 | 226704 | 226270.87 | 209.91 | 226607 | 225909.9 | 372.62 | 227008 | 226051.23 | 388.31 |

Table A.1305: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226411 | 225509.9 | 611.81 | 227184 | 225360.33 | 701.71 | 226376 | 225252.13 | 637.37 | 226380 | 225086.17 | 767.64 |
| | | 2op | 227235 | 225962.13 | 505.38 | 227235 | 226049.9 | 563.9 | 227127 | 226020.87 | 524.48 | 226774 | 225928.97 | 556.06 |
| | 50 | rnd | 226950 | 225330.77 | 803.07 | 226046 | 225025.4 | 598.59 | 226885 | 225224.7 | 760.07 | 226501 | 225059.43 | 923.67 |
| | | 2op | 227259 | 226154.63 | 585.08 | 227211 | 226171.77 | 653.13 | 226816 | 226060.03 | 600.5 | 226808 | 225897.43 | 517.42 |
| 51 | 20 | rnd | 227217 | 225389.1 | 844.1 | 226745 | 225318.77 | 771.54 | 226836 | 225393.53 | 683.59 | 226772 | 225165.97 | 702.34 |
| | | 2op | 226912 | 226031.17 | 372.45 | 226912 | 226031.17 | 372.45 | 226815 | 226179 | 417.04 | 226705 | 225995.3 | 540.33 |
| | 50 | rnd | 226993 | 225406.03 | 685.1 | 226268 | 225365.33 | 641.8 | 226708 | 225196.6 | 763.07 | 226709 | 225336.23 | 651.35 |
| | | 2op | 226943 | 226192.73 | 449.14 | 226943 | 226191.07 | 446.91 | 226846 | 226201.9 | 472.93 | 227125 | 226003.13 | 658.8 |

Table A.1306: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226265 | 225139.13 | 907.65 | 226527 | 225163.07 | 818.68 | 226664 | 225134.2 | 705.25 | 226698 | 224937.13 | 928.79 |
| | | 2op | 226619 | 225928.97 | 357.14 | 226611 | 225975.23 | 353.53 | 226660 | 225980.5 | 365.49 | 227074 | 226213.53 | 524.39 |
| | 50 | rnd | 226916 | 225157.43 | 794.01 | 226946 | 225065.6 | 977.93 | 226991 | 225203.4 | 759.85 | 226308 | 225023.83 | 788.33 |
| | | 2op | 226297 | 225848.83 | 364.68 | 226824 | 225941.17 | 411.03 | 226852 | 225899.37 | 450.4 | 227030 | 226089.23 | 480.7 |
| 51 | 20 | rnd | 226598 | 225027.33 | 925.99 | 226337 | 225214.07 | 629.37 | 226484 | 225193.8 | 721.83 | 226480 | 225165.97 | 649.12 |
| | | 2op | 226887 | 226049.43 | 346.07 | 226887 | 226063.9 | 354.8 | 226802 | 226056.53 | 384.98 | 226885 | 226130.07 | 408.02 |
| | 50 | rnd | 227229 | 225087.67 | 730.38 | 226317 | 224829.8 | 833.71 | 226318 | 224949.2 | 814.2 | 226531 | 225310.23 | 714.46 |
| | | 2op | 226424 | 225893.7 | 323.94 | 226404 | 225993.13 | 281.65 | 226661 | 225846.37 | 380.08 | 226708 | 226081.07 | 413.85 |

Table A.1307: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441145 | 438926.53 | 1276.86 | 440158 | 438691.07 | 1047.55 | 440394 | 438436.23 | 1329.59 | 440646 | 438355.07 | 1545.38 |
| | | 2op | 441209 | 439345.37 | 1007.58 | 442472 | 439714.53 | 1204.8 | 441959 | 439745.33 | 1011.13 | 441959 | 439730.03 | 1114.28 |
| | 50 | rnd | 442381 | 439450.37 | 1290.37 | 440344 | 438574.67 | 1034.78 | 440614 | 438473.77 | 1252.12 | 440874 | 438311.43 | 1338.47 |
| | | 2op | 440945 | 439428.23 | 867.36 | 441769 | 439699.83 | 1010.67 | 441030 | 439506.23 | 804.82 | 441389 | 439923.8 | 851.89 |
| 51 | 20 | rnd | 440865 | 438524.87 | 1238.74 | 440406 | 438849.27 | 1044.33 | 440790 | 438350.3 | 1011.71 | 440361 | 438273.67 | 1262.72 |
| | | 2op | 441100 | 439308.73 | 1010.08 | 441211 | 439556.83 | 1052.2 | 441684 | 439910.43 | 1054.46 | 441690 | 439855.73 | 1103.38 |
| | 50 | rnd | 440822 | 438747.67 | 1114.99 | 441795 | 439248.7 | 1163.72 | 440309 | 438738.37 | 1125.23 | 440197 | 438220.8 | 1002.45 |
| | | 2op | 440555 | 439133.2 | 791.92 | 440452 | 439173.2 | 826.63 | 441440 | 439562.63 | 1080.22 | 440918 | 439325.87 | 1028.77 |

Table A.1308: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440918 | 438629 | 1318.13 | 441469 | 438664.9 | 1332.21 | 442079 | 438477.23 | 1231.64 | 441312 | 438675.77 | 1234.51 |
| | | 2op | 438680 | 438103.27 | 296.06 | 438755 | 438113.97 | 326.57 | 439758 | 438434.37 | 525.71 | 440400 | 439202.17 | 547 |
| | 50 | rnd | 440961 | 438194.43 | 1246.16 | 440185 | 438430.83 | 1093.63 | 440555 | 438831.67 | 1175.19 | 440145 | 438339.8 | 1030.8 |
| | | 2op | 438887 | 437989.47 | 322.82 | 438974 | 437961.87 | 385.87 | 439104 | 438230.07 | 500.69 | 439916 | 438987.83 | 678.39 |
| 51 | 20 | rnd | 440731 | 438155.2 | 1211.97 | 440331 | 437968.07 | 1240.61 | 440297 | 438560.2 | 1280.21 | 440544 | 438110.77 | 1305.49 |
| | | 2op | 438798 | 437956.07 | 408.03 | 439530 | 438059.67 | 556.67 | 438977 | 438040.2 | 521.14 | 440299 | 438525.3 | 610.28 |
| | 50 | rnd | 440419 | 438128 | 1275.49 | 441245 | 438556.2 | 1341.44 | 440917 | 438656.43 | 1118.17 | 441191 | 438825.5 | 1259.97 |
| | | 2op | 438507 | 437945.73 | 259.72 | 438841 | 437965.4 | 329.89 | 438652 | 438032.77 | 338.17 | 440058 | 438444.57 | 534.51 |

Table A.1309: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441097 | 438985.7 | 1086.28 | 440595 | 438590.1 | 1274.51 | 440863 | 438490.27 | 1225.79 | 440676 | 438381.8 | 1197.4 |
| | | 2op | 442854 | 439425 | 1127.08 | 442548 | 439635.47 | 1124.26 | 441472 | 439702.87 | 897.4 | 441628 | 439457.6 | 938.71 |
| | 50 | rnd | 440779 | 438685.47 | 1240.31 | 441734 | 438654.8 | 1232 | 440772 | 438543.47 | 1177.38 | 440469 | 438434.07 | 989.61 |
| | | 2op | 440326 | 439128.07 | 840.35 | 441125 | 439626.27 | 1089.62 | 441687 | 439496.53 | 1004.24 | 441051 | 439643.63 | 944.57 |
| 51 | 20 | rnd | 440729 | 438986.47 | 1084.19 | 441130 | 438775.23 | 1305.78 | 441451 | 438822.17 | 1403.64 | 440889 | 438600.53 | 1244.5 |
| | | 2op | 441183 | 439198.1 | 797.34 | 441224 | 439388.37 | 1055.6 | 442480 | 439829.3 | 1085.85 | 441776 | 440119.37 | 892.22 |
| | 50 | rnd | 441958 | 439020.67 | 1078.66 | 441393 | 439279.3 | 1106.29 | 441119 | 438669.53 | 1252.27 | 440396 | 438418.2 | 1077.26 |
| | | 2op | 441260 | 439373.97 | 916.37 | 441178 | 439460.7 | 893.25 | 441931 | 439755.77 | 948.64 | 442408 | 439941.23 | 1144.41 |

Table A.1310: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441351 | 438668.23 | 1013.9 | 440984 | 438451.27 | 1320.04 | 440118 | 437911.5 | 1366.12 | 440021 | 438344.5 | 1234.66 |
| | | 2op | 438989 | 438140.57 | 401.22 | 439506 | 438265.67 | 505.06 | 439536 | 438360.3 | 565.82 | 440669 | 439245.47 | 805.55 |
| | 50 | rnd | 440850 | 438402.37 | 1208 | 441680 | 438671.1 | 1321.64 | 441063 | 438393.83 | 1376.42 | 440051 | 437912.63 | 1163.38 |
| | | 2op | 438962 | 438141 | 320.35 | 438971 | 438045.83 | 339.26 | 439175 | 438255.77 | 478.26 | 439988 | 439057.23 | 608.44 |
| 51 | 20 | rnd | 441685 | 438500.1 | 1376.79 | 440565 | 438375.43 | 1277.26 | 440377 | 438126.37 | 1154.28 | 440247 | 437981.77 | 1429.8 |
| | | 2op | 439047 | 437962.73 | 346.49 | 439390 | 438033.1 | 414.52 | 439284 | 438157.9 | 457.22 | 440860 | 438497.2 | 676.67 |
| | 50 | rnd | 441622 | 438744.37 | 1111.44 | 440908 | 438393.37 | 1245.36 | 441200 | 438677.77 | 1105.43 | 439938 | 437871.27 | 1325.81 |
| | | 2op | 438576 | 437939.57 | 286.87 | 438818 | 438007.5 | 372.95 | 439426 | 438128.37 | 443.24 | 439562 | 438467.07 | 560.71 |

Table A.1311: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441453 | 439012.43 | 1283.58 | 441181 | 439192.07 | 1288.63 | 441532 | 438532.9 | 1635.93 | 441010 | 438329.03 | 1551.12 |
| | | 2op | 441154 | 439146.07 | 834.03 | 441702 | 439394.53 | 831.69 | 441922 | 439852.27 | 1059.08 | 441609 | 439799.57 | 812.91 |
| | 50 | rnd | 441049 | 438757.53 | 1158.59 | 441049 | 438776.97 | 1087.1 | 440169 | 438402.27 | 1285.38 | 440042 | 438236.13 | 1041.71 |
| | | 2op | 440467 | 439062.6 | 755.06 | 440595 | 439143.13 | 796.4 | 441448 | 439599.43 | 925.28 | 441487 | 439629.9 | 928.09 |
| 51 | 20 | rnd | 440953 | 439197.2 | 927.65 | 440953 | 439197.2 | 927.65 | 441367 | 438379.4 | 1543.8 | 440312 | 438623.57 | 1300.69 |
| | | 2op | 439490 | 438525.9 | 604.78 | 439490 | 438541.4 | 595.51 | 441694 | 439716.93 | 1015.49 | 441702 | 439839.87 | 1088.96 |
| | 50 | rnd | 441453 | 438885.6 | 1286.99 | 441453 | 438885.6 | 1286.99 | 441712 | 439081.93 | 1128.11 | 440590 | 438385.07 | 1244.08 |
| | | 2op | 440211 | 438938.4 | 655.07 | 440211 | 438902.97 | 659.34 | 440763 | 439530.27 | 747.27 | 441421 | 439784.27 | 981.96 |

Table A.1312: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440597 | 438306.7 | 1310.83 | 440494 | 438604.3 | 967.29 | 441978 | 438438.13 | 1135.33 | 440304 | 437982.37 | 1291.64 |
| | | 2op | 439076 | 438047.73 | 308.53 | 439076 | 438052.53 | 388.64 | 439749 | 438488.93 | 568.15 | 441065 | 439490.03 | 914.08 |
| | 50 | rnd | 440755 | 438672.93 | 1195.54 | 441008 | 438401.87 | 1613.41 | 441365 | 438503.73 | 1436.87 | 441129 | 438344.37 | 1304.22 |
| | | 2op | 438750 | 438078.13 | 347.54 | 438576 | 438033.87 | 295.78 | 439439 | 438332.6 | 441.17 | 440854 | 439070.57 | 841 |
| 51 | 20 | rnd | 440678 | 438520.93 | 1154.36 | 440678 | 438653.67 | 1209.19 | 440925 | 438557.57 | 1344.76 | 440166 | 438301.8 | 929.55 |
| | | 2op | 439240 | 437961.23 | 353 | 438664 | 437925.83 | 280.34 | 438974 | 438036.83 | 394.13 | 440599 | 438809.77 | 644.89 |
| | 50 | rnd | 440295 | 438395.97 | 1224.45 | 441003 | 438410.57 | 1413.13 | 441429 | 438650.3 | 1323.07 | 440472 | 438328.1 | 1180.34 |
| | | 2op | 438806 | 437967.03 | 330.47 | 438989 | 437974.2 | 354.98 | 439439 | 437977.27 | 409.36 | 440334 | 438821.97 | 695.86 |

Table A.1313: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115741 | 114802.93 | 434.43 | 115993 | 114811.83 | 506.51 | 115744 | 114827.03 | 664.09 | 115808 | 114876.57 | 555.67 |
| | | 2op | 116171 | 115546.33 | 378.9 | 116149 | 115499.43 | 382.84 | 116158 | 115205.63 | 384.04 | 115995 | 115377.5 | 323.25 |
| | 50 | rnd | 115994 | 115026.07 | 562.12 | 115873 | 115188.57 | 458.97 | 116177 | 114914.37 | 609.54 | 115754 | 114670.17 | 543.26 |
| | | 2op | 115978 | 115327.43 | 322.99 | 116138 | 115348.1 | 453.35 | 116104 | 115341.2 | 411.87 | 116061 | 115452.7 | 318.73 |
| 51 | 20 | rnd | 115833 | 114958.93 | 501.25 | 115851 | 114896.1 | 414.29 | 115725 | 114907.03 | 580.6 | 115753 | 114843.43 | 563.73 |
| | | 2op | 116152 | 115515.07 | 338.12 | 116152 | 115506.27 | 350.63 | 115991 | 115451.37 | 338.31 | 116172 | 115456.2 | 380.56 |
| | 50 | rnd | 115952 | 114948.67 | 541.85 | 116124 | 114938.4 | 570.57 | 115735 | 114860.03 | 496.8 | 115490 | 114664.33 | 445.38 |
| | | 2op | 116098 | 115582.3 | 314.86 | 116124 | 115538.3 | 344.51 | 115928 | 115469.9 | 340.69 | 116138 | 115313.93 | 324.71 |

Table A.1314: *j*02459_7: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115876 | 114810.13 | 502.7 | 115553 | 114666.33 | 450.23 | 116248 | 114811.33 | 564.26 | 115420 | 114584.37 | 517.36 |
| | | 2op | 116327 | 115526 | 221.98 | 115888 | 115459.63 | 222.07 | 115888 | 115451.83 | 256.81 | 116312 | 115563.77 | 304 |
| | 50 | rnd | 115431 | 114772.17 | 426.02 | 115621 | 114661.17 | 423.71 | 115768 | 114871.47 | 532.51 | 115601 | 114849.4 | 560.44 |
| | | 2op | 115935 | 115464.63 | 206.74 | 116042 | 115550.63 | 229.59 | 115933 | 115411.9 | 224.4 | 115905 | 115401.5 | 286.01 |
| 51 | 20 | rnd | 115953 | 114696.83 | 655.13 | 115653 | 114806.33 | 595.07 | 115619 | 114648.23 | 488.37 | 115930 | 114819.53 | 502.83 |
| | | 2op | 115633 | 115439.77 | 125.18 | 116391 | 115600.4 | 273.58 | 115633 | 115358.33 | 157.14 | 115849 | 115425.73 | 183.77 |
| | 50 | rnd | 115690 | 114774.6 | 475.75 | 115402 | 114728.9 | 437.08 | 115654 | 114830.5 | 497.95 | 115717 | 114705.07 | 560.4 |
| | | 2op | 115803 | 115496.53 | 148.63 | 116424 | 115767.87 | 216.49 | 115858 | 115437.33 | 209.98 | 115939 | 115451.23 | 229.18 |

Table A.1315: *j*02459_7: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115817 | 115065.97 | 514.33 | 115626 | 114797.73 | 527.07 | 115976 | 114843.4 | 494.71 | 115737 | 114668.2 | 426.4 |
| | | 2op | 116173 | 115421.27 | 402.07 | 116178 | 115352.93 | 474.66 | 115948 | 115329.43 | 317.85 | 115803 | 115324.37 | 310.74 |
| | 50 | rnd | 115839 | 115173.83 | 459.92 | 115614 | 114912.83 | 433.06 | 115983 | 114694.33 | 569.27 | 115778 | 114784.53 | 549.5 |
| | | 2op | 116037 | 115388.6 | 354.22 | 115912 | 115315.33 | 429.65 | 116298 | 115347.43 | 441.78 | 116078 | 115365.33 | 351.63 |
| 51 | 20 | rnd | 116009 | 115007.27 | 459.63 | 115725 | 114895.03 | 557.38 | 115956 | 115033.4 | 587.18 | 115713 | 114743.93 | 547.53 |
| | | 2op | 116103 | 115471.8 | 357.12 | 116103 | 115429 | 365.4 | 116121 | 115344.13 | 443.35 | 115987 | 115310.7 | 402.6 |
| | 50 | rnd | 116139 | 114960.07 | 551.69 | 116308 | 115073.63 | 551.94 | 116026 | 115037.17 | 433.96 | 115847 | 114729.2 | 467.54 |
| | | 2op | 116033 | 115493.97 | 320.49 | 116066 | 115495.77 | 295.69 | 115909 | 115485.3 | 262.19 | 116059 | 115497.87 | 319.89 |

Table A.1316: *j*02459_7: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115650 | 114856.67 | 517.37 | 115592 | 114918.4 | 501.3 | 115774 | 114999.83 | 392.1 | 115283 | 114585.63 | 557.15 |
| | | 2op | 115793 | 115484.43 | 164.22 | 115710 | 115383.53 | 224.47 | 116050 | 115369.37 | 284.68 | 116269 | 115420.8 | 355.79 |
| | 50 | rnd | 115678 | 114754.07 | 457.41 | 115604 | 114849.77 | 502.5 | 115742 | 114600.03 | 499.21 | 115724 | 114705.97 | 525.73 |
| | | 2op | 116039 | 115482.1 | 218.46 | 115996 | 115529.8 | 226.55 | 116091 | 115314.93 | 298.28 | 116320 | 115504.1 | 318.12 |
| 51 | 20 | rnd | 115911 | 114853.5 | 617.63 | 115789 | 114763.07 | 538.52 | 115503 | 114763.7 | 509.22 | 116175 | 114743.03 | 640.99 |
| | | 2op | 115933 | 115462.63 | 191.72 | 116126 | 115710.73 | 243.21 | 115900 | 115452.73 | 207.99 | 115889 | 115468.73 | 146.15 |
| | 50 | rnd | 115862 | 114884.67 | 534.74 | 115233 | 114636.3 | 490.59 | 115908 | 114864.9 | 572.34 | 115851 | 114823.7 | 513.33 |
| | | 2op | 116025 | 115428 | 207.9 | 116438 | 115759.1 | 189.73 | 116023 | 115402.67 | 199.17 | 115888 | 115401.13 | 251.93 |

Table A.1317: *j*02459_7: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115844 | 114891.23 | 507.18 | 116029 | 115064.87 | 523.77 | 115682 | 114727.33 | 433.13 | 115682 | 114816.4 | 533.12 |
| | | 2op | 116239 | 115582 | 275.84 | 116239 | 115584.7 | 264.33 | 116156 | 115580.13 | 371.45 | 116394 | 115449.33 | 418 |
| | 50 | rnd | 115434 | 114776.6 | 384.15 | 115661 | 114869.97 | 478.05 | 115645 | 114961.23 | 392.1 | 115617 | 114781.03 | 453.88 |
| | | 2op | 116181 | 115503.73 | 320.33 | 116121 | 115466.5 | 279.88 | 116115 | 115479.7 | 337.18 | 116323 | 115574.43 | 438.99 |
| 51 | 20 | rnd | 115836 | 115034.53 | 432.45 | 115836 | 114975.8 | 408.29 | 115990 | 115012.53 | 501.07 | 115913 | 114669.37 | 709.08 |
| | | 2op | 116111 | 115453.37 | 253.39 | 116111 | 115447.67 | 257.91 | 115935 | 115426.37 | 277.18 | 116255 | 115541.3 | 363.02 |
| | 50 | rnd | 115996 | 115006.17 | 435.82 | 115996 | 115095.73 | 564.14 | 116207 | 115136.37 | 599.75 | 116174 | 114855.43 | 727.06 |
| | | 2op | 116422 | 115769.33 | 311.02 | 116422 | 115770.43 | 308.72 | 116401 | 115654.93 | 292.35 | 116205 | 115372.33 | 365.24 |

Table A.1318: *j*02459_7: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115900 | 114858.97 | 368.14 | 116164 | 114863.5 | 560.47 | 115381 | 114658.13 | 463.67 | 115460 | 114632.77 | 620.94 |
| | | 2op | 116308 | 115486.67 | 219.14 | 115749 | 115437.7 | 154.98 | 115992 | 115474.27 | 236.29 | 116146 | 115495.6 | 338.32 |
| | 50 | rnd | 115594 | 114770.57 | 422.58 | 115638 | 114576.8 | 579.79 | 115831 | 114763.43 | 480.57 | 115837 | 114792.47 | 608.15 |
| | | 2op | 115696 | 115466.43 | 176.31 | 116004 | 115472.6 | 197.33 | 116101 | 115499.53 | 220.27 | 116077 | 115438.73 | 321.08 |
| 51 | 20 | rnd | 115953 | 114822.57 | 515.73 | 115811 | 114853.13 | 556.89 | 115365 | 114724.63 | 473.9 | 115856 | 114623.7 | 539.41 |
| | | 2op | 115807 | 115469.73 | 181.43 | 116087 | 115464.17 | 213.54 | 116077 | 115403.8 | 222.78 | 115796 | 115428.6 | 244.13 |
| | 50 | rnd | 115716 | 114664.47 | 643.39 | 115698 | 114815.43 | 605.18 | 115592 | 114641.5 | 534.9 | 115604 | 114842.9 | 548.75 |
| | | 2op | 116052 | 115504.73 | 217.93 | 116126 | 115450.5 | 212.06 | 115974 | 115427.67 | 192.61 | 116040 | 115452.97 | 340.17 |

Table A.1319: *j*02459_7: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38534 | 38280.97 | 159 | 38522 | 38256.27 | 153.44 | 38593 | 38210 | 160.23 | 38526 | 38147.33 | 234.82 |
| | | 2op | 38555 | 38354.77 | 131.9 | 38550 | 38329.8 | 142.08 | 38550 | 38296.4 | 153.86 | 38561 | 38243.17 | 183.63 |
| | 50 | rnd | 38578 | 38297.57 | 167.63 | 38618 | 38260.77 | 230.09 | 38548 | 38232.3 | 196.14 | 38534 | 38166.03 | 215.66 |
| | | 2op | 38469 | 38300.33 | 112.42 | 38537 | 38302.87 | 149.52 | 38520 | 38301.27 | 173.64 | 38527 | 38252 | 156.58 |
| 51 | 20 | rnd | 38496 | 38183.53 | 222.2 | 38617 | 38204.2 | 198.91 | 38591 | 38270 | 204.43 | 38586 | 38250.1 | 226.13 |
| | | 2op | 38545 | 38366.9 | 86.11 | 38545 | 38359.97 | 82.07 | 38561 | 38375.1 | 106.81 | 38566 | 38364.03 | 130.81 |
| | 50 | rnd | 38567 | 38272.83 | 196.64 | 38623 | 38285.43 | 168.45 | 38613 | 38303.53 | 192.07 | 38638 | 38231.23 | 194.55 |
| | | 2op | 38531 | 38371.93 | 63.34 | 38563 | 38359.7 | 77.88 | 38435 | 38312 | 105.74 | 38545 | 38374.03 | 104.86 |

Table A.1320: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38492 | 38181.7 | 174.35 | 38482 | 38151.33 | 220.5 | 38581 | 38256.53 | 240.69 | 38531 | 38211.8 | 225.03 |
| | | 2op | 38414 | 38360.6 | 66.96 | 38432 | 38409.8 | 7.39 | 38557 | 38367.87 | 101.68 | 38542 | 38381.77 | 84.13 |
| | 50 | rnd | 38559 | 38177.03 | 217.62 | 38527 | 38146.4 | 249.88 | 38580 | 38145.57 | 279.67 | 38588 | 38197.73 | 176.85 |
| | | 2op | 38409 | 38379.63 | 50.95 | 38442 | 38422.53 | 14.49 | 38535 | 38406.07 | 57.01 | 38557 | 38418.77 | 75.13 |
| 51 | 20 | rnd | 38566 | 38237.77 | 221.91 | 38579 | 38226 | 225.57 | 38577 | 38175.67 | 258.74 | 38580 | 38151.07 | 275.96 |
| | | 2op | 38414 | 38369.17 | 65.12 | 38442 | 38423.4 | 14.53 | 38532 | 38409.03 | 26.4 | 38550 | 38374.3 | 76.76 |
| | 50 | rnd | 38681 | 38195.47 | 232.31 | 38656 | 38256.27 | 228.08 | 38677 | 38202.77 | 223.89 | 38542 | 38224.7 | 201.97 |
| | | 2op | 38409 | 38374.03 | 55.09 | 38442 | 38431.2 | 14 | 38529 | 38411.7 | 23.8 | 38520 | 38392.43 | 59.49 |

Table A.1321: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38584 | 38249.13 | 199.44 | 38570 | 38262.9 | 191.95 | 38664 | 38205.2 | 221.54 | 38537 | 38174.77 | 228.22 |
| | | 2op | 38592 | 38296.73 | 159.67 | 38592 | 38305.7 | 152.78 | 38524 | 38273.83 | 162.27 | 38529 | 38222.1 | 187.76 |
| | 50 | rnd | 38432 | 38164.63 | 185.73 | 38580 | 38264.8 | 208.7 | 38527 | 38260.43 | 181.29 | 38518 | 38177.9 | 242.61 |
| | | 2op | 38538 | 38342.57 | 106.19 | 38526 | 38326.03 | 117.81 | 38457 | 38292.7 | 118.59 | 38542 | 38273.83 | 180.25 |
| 51 | 20 | rnd | 38612 | 38226.03 | 216.74 | 38567 | 38266.13 | 198.58 | 38462 | 38174.57 | 204.65 | 38546 | 38122.67 | 249.77 |
| | | 2op | 38477 | 38362.07 | 80.37 | 38504 | 38383.8 | 57.57 | 38550 | 38375.63 | 92.47 | 38572 | 38364.27 | 130.37 |
| | 50 | rnd | 38567 | 38258.83 | 157.95 | 38546 | 38243 | 220.08 | 38590 | 38208.23 | 181.86 | 38492 | 38210.7 | 199.32 |
| | | 2op | 38523 | 38374.27 | 97.52 | 38518 | 38381.7 | 76.02 | 38524 | 38330.5 | 110.79 | 38569 | 38310.87 | 154.95 |

Table A.1322: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38658 | 38232.1 | 192.45 | 38647 | 38221.33 | 209.93 | 38567 | 38128.33 | 284.34 | 38686 | 38216.17 | 224.51 |
| | | 2op | 38413 | 38366.17 | 67.71 | 38534 | 38416.57 | 25.49 | 38505 | 38372.97 | 77.48 | 38529 | 38355.53 | 92.59 |
| | 50 | rnd | 38485 | 38125.9 | 236.6 | 38649 | 38198.93 | 234.3 | 38563 | 38228.93 | 232.99 | 38619 | 38200.03 | 248.5 |
| | | 2op | 38413 | 38373.47 | 59.74 | 38442 | 38422.07 | 14.33 | 38524 | 38392.8 | 54.3 | 38530 | 38387.1 | 81.26 |
| 51 | 20 | rnd | 38506 | 38181.87 | 241.99 | 38606 | 38193.7 | 227.19 | 38567 | 38175.6 | 222.14 | 38486 | 38199.9 | 182.12 |
| | | 2op | 38436 | 38368.4 | 67.02 | 38442 | 38419.33 | 13.28 | 38432 | 38406.87 | 12.62 | 38552 | 38385.87 | 101.53 |
| | 50 | rnd | 38657 | 38170.27 | 250.78 | 38601 | 38188.2 | 218.95 | 38539 | 38183 | 231.85 | 38633 | 38182 | 226.91 |
| | | 2op | 38414 | 38367.3 | 65.2 | 38442 | 38429.33 | 13.1 | 38442 | 38412.3 | 14.13 | 38530 | 38376.77 | 70.66 |

Table A.1323: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38642 | 38288.7 | 197.11 | 38575 | 38280.47 | 186.83 | 38663 | 38206.67 | 240.09 | 38655 | 38185.2 | 221.33 |
| | | 2op | 38431 | 38391.6 | 30.87 | 38430 | 38387.5 | 29.92 | 38580 | 38376.6 | 115.48 | 38602 | 38274.63 | 185.13 |
| | 50 | rnd | 38629 | 38275.93 | 181.16 | 38612 | 38306.03 | 196.56 | 38626 | 38201.47 | 211.23 | 38626 | 38210.33 | 195.38 |
| | | 2op | 38437 | 38384.53 | 50.31 | 38437 | 38381.1 | 53.57 | 38579 | 38334.63 | 126.6 | 38567 | 38258.9 | 138.65 |
| 51 | 20 | rnd | 38573 | 38232.2 | 172.52 | 38508 | 38232.8 | 196.44 | 38652 | 38240.07 | 190.26 | 38573 | 38214.4 | 188.94 |
| | | 2op | 38437 | 38415.17 | 14.12 | 38442 | 38433.6 | 8.48 | 38524 | 38399.67 | 37.22 | 38568 | 38359.3 | 153.11 |
| | 50 | rnd | 38555 | 38265.07 | 192.25 | 38639 | 38242.57 | 210.66 | 38515 | 38185.77 | 214.42 | 38491 | 38106.53 | 239.65 |
| | | 2op | 38442 | 38424.2 | 14.5 | 38442 | 38428.7 | 11.82 | 38438 | 38385.83 | 41.6 | 38517 | 38292.93 | 131.15 |

Table A.1324: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38650 | 38217.73 | 214.76 | 38527 | 38198.97 | 239.34 | 38634 | 38120 | 245.46 | 38612 | 38185.97 | 238.01 |
| | | 2op | 38409 | 38402.53 | 8.87 | 38418 | 38402.8 | 9.69 | 38507 | 38407.87 | 26.21 | 38566 | 38384.33 | 114.33 |
| | 50 | rnd | 38615 | 38230.7 | 214.57 | 38527 | 38192.7 | 229.25 | 38535 | 38181.13 | 200.91 | 38571 | 38214.37 | 238.86 |
| | | 2op | 38409 | 38404.77 | 7.61 | 38409 | 38403.7 | 8.57 | 38530 | 38396.33 | 55.01 | 38556 | 38362 | 102.68 |
| 51 | 20 | rnd | 38569 | 38176.37 | 201.59 | 38522 | 38169.8 | 223.64 | 38636 | 38202.5 | 271.77 | 38553 | 38152.83 | 229.71 |
| | | 2op | 38437 | 38407.93 | 9.59 | 38437 | 38409.07 | 7.51 | 38432 | 38392.4 | 21.8 | 38550 | 38381.17 | 88.08 |
| | 50 | rnd | 38528 | 38158.7 | 234.41 | 38513 | 38258.53 | 202.08 | 38566 | 38171.5 | 241.5 | 38687 | 38171.97 | 260.43 |
| | | 2op | 38432 | 38408.87 | 4.76 | 38442 | 38406.53 | 8.46 | 38431 | 38392.53 | 34.15 | 38533 | 38403.9 | 78.08 |

Table A.1325: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47921 | 47585.67 | 234.12 | 47846 | 47537.33 | 229.16 | 47961 | 47547.23 | 337.94 | 47899 | 47546.2 | 261.82 |
| | | 2op | 47814 | 47582.83 | 151.17 | 47830 | 47574.4 | 169.87 | 47756 | 47569.7 | 153.03 | 47830 | 47563.27 | 205.43 |
| | 50 | rnd | 48034 | 47613.93 | 270.9 | 47894 | 47522.63 | 265.52 | 47917 | 47464 | 316.18 | 47862 | 47600.7 | 190.43 |
| | | 2op | 47862 | 47593 | 173.47 | 47810 | 47558.23 | 194.63 | 47874 | 47642.47 | 148.04 | 47830 | 47599.33 | 188.81 |
| 51 | 20 | rnd | 47870 | 47556.03 | 230.7 | 47843 | 47543.93 | 289 | 47905 | 47584.07 | 210.88 | 48023 | 47503.47 | 271.02 |
| | | 2op | 47801 | 47630.57 | 175.38 | 47801 | 47634.9 | 175.16 | 47801 | 47634.37 | 173.42 | 47810 | 47599.23 | 184.75 |
| | 50 | rnd | 47887 | 47594.67 | 177.54 | 47897 | 47577.47 | 208.21 | 47998 | 47554.73 | 238.16 | 47849 | 47528.27 | 252.6 |
| | | 2op | 47821 | 47602 | 190.86 | 47821 | 47628.1 | 183.64 | 47830 | 47618.67 | 170.02 | 47819 | 47617.1 | 167.99 |

Table A.1326: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47851 | 47569.53 | 209.95 | 47923 | 47473.93 | 264.22 | 47899 | 47562.3 | 283.96 | 47846 | 47431.87 | 287.17 |
| | | 2op | 47758 | 47470.9 | 175.72 | 47758 | 47745.9 | 9.2 | 47951 | 47513.63 | 188.38 | 47956 | 47588.9 | 162.51 |
| | 50 | rnd | 47824 | 47493.63 | 260.9 | 47949 | 47428.83 | 371.53 | 47851 | 47514.47 | 212.22 | 47939 | 47515.83 | 257.85 |
| | | 2op | 47758 | 47493.43 | 165.7 | 47758 | 47754.93 | 6.24 | 47755 | 47472.43 | 157.26 | 47803 | 47519.5 | 187.14 |
| 51 | 20 | rnd | 47772 | 47433.13 | 290.55 | 47913 | 47538.5 | 216.69 | 47820 | 47494.27 | 309.7 | 47939 | 47512.67 | 305.14 |
| | | 2op | 47758 | 47495 | 160.37 | 47758 | 47756.57 | 3.37 | 47758 | 47567.3 | 185.22 | 47758 | 47500.37 | 164.4 |
| | 50 | rnd | 47848 | 47434.7 | 265.21 | 47919 | 47450.87 | 342.01 | 47838 | 47518.43 | 216.44 | 47833 | 47475.07 | 251.89 |
| | | 2op | 47758 | 47442.27 | 123.79 | 47758 | 47756.9 | 1.47 | 47758 | 47713.53 | 101.29 | 47750 | 47440.4 | 138.54 |

Table A.1327: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48021 | 47635.27 | 187.35 | 47909 | 47630.5 | 225.44 | 47862 | 47579.8 | 254.74 | 47943 | 47560.4 | 313.84 |
| | | 2op | 47814 | 47637.4 | 154.5 | 47814 | 47613.43 | 157.12 | 47803 | 47594.07 | 200.21 | 47803 | 47570.77 | 186.74 |
| | 50 | rnd | 47888 | 47541.43 | 251.35 | 47961 | 47605.63 | 234.32 | 48002 | 47575.93 | 260.72 | 48027 | 47545.97 | 262.63 |
| | | 2op | 47814 | 47579.8 | 198.16 | 47821 | 47538.1 | 226.98 | 47830 | 47643.67 | 123.66 | 47830 | 47661.83 | 107.98 |
| 51 | 20 | rnd | 47933 | 47532.87 | 245.91 | 47868 | 47544.37 | 200.38 | 47923 | 47611.33 | 235.31 | 47866 | 47553.37 | 174.66 |
| | | 2op | 47814 | 47601.97 | 191.54 | 47803 | 47593.17 | 184.29 | 47758 | 47600.83 | 139.83 | 47805 | 47592.83 | 181.43 |
| | 50 | rnd | 48043 | 47636.7 | 237.48 | 47897 | 47492.93 | 289.89 | 47915 | 47557.1 | 227.61 | 47972 | 47509.57 | 274.39 |
| | | 2op | 47758 | 47618.47 | 136.05 | 47758 | 47585.4 | 139.41 | 47794 | 47632.67 | 141.46 | 47814 | 47606.47 | 172.19 |

Table A.1328: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47919 | 47514.43 | 268.33 | 47982 | 47536.1 | 269.66 | 47864 | 47477.83 | 251.91 | 47925 | 47482.5 | 256.88 |
| | | 2op | 47758 | 47506.07 | 161.06 | 47758 | 47719.5 | 105.66 | 47758 | 47491.7 | 147.21 | 47960 | 47562.9 | 200.64 |
| | 50 | rnd | 47790 | 47444.2 | 299.97 | 47923 | 47503.43 | 239.68 | 47914 | 47470.27 | 340.86 | 47916 | 47568.33 | 236.33 |
| | | 2op | 47758 | 47469.43 | 165.82 | 47758 | 47754.03 | 6.39 | 47793 | 47502.7 | 184.72 | 47776 | 47496.9 | 174.77 |
| 51 | 20 | rnd | 47830 | 47536.7 | 255.82 | 47916 | 47485.07 | 299.76 | 47909 | 47563.83 | 270.74 | 47839 | 47510.6 | 228.83 |
| | | 2op | 47758 | 47456 | 141.25 | 47758 | 47756.67 | 3.08 | 47830 | 47556.03 | 185.28 | 47758 | 47489.23 | 157.95 |
| | 50 | rnd | 47848 | 47459.07 | 235.74 | 47837 | 47407.9 | 327.14 | 47986 | 47562.3 | 298.49 | 47916 | 47524.33 | 246.58 |
| | | 2op | 47758 | 47503.43 | 173.79 | 47758 | 47757.2 | 1.35 | 47758 | 47735.37 | 61.99 | 47758 | 47491.27 | 135.04 |

Table A.1329: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47599.67 | 223.12 | 47949 | 47573.7 | 212.01 | 47967 | 47606.47 | 197.48 | 48027 | 47525.53 | 293.73 |
| | | 2op | 47814 | 47660.6 | 142.85 | 47814 | 47660.63 | 143.04 | 47805 | 47629 | 135.89 | 47821 | 47630.17 | 186.14 |
| | 50 | rnd | 47904 | 47626.4 | 206.68 | 47924 | 47572.87 | 218.92 | 47933 | 47567.07 | 217.95 | 47836 | 47558.2 | 261.46 |
| | | 2op | 47830 | 47703.53 | 102.43 | 47830 | 47698.9 | 102.06 | 47830 | 47633.37 | 132.59 | 47814 | 47573.5 | 180.85 |
| 51 | 20 | rnd | 47848 | 47490.57 | 282.97 | 48052 | 47620.5 | 227.66 | 47952 | 47521.4 | 377.02 | 48043 | 47548.93 | 314.69 |
| | | 2op | 47758 | 47711 | 101.9 | 47758 | 47753.8 | 6.3 | 47830 | 47621.8 | 170.33 | 47803 | 47640.3 | 134.22 |
| | 50 | rnd | 47836 | 47489.2 | 328.75 | 47978 | 47541.77 | 236.47 | 47892 | 47599.67 | 235.55 | 47862 | 47546.23 | 215.16 |
| | | 2op | 47758 | 47737.73 | 62.01 | 47758 | 47720.43 | 111.38 | 47758 | 47621.23 | 189.78 | 47814 | 47607.37 | 181.44 |

Table A.1330: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47821 | 47473.7 | 297.8 | 47898 | 47489.5 | 272.75 | 47906 | 47566.23 | 218.64 | 47910 | 47539.4 | 262.32 |
| | | 2op | 47758 | 47543 | 167.51 | 47758 | 47541.07 | 166.82 | 47758 | 47493.77 | 168.21 | 47852 | 47589.4 | 144.07 |
| | 50 | rnd | 47840 | 47527.57 | 209.96 | 47886 | 47521.93 | 238.67 | 47944 | 47451.63 | 342.38 | 47943 | 47457.27 | 280.78 |
| | | 2op | 47758 | 47652.9 | 146.07 | 47758 | 47674.1 | 133.12 | 47758 | 47492.8 | 139.03 | 47976 | 47494.47 | 181.22 |
| 51 | 20 | rnd | 47844 | 47534.77 | 252.42 | 47833 | 47468.8 | 277.22 | 47914 | 47565.23 | 266.4 | 47848 | 47578.77 | 181.18 |
| | | 2op | 47758 | 47671.67 | 131.56 | 47758 | 47737.7 | 61.84 | 47758 | 47575.47 | 177.65 | 47766 | 47506.73 | 156.54 |
| | 50 | rnd | 47814 | 47517.53 | 203.14 | 47841 | 47436.57 | 258.2 | 47973 | 47511.87 | 294.4 | 47898 | 47502.57 | 241.79 |
| | | 2op | 47758 | 47634.67 | 156.98 | 47830 | 47738.17 | 63.07 | 47758 | 47466.9 | 156.08 | 47758 | 47502.63 | 166.58 |

Table A.1331: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54876 | 54399.93 | 310.77 | 54998 | 54335.17 | 287.61 | 54876 | 54344.57 | 374.8 | 54921 | 54336.9 | 344.49 |
| | | 2op | 54935 | 54615.17 | 156.51 | 54935 | 54636.37 | 148.61 | 54795 | 54586.57 | 147.94 | 54859 | 54528.07 | 184.18 |
| | 50 | rnd | 54947 | 54343.53 | 310.46 | 55024 | 54416.37 | 330.3 | 54985 | 54380 | 243.85 | 55100 | 54313.33 | 364.19 |
| | | 2op | 54945 | 54562.1 | 261.15 | 54929 | 54551.13 | 274.47 | 54882 | 54648.07 | 207.17 | 54911 | 54648.23 | 162.68 |
| 51 | 20 | rnd | 54898 | 54288.13 | 425.26 | 54909 | 54378.37 | 351.6 | 54752 | 54290.43 | 372.14 | 54955 | 54322.97 | 270.66 |
| | | 2op | 54921 | 54624.03 | 128.38 | 54921 | 54624.53 | 128.54 | 54881 | 54653.83 | 126.25 | 54940 | 54655 | 156.35 |
| | 50 | rnd | 54903 | 54341.83 | 327.59 | 55078 | 54507.67 | 286.81 | 54960 | 54393.73 | 372.39 | 54951 | 54349.9 | 337.73 |
| | | 2op | 54880 | 54602.37 | 120.97 | 54910 | 54613.2 | 125.51 | 54899 | 54598.53 | 141.68 | 55065 | 54663.43 | 174.89 |

Table A.1332: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54750 | 54213.5 | 266.11 | 55042 | 54361.5 | 406.41 | 54729 | 54358.1 | 271.44 | 54880 | 54300.37 | 341.91 |
| | | 2op | 54753 | 54714.57 | 35.01 | 54747 | 54721 | 26.17 | 54894 | 54704 | 79.86 | 54940 | 54711.6 | 115.45 |
| | 50 | rnd | 54874 | 54324.53 | 368.91 | 54960 | 54266.5 | 418.26 | 54884 | 54329 | 412.07 | 54827 | 54397.83 | 274.96 |
| | | 2op | 54745 | 54714.57 | 26.37 | 54756 | 54745.23 | 5.08 | 54899 | 54714.4 | 61.03 | 54891 | 54727.87 | 87.92 |
| 51 | 20 | rnd | 54685 | 54310.23 | 315.37 | 54803 | 54321.3 | 327.67 | 54815 | 54274.07 | 283.99 | 54895 | 54293.73 | 318.65 |
| | | 2op | 54745 | 54715.43 | 27.8 | 54766 | 54748.37 | 7.16 | 54805 | 54708.73 | 42.4 | 54947 | 54684.57 | 97.04 |
| | 50 | rnd | 54922 | 54451.17 | 252 | 54742 | 54332.77 | 292.18 | 54739 | 54270.33 | 356.22 | 54716 | 54283.9 | 274.34 |
| | | 2op | 54753 | 54732.2 | 21.45 | 54754 | 54750.73 | 4.91 | 54959 | 54727.73 | 52.08 | 54959 | 54733.07 | 84.37 |

Table A.1333: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55112 | 54443.47 | 335.24 | 55014 | 54381.13 | 405.03 | 55084 | 54432.3 | 355.28 | 55018 | 54299.83 | 353.09 |
| | | 2op | 54880 | 54535.67 | 217.99 | 54865 | 54539.8 | 192.19 | 54902 | 54521.13 | 238.63 | 54852 | 54533.43 | 181.47 |
| | 50 | rnd | 54837 | 54331.9 | 369.22 | 54866 | 54304.77 | 334.66 | 54902 | 54405.9 | 333.46 | 54912 | 54335.63 | 378.13 |
| | | 2op | 54883 | 54587.67 | 189.1 | 54883 | 54587.47 | 174.13 | 54984 | 54633.07 | 246.6 | 54849 | 54595.93 | 157.68 |
| 51 | 20 | rnd | 54853 | 54428 | 242.82 | 54773 | 54330.43 | 316.82 | 54927 | 54311.13 | 315.53 | 54801 | 54293 | 354.18 |
| | | 2op | 54915 | 54607.53 | 145.86 | 54915 | 54604.63 | 148.34 | 54922 | 54612.83 | 144.83 | 54894 | 54627.03 | 124.37 |
| | 50 | rnd | 54951 | 54441 | 296.28 | 54931 | 54479.93 | 342.07 | 55046 | 54433.57 | 295.44 | 54924 | 54427.27 | 352.54 |
| | | 2op | 54919 | 54631.77 | 118.72 | 54931 | 54638.87 | 136.26 | 54927 | 54606.13 | 136.32 | 54932 | 54675.13 | 142.79 |

Table A.1334: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54814 | 54322.9 | 320.56 | 54866 | 54364.2 | 293.07 | 54827 | 54341.97 | 352.12 | 54872 | 54356.33 | 359.93 |
| | | 2op | 54938 | 54721.03 | 52.07 | 54959 | 54742.97 | 70.2 | 54897 | 54712.73 | 75.22 | 54932 | 54683.17 | 130.09 |
| | 50 | rnd | 54802 | 54304.4 | 377.65 | 55008 | 54384.9 | 369.44 | 54757 | 54177.23 | 390.15 | 54788 | 54203.73 | 333.19 |
| | | 2op | 54745 | 54719.1 | 21.27 | 54756 | 54744.4 | 8.2 | 54958 | 54743.7 | 79.42 | 54943 | 54712.47 | 107.74 |
| 51 | 20 | rnd | 54832 | 54320.53 | 281.71 | 54783 | 54275.33 | 354.57 | 54615 | 54243.57 | 259.54 | 54853 | 54379.4 | 243.98 |
| | | 2op | 54745 | 54712.03 | 40.81 | 54756 | 54745.67 | 9.14 | 54968 | 54705.63 | 67.3 | 54959 | 54715.43 | 119.05 |
| | 50 | rnd | 54847 | 54372.4 | 334.76 | 54939 | 54387.57 | 329.35 | 54776 | 54307.6 | 328.01 | 54805 | 54323.33 | 325.92 |
| | | 2op | 54745 | 54723.1 | 20.45 | 54762 | 54750.33 | 5.03 | 54959 | 54723.83 | 55.81 | 54958 | 54720.73 | 84.33 |

Table A.1335: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54994 | 54446.3 | 344.19 | 54731 | 54374.83 | 271.92 | 54921 | 54370.57 | 321.8 | 54842 | 54340.5 | 374.99 |
| | | 2op | 54935 | 54687.87 | 98.78 | 54935 | 54681.23 | 108.15 | 54955 | 54653.43 | 150.41 | 54854 | 54643.57 | 176.19 |
| | 50 | rnd | 55135 | 54415.3 | 326.01 | 54882 | 54310.73 | 324.64 | 54866 | 54278.97 | 393.39 | 54899 | 54383.23 | 348.37 |
| | | 2op | 54842 | 54655.13 | 94.57 | 54754 | 54644.1 | 91.28 | 55141 | 54677.73 | 148.12 | 54849 | 54608.13 | 155.09 |
| 51 | 20 | rnd | 54909 | 54377.83 | 386.89 | 54977 | 54336.93 | 342.75 | 55037 | 54452.73 | 333.2 | 54942 | 54183.1 | 423.38 |
| | | 2op | 54754 | 54735.93 | 19.7 | 54754 | 54740.33 | 14.59 | 54916 | 54718.73 | 66.17 | 54963 | 54625.37 | 159.53 |
| | 50 | rnd | 54938 | 54506.83 | 279.2 | 54933 | 54335.03 | 414.61 | 54834 | 54333.97 | 318.79 | 54913 | 54309.4 | 397.13 |
| | | 2op | 54754 | 54742.17 | 13.13 | 54754 | 54741.2 | 16.24 | 54744 | 54666.2 | 61.79 | 54910 | 54666.77 | 178.94 |

Table A.1336: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54884 | 54280.63 | 441.6 | 54869 | 54384.7 | 316.75 | 54939 | 54354.97 | 361.88 | 54834 | 54348.53 | 281.78 |
| | | 2op | 54754 | 54737.13 | 16.53 | 54959 | 54739.67 | 46.22 | 54959 | 54741.37 | 97.44 | 55065 | 54696.37 | 153.56 |
| | 50 | rnd | 54881 | 54403.27 | 235.41 | 54982 | 54432.83 | 358.75 | 54832 | 54270.77 | 300.29 | 54945 | 54355.3 | 334.98 |
| | | 2op | 54754 | 54739.77 | 13.89 | 54754 | 54738.1 | 13.98 | 54967 | 54731.27 | 74.42 | 54844 | 54710.07 | 85.28 |
| 51 | 20 | rnd | 54633 | 54314.83 | 314.02 | 54632 | 54184.93 | 288.41 | 54772 | 54340.73 | 308.73 | 55031 | 54326.07 | 372.7 |
| | | 2op | 54754 | 54742.13 | 10.6 | 54754 | 54742.03 | 10.6 | 54922 | 54725 | 46.16 | 54870 | 54694.83 | 82.35 |
| | 50 | rnd | 54778 | 54368.1 | 279.54 | 54826 | 54280.13 | 428.56 | 54858 | 54321.37 | 487.16 | 54856 | 54220.83 | 395.98 |
| | | 2op | 54754 | 54744.3 | 6.15 | 54754 | 54739.27 | 12.5 | 54959 | 54703.77 | 59.75 | 54944 | 54720.23 | 86.57 |

Table A.1337: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11209.17 | 127.74 | 11478 | 11244.3 | 123.58 | 11372 | 11161.4 | 172.76 | 11478 | 11207.7 | 116.54 |
| | | 2op | 11285 | 11083.57 | 96.37 | 11394 | 11260.87 | 72.41 | 11346 | 11129.67 | 152.64 | 11346 | 11166.07 | 134.97 |
| | 50 | rnd | 11478 | 11218.8 | 183.94 | 11478 | 11254.37 | 95.12 | 11478 | 11246 | 139.26 | 11411 | 11169.57 | 158.97 |
| | | 2op | 11346 | 11115.1 | 114.29 | 11373 | 11276.6 | 71.13 | 11346 | 11177.07 | 105.36 | 11305 | 11141.23 | 146.02 |
| 51 | 20 | rnd | 11478 | 11159.67 | 156.7 | 11478 | 11215.17 | 146.25 | 11478 | 11208.33 | 118.96 | 11478 | 11148.7 | 179 |
| | | 2op | 11346 | 11061.17 | 89.34 | 11305 | 11126.3 | 53.18 | 11373 | 11205.63 | 89.18 | 11285 | 11057.83 | 64.81 |
| | 50 | rnd | 11478 | 11185.37 | 143.02 | 11478 | 11302.8 | 113.92 | 11478 | 11269.13 | 143.1 | 11478 | 11209.17 | 157.25 |
| | | 2op | 11153 | 11079.73 | 45.75 | 11411 | 11201.57 | 94.54 | 11394 | 11277.87 | 60.17 | 11153 | 11064.9 | 60.69 |

Table A.1338: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11340 | 11116.9 | 171.15 | 11478 | 11203.93 | 148.99 | 11478 | 11177.77 | 203.64 | 11478 | 11178.23 | 187.02 |
| | | 2op | 11109 | 11029.33 | 36.42 | 11285 | 11120.73 | 44.65 | 11109 | 11107.47 | 8.4 | 11305 | 11072.17 | 82.58 |
| | 50 | rnd | 11291 | 11111.53 | 142.9 | 11478 | 11182.17 | 168.78 | 11478 | 11188.77 | 181.01 | 11411 | 11179.47 | 161.68 |
| | | 2op | 11109 | 11027.67 | 35.09 | 11285 | 11135.43 | 60.41 | 11285 | 11125.63 | 50.94 | 11109 | 11054.67 | 47.71 |
| 51 | 20 | rnd | 11340 | 11075.03 | 151.01 | 11478 | 11162.67 | 166.24 | 11478 | 11183.63 | 191.15 | 11411 | 11164.93 | 176.98 |
| | | 2op | 11109 | 11020.6 | 27.67 | 11256 | 11110.83 | 32.15 | 11256 | 11123.7 | 44.85 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11053.6 | 195.52 | 11411 | 11180.7 | 157.17 | 11394 | 11151.33 | 159.52 | 11478 | 11201.9 | 165.44 |
| | | 2op | 11109 | 11020.6 | 30.71 | 11109 | 11109 | 0 | 11256 | 11122.17 | 46.14 | 11109 | 11109 | 0 |

Table A.1339: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11217.5 | 173.54 | 11478 | 11289.4 | 125.16 | 11478 | 11205.27 | 147.92 | 11478 | 11175.8 | 158.56 |
| | | 2op | 11346 | 11136.87 | 124.15 | 11394 | 11273.9 | 67.01 | 11346 | 11100.33 | 133.17 | 11332 | 11182.7 | 117.25 |
| | 50 | rnd | 11478 | 11197.6 | 122.5 | 11478 | 11241.8 | 148.21 | 11373 | 11219.43 | 99.22 | 11478 | 11213.37 | 131.19 |
| | | 2op | 11348 | 11135.37 | 111.44 | 11373 | 11249.83 | 82.01 | 11305 | 11182.87 | 103.78 | 11305 | 11151 | 131.18 |
| 51 | 20 | rnd | 11478 | 11172.53 | 138.2 | 11478 | 11165.97 | 156.32 | 11394 | 11214.2 | 104.45 | 11478 | 11162.43 | 172.15 |
| | | 2op | 11109 | 11043.07 | 41.29 | 11305 | 11134.47 | 66.12 | 11373 | 11165.47 | 89.61 | 11285 | 11077 | 61.22 |
| | 50 | rnd | 11478 | 11186.97 | 178.68 | 11478 | 11275 | 146.34 | 11478 | 11286.63 | 135.67 | 11478 | 11238.8 | 167.13 |
| | | 2op | 11305 | 11085 | 75.35 | 11373 | 11217.37 | 97.57 | 11373 | 11272.5 | 66.41 | 11240 | 11060.73 | 68.7 |

Table A.1340: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11126.6 | 152.11 | 11411 | 11196.33 | 144.16 | 11478 | 11195.37 | 178.27 | 11478 | 11154.13 | 175.89 |
| | | 2op | 11109 | 11014.47 | 19.14 | 11285 | 11124.67 | 48.01 | 11305 | 11115.53 | 35.78 | 11151 | 11051 | 52.01 |
| | 50 | rnd | 11303 | 11052.33 | 191.91 | 11478 | 11180.73 | 172 | 11411 | 11140.37 | 172.54 | 11411 | 11211.2 | 117.81 |
| | | 2op | 11109 | 11023.67 | 30.6 | 11305 | 11159.93 | 80.05 | 11256 | 11118.8 | 37.3 | 11137 | 11069.7 | 46.17 |
| 51 | 20 | rnd | 11332 | 11077.93 | 190.75 | 11394 | 11195.37 | 147.18 | 11478 | 11228.87 | 139.55 | 11478 | 11215.83 | 140.69 |
| | | 2op | 11095 | 11021.07 | 25.81 | 11109 | 11109 | 0 | 11305 | 11132.17 | 60.42 | 11109 | 11109 | 0 |
| | 50 | rnd | 11291 | 11191.73 | 101.97 | 11478 | 11144.73 | 169.41 | 11478 | 11181.5 | 139.92 | 11478 | 11238.63 | 151.76 |
| | | 2op | 11095 | 11013.53 | 16.89 | 11109 | 11105.93 | 16.8 | 11256 | 11128.6 | 50.82 | 11109 | 11109 | 0 |

Table A.1341: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11207.13 | 136.89 | 11478 | 11260.37 | 135.45 | 11478 | 11187.1 | 176.02 | 11394 | 11182.2 | 159.84 |
| | | 2op | 11109 | 11086 | 39.61 | 11394 | 11275.23 | 74.15 | 11305 | 11080.8 | 119.19 | 11305 | 11160.8 | 113.71 |
| | 50 | rnd | 11478 | 11166.7 | 154.82 | 11478 | 11267.17 | 117.2 | 11478 | 11202.57 | 132.96 | 11478 | 11169.17 | 167.18 |
| | | 2op | 11256 | 11083.23 | 54.56 | 11394 | 11232.37 | 94.15 | 11305 | 11095.23 | 97.44 | 11305 | 11139.53 | 137.62 |
| 51 | 20 | rnd | 11478 | 11178.37 | 154.6 | 11478 | 11269.33 | 145.05 | 11478 | 11239.53 | 125.21 | 11478 | 11207.2 | 151.73 |
| | | 2op | 11109 | 11078.33 | 44.11 | 11305 | 11153.1 | 81.74 | 11151 | 11083 | 49.76 | 11346 | 11123.73 | 108.12 |
| | 50 | rnd | 11411 | 11214.07 | 120.53 | 11478 | 11241 | 148.49 | 11478 | 11179.83 | 153.47 | 11413 | 11163.6 | 162.93 |
| | | 2op | 11213 | 11094.07 | 43.51 | 11305 | 11140.03 | 71.05 | 11305 | 11050.67 | 62.77 | 11346 | 11108.47 | 120.62 |

Table A.1342: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11096.7 | 193.59 | 11394 | 11116.53 | 188.36 | 11413 | 11177.87 | 168.11 | 11394 | 11133.73 | 171.11 |
| | | 2op | 11109 | 11043.2 | 40.87 | 11109 | 11097.93 | 27.86 | 11151 | 11035.97 | 46.25 | 11478 | 11125.8 | 151.02 |
| | 50 | rnd | 11332 | 11154.37 | 132.5 | 11478 | 11190.93 | 178.07 | 11478 | 11183.1 | 133.63 | 11394 | 11146.7 | 157.54 |
| | | 2op | 11109 | 11052.87 | 44.8 | 11109 | 11107.47 | 8.4 | 11305 | 11079.47 | 63.43 | 11305 | 11073.63 | 112.67 |
| 51 | 20 | rnd | 11332 | 11090.2 | 177.56 | 11478 | 11148.63 | 163.61 | 11478 | 11164.13 | 203.87 | 11411 | 11112.6 | 194.91 |
| | | 2op | 11109 | 11061.13 | 45.11 | 11109 | 11101.93 | 23.36 | 11151 | 11092.73 | 35.78 | 11346 | 11017.27 | 69 |
| | 50 | rnd | 11332 | 11137.43 | 156.88 | 11394 | 11189.87 | 184.02 | 11478 | 11199.8 | 137.2 | 11478 | 11158.07 | 164.89 |
| | | 2op | 11109 | 11055.93 | 45.41 | 11109 | 11083.53 | 40.96 | 11109 | 11102.87 | 23.34 | 11305 | 11032.2 | 60.37 |

Table A.1343: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14119 | 13827.37 | 154.68 | 14161 | 13929.93 | 111.58 | 14006 | 13824.63 | 131.07 | 14133 | 13847.53 | 163 |
| | | 2op | 14038 | 13885.93 | 107.44 | 14133 | 13996.3 | 50.11 | 14038 | 13840.47 | 168.33 | 14038 | 13839.27 | 176.56 |
| | 50 | rnd | 14157 | 13818.33 | 202.6 | 14133 | 13899.6 | 124.22 | 14157 | 13857.5 | 169.49 | 14133 | 13767.93 | 206.85 |
| | | 2op | 14133 | 13905.6 | 113.31 | 14157 | 14020.93 | 66.2 | 14133 | 13907.13 | 120.89 | 14018 | 13822.7 | 152.7 |
| 51 | 20 | rnd | 14119 | 13817.5 | 195.03 | 14137 | 13850.93 | 140.58 | 14139 | 13872.37 | 120 | 14076 | 13818.57 | 191.96 |
| | | 2op | 14038 | 13863.83 | 83.11 | 14124 | 13991.17 | 42.08 | 14038 | 13986.8 | 29.96 | 14038 | 13915.13 | 100.55 |
| | 50 | rnd | 14071 | 13800 | 196.69 | 14161 | 13917.47 | 158.44 | 14139 | 13915.67 | 134.12 | 14161 | 13797.3 | 154.33 |
| | | 2op | 13995 | 13898.83 | 83.39 | 14157 | 14019.17 | 51.98 | 14157 | 14005.9 | 44.41 | 14038 | 13844.23 | 121.96 |

Table A.1344: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14039 | 13770.97 | 171.96 | 14157 | 13856 | 179.11 | 14133 | 13801.7 | 185.76 | 14157 | 13780.1 | 195.92 |
| | | 2op | 13938 | 13770.63 | 61.03 | 13995 | 13964.97 | 30.34 | 13995 | 13957.7 | 44.89 | 14038 | 13860.13 | 132.4 |
| | 50 | rnd | 14091 | 13820.43 | 172.24 | 14099 | 13863.6 | 144.68 | 14139 | 13868.47 | 122.34 | 14079 | 13827.23 | 186.88 |
| | | 2op | 13938 | 13791.8 | 64.6 | 13995 | 13972.43 | 20.43 | 13995 | 13967.97 | 22.4 | 14038 | 13796.57 | 103.7 |
| 51 | 20 | rnd | 14100 | 13812.9 | 133.98 | 14089 | 13746.33 | 206.78 | 14161 | 13851.57 | 183.56 | 14137 | 13831.73 | 164.8 |
| | | 2op | 13938 | 13803.1 | 78.63 | 14062 | 13975.37 | 23.84 | 13995 | 13967.63 | 18.67 | 13995 | 13861.7 | 91.71 |
| | 50 | rnd | 14060 | 13835.6 | 162.09 | 14121 | 13825.73 | 158.63 | 14133 | 13883.7 | 166.14 | 14121 | 13799.5 | 160.83 |
| | | 2op | 13827 | 13752.8 | 49.41 | 13995 | 13956.83 | 24.05 | 14157 | 13986.77 | 50.62 | 13995 | 13869.77 | 84.33 |

Table A.1345: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13809.7 | 180.54 | 14139 | 13923.5 | 143.53 | 14139 | 13825.83 | 181.57 | 14105 | 13745.6 | 187.53 |
| | | 2op | 14038 | 13894.8 | 105.27 | 14157 | 13991.43 | 82.72 | 13995 | 13827.3 | 128.52 | 14119 | 13874.2 | 124.57 |
| | 50 | rnd | 14128 | 13845.6 | 129.23 | 14157 | 13936.5 | 169.67 | 14100 | 13844.7 | 186.52 | 14137 | 13836.5 | 201.54 |
| | | 2op | 14038 | 13941.33 | 78.52 | 14157 | 14015.7 | 59.12 | 14119 | 13863.7 | 131.29 | 14124 | 13836.43 | 173.54 |
| 51 | 20 | rnd | 14064 | 13840.43 | 144.36 | 14107 | 13858.53 | 123.01 | 14157 | 13880.77 | 155.82 | 14139 | 13877.27 | 183.92 |
| | | 2op | 14038 | 13864.87 | 92.48 | 14133 | 13987.83 | 40.95 | 14133 | 13997.73 | 36.19 | 14038 | 13866.2 | 123.22 |
| | 50 | rnd | 14139 | 13855.3 | 181.78 | 14161 | 13936.37 | 163.69 | 14161 | 13958.47 | 139.53 | 14137 | 13768.83 | 186.91 |
| | | 2op | 14038 | 13898.97 | 103.43 | 14133 | 13992.47 | 40.96 | 14064 | 13996.2 | 31.83 | 14038 | 13855.03 | 123.14 |

Table A.1346: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14089 | 13835.97 | 159.75 | 14161 | 13856.7 | 172.94 | 14133 | 13836.93 | 155.29 | 14094 | 13796.4 | 135.01 |
| | | 2op | 13938 | 13774.33 | 67.58 | 14064 | 13965.13 | 34.14 | 13995 | 13945.43 | 53.55 | 14001 | 13841.3 | 113.28 |
| | 50 | rnd | 14133 | 13803.7 | 180.42 | 14161 | 13829.57 | 171.11 | 14139 | 13817.83 | 194.22 | 14066 | 13800.07 | 148.12 |
| | | 2op | 13938 | 13780.67 | 66.37 | 13995 | 13970.13 | 25.75 | 13995 | 13955.23 | 31.19 | 13995 | 13806.37 | 103.13 |
| 51 | 20 | rnd | 14064 | 13799.87 | 188 | 14161 | 13820.43 | 182.58 | 14079 | 13825.87 | 158.06 | 14121 | 13791.23 | 195.85 |
| | | 2op | 13932 | 13778.57 | 58.93 | 14157 | 13976.33 | 40.04 | 13995 | 13962.43 | 29.29 | 13995 | 13846.43 | 82.53 |
| | 50 | rnd | 14067 | 13826.77 | 150.24 | 14094 | 13777.37 | 177.08 | 14161 | 13855.43 | 197.82 | 14103 | 13858.4 | 167.89 |
| | | 2op | 13827 | 13774 | 53.91 | 14064 | 13956.93 | 51.13 | 14005 | 13961.7 | 28.47 | 13995 | 13865.1 | 86.35 |

Table A.1347: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14139 | 13827.17 | 179.85 | 14139 | 13946.47 | 94.87 | 14127 | 13779.83 | 167.36 | 14139 | 13842.1 | 171.19 |
| | | 2op | 14038 | 13924.83 | 74.7 | 14064 | 14010.37 | 32.61 | 14038 | 13812.67 | 141.08 | 14038 | 13801.43 | 138.38 |
| | 50 | rnd | 14161 | 13823.47 | 193.1 | 14139 | 13908.83 | 141.21 | 14038 | 13770.4 | 146.87 | 14064 | 13800.23 | 157.74 |
| | | 2op | 14038 | 13971.53 | 74.41 | 14064 | 13991.87 | 23.19 | 14038 | 13902.53 | 109.45 | 14004 | 13837.27 | 129.69 |
| 51 | 20 | rnd | 14103 | 13862.2 | 140.16 | 14161 | 13882.03 | 122.8 | 14139 | 13855.63 | 161.24 | 14127 | 13814.5 | 177.43 |
| | | 2op | 14038 | 13913.83 | 99.82 | 14064 | 13980.27 | 26.38 | 14038 | 13890 | 111.63 | 13995 | 13817.93 | 127.4 |
| | 50 | rnd | 14038 | 13841.17 | 113.27 | 14133 | 13899.67 | 134.99 | 14161 | 13870.2 | 161.6 | 14161 | 13814.87 | 157.21 |
| | | 2op | 14038 | 13971.27 | 42.96 | 14018 | 13976.5 | 32.57 | 14038 | 13884.37 | 108.3 | 13963 | 13755.9 | 116.82 |

Table A.1348: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14078 | 13839.8 | 165.27 | 14068 | 13824.67 | 184.18 | 14105 | 13844.5 | 160.53 | 14099 | 13778.4 | 189.13 |
| | | 2op | 13938 | 13825.5 | 66.14 | 14038 | 13924.33 | 72.21 | 14001 | 13785.77 | 112.4 | 13995 | 13755.97 | 130.56 |
| | 50 | rnd | 14100 | 13880.73 | 182.42 | 14125 | 13840.87 | 201.65 | 14127 | 13776.27 | 188.36 | 14123 | 13835.73 | 146.61 |
| | | 2op | 13932 | 13819.9 | 38.61 | 14038 | 13960.9 | 37.19 | 14001 | 13853 | 116.75 | 13954 | 13736.9 | 92.59 |
| 51 | 20 | rnd | 14103 | 13835.17 | 178.69 | 13998 | 13811.93 | 135.66 | 14097 | 13817.07 | 183.84 | 14071 | 13867.87 | 145.04 |
| | | 2op | 13938 | 13830.8 | 52.51 | 13995 | 13893.5 | 57.93 | 14038 | 13876.1 | 106.35 | 13995 | 13781.77 | 102.73 |
| | 50 | rnd | 14133 | 13876.43 | 135.81 | 14038 | 13802 | 125.09 | 14139 | 13882.8 | 140.03 | 14133 | 13768.97 | 160.52 |
| | | 2op | 13968 | 13842.6 | 40.79 | 14038 | 13900.6 | 66.24 | 14038 | 13919.97 | 82.81 | 13995 | 13724.93 | 78 |

Table A.1349: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18093 | 17859.67 | 166.99 | 18101 | 17936.8 | 143.85 | 18301 | 17895.07 | 211.04 | 18261 | 17880.73 | 193.21 |
| | | 2op | 18074 | 17976.67 | 97.01 | 18042 | 17990.07 | 34.52 | 18119 | 17904.7 | 127.63 | 18136 | 17940.77 | 112.8 |
| | 50 | rnd | 18175 | 17837.77 | 201.91 | 18181 | 17961.2 | 175.24 | 18172 | 17871.83 | 218.22 | 18301 | 17895.5 | 196.63 |
| | | 2op | 18017 | 17995.47 | 25.65 | 18142 | 18014.1 | 30.6 | 18142 | 17955.07 | 103.75 | 18142 | 17912.1 | 140.19 |
| 51 | 20 | rnd | 18184 | 17865.43 | 173.41 | 18171 | 17929.03 | 140.77 | 18131 | 17873.73 | 202.05 | 18176 | 17881.67 | 208.26 |
| | | 2op | 18017 | 18002.37 | 22.07 | 18017 | 18017 | 0 | 18090 | 17999.87 | 27.13 | 18017 | 17989.97 | 34.06 |
| | 50 | rnd | 18114 | 17810.53 | 188.22 | 18125 | 17896.73 | 180.08 | 18156 | 17915.17 | 145.38 | 18172 | 17865.93 | 184.48 |
| | | 2op | 18017 | 18003.73 | 21.18 | 18017 | 18017 | 0 | 18017 | 18009.67 | 12.74 | 18017 | 17970.43 | 48.35 |

Table A.1350: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18074 | 17842.47 | 140.26 | 18152 | 17783.27 | 208.26 | 18172 | 17828.63 | 219.55 | 18172 | 17775.6 | 173.04 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18015.47 | 5.84 | 18074 | 18005.23 | 19.61 |
| | 50 | rnd | 18156 | 17844.9 | 124.42 | 18172 | 17929.33 | 181.74 | 18156 | 17801.73 | 232.58 | 18184 | 17841.37 | 175.94 |
| | | 2op | 18017 | 18006.27 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17999.57 | 20.18 |
| 51 | 20 | rnd | 18184 | 17837.37 | 193.04 | 18129 | 17780.33 | 172.57 | 18129 | 17832.93 | 178.13 | 18171 | 17860.8 | 179.6 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18010.67 | 12.7 |
| | 50 | rnd | 18184 | 17900.13 | 193.83 | 18091 | 17823.47 | 184.19 | 18175 | 17871.37 | 188.06 | 18172 | 17882.83 | 167.63 |
| | | 2op | 18017 | 18004.73 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18005.3 | 13.74 |

Table A.1351: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18176 | 17840.53 | 208.39 | 18171 | 17858.57 | 169.86 | 18159 | 17883.8 | 179.23 | 18171 | 17863.13 | 185.53 |
| | | 2op | 18142 | 17984.33 | 91.36 | 18017 | 17970.57 | 44.99 | 18142 | 17960.5 | 85.45 | 18119 | 17890 | 117.4 |
| | 50 | rnd | 18109 | 17884.63 | 146.16 | 18301 | 17923.93 | 166.27 | 18172 | 17869.2 | 167.75 | 18172 | 17908.8 | 188.91 |
| | | 2op | 18142 | 17993.37 | 62.11 | 18064 | 18007.17 | 27.88 | 18119 | 17961.07 | 86.39 | 18176 | 17927.97 | 151.63 |
| 51 | 20 | rnd | 18235 | 17849.8 | 182.91 | 18131 | 17925.17 | 154.87 | 18275 | 17932.57 | 174.04 | 18084 | 17793.9 | 178.44 |
| | | 2op | 18142 | 18009.1 | 31.55 | 18017 | 18017 | 0 | 18142 | 18003.37 | 32.64 | 18017 | 17984.7 | 43.71 |
| | 50 | rnd | 18301 | 17929.2 | 160.94 | 18171 | 17918.9 | 149.08 | 18184 | 17915.37 | 154.93 | 18134 | 17899.43 | 121.66 |
| | | 2op | 18017 | 17992.47 | 50.85 | 18017 | 18017 | 0 | 18017 | 18011.77 | 13.84 | 18017 | 17940.97 | 82.27 |

Table A.1352: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17851.53 | 189.79 | 18171 | 17868.83 | 184.71 | 18292 | 17809.7 | 187.23 | 18184 | 17817.83 | 235.51 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18017 | 0 | 18017 | 18013.17 | 8.72 | 18090 | 17996.17 | 36.14 |
| | 50 | rnd | 18172 | 17811.67 | 194.1 | 18156 | 17898.9 | 159.69 | 18172 | 17851.6 | 181.36 | 18142 | 17868.37 | 176.77 |
| | | 2op | 18017 | 18003.97 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18004.2 | 12.34 |
| 51 | 20 | rnd | 18175 | 17848.87 | 146.01 | 18086 | 17850.63 | 157.35 | 18301 | 17874.5 | 231.84 | 18109 | 17830.6 | 177.33 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18003.57 | 16.69 |
| | 50 | rnd | 18142 | 17843.4 | 165.66 | 18142 | 17796.1 | 215.55 | 18156 | 17873.87 | 196.26 | 18301 | 17832.43 | 224.63 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.83 | 10.9 |

Table A.1353: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17852.13 | 239.69 | 18175 | 17963.2 | 145.42 | 18152 | 17877.5 | 144.8 | 18301 | 17900.93 | 151.42 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18074 | 17981.83 | 62.76 | 18142 | 17971.3 | 118.3 |
| | 50 | rnd | 18084 | 17851.57 | 139.95 | 18186 | 17971.27 | 131.5 | 18156 | 17869.5 | 181.29 | 18152 | 17889.67 | 166.8 |
| | | 2op | 18017 | 18015.83 | 6.39 | 18017 | 18014.7 | 7.02 | 18025 | 17963.37 | 69.17 | 18142 | 17954.87 | 110.06 |
| 51 | 20 | rnd | 18181 | 17862.47 | 216.93 | 18159 | 17899.5 | 155.8 | 18053 | 17838.83 | 193.69 | 18260 | 17856.6 | 205.15 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18010.87 | 10.34 | 18119 | 17991.23 | 42.34 |
| | 50 | rnd | 18176 | 17984.53 | 145.49 | 18143 | 17890.3 | 171.8 | 18142 | 17938.8 | 129.6 | 18216 | 17903.23 | 126.59 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17992.63 | 38.95 | 18074 | 17954.17 | 71.06 |

Table A.1354: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18156 | 17832.27 | 196.72 | 18105 | 17868.13 | 176.45 | 18301 | 17821.3 | 246.72 | 18275 | 17901.4 | 192.21 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18006.93 | 12.42 | 18119 | 17993 | 53.25 |
| | 50 | rnd | 18109 | 17880 | 126.64 | 18172 | 17872.23 | 159.89 | 18171 | 17885.03 | 207.79 | 18044 | 17777.53 | 187.56 |
| | | 2op | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 18005.5 | 11.7 | 18017 | 17990.27 | 33.84 |
| 51 | 20 | rnd | 18175 | 17892.53 | 190.12 | 18158 | 17876 | 194.91 | 18141 | 17886.13 | 171.23 | 18119 | 17831.87 | 156.64 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18012.4 | 9.36 | 18017 | 18002.97 | 23.19 |
| | 50 | rnd | 18142 | 17826.27 | 193.62 | 18142 | 17849.27 | 171.02 | 18184 | 17835.2 | 224.97 | 18172 | 17873.53 | 181.16 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18015.47 | 5.84 | 18017 | 17993.97 | 26.17 |

Table A.1355: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21178 | 20839.17 | 201.65 | 21167 | 20876.37 | 178.07 | 21153 | 20863.37 | 246.93 | 21150 | 20869.97 | 195.18 |
| | | 2op | 21154 | 20839.6 | 124.01 | 21193 | 20902.5 | 129.89 | 21153 | 20873.2 | 137.93 | 21192 | 20963.4 | 106.83 |
| | 50 | rnd | 21162 | 20812.47 | 237.93 | 21176 | 20933.93 | 141.9 | 21184 | 20846.13 | 214.07 | 21196 | 20867.57 | 230.28 |
| | | 2op | 21101 | 20844.4 | 132.52 | 21190 | 21015.97 | 92.24 | 21185 | 20903.9 | 136.78 | 21153 | 20881.57 | 157.19 |
| 51 | 20 | rnd | 21172 | 20826.4 | 213.93 | 21158 | 20891.5 | 190.26 | 21182 | 20939.97 | 155.72 | 21192 | 20810.37 | 249.79 |
| | | 2op | 21015 | 20849.97 | 64.22 | 21057 | 20902.5 | 83.16 | 21015 | 20852.7 | 61.74 | 21074 | 20893.7 | 92.99 |
| | 50 | rnd | 21206 | 20809.13 | 280.19 | 21186 | 20909.57 | 196.91 | 21206 | 20910.77 | 150.09 | 21172 | 20870.3 | 216.24 |
| | | 2op | 21025 | 20845 | 47.59 | 21063 | 20946.97 | 84.98 | 21166 | 20861.3 | 88.39 | 21156 | 20907.6 | 118.52 |

Table A.1356: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21199 | 20863.17 | 197.87 | 21157 | 20791.73 | 247.76 | 21104 | 20797.03 | 192.01 | 21212 | 20883.13 | 190.11 |
| | | 2op | 20829 | 20829 | 0 | 20997 | 20834.6 | 30.67 | 20987 | 20845.6 | 48.02 | 21174 | 20904.6 | 97.3 |
| | 50 | rnd | 21212 | 20859.33 | 199.94 | 21203 | 20815.07 | 213.97 | 21177 | 20813.33 | 259.85 | 21206 | 20831 | 221.23 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20835 | 20829 | 1.2 | 20987 | 20850.8 | 56.81 |
| 51 | 20 | rnd | 21152 | 20870.53 | 181.34 | 21163 | 20917.53 | 193.55 | 21163 | 20802.7 | 262.34 | 21181 | 20882.37 | 178.41 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20987 | 20859.53 | 65.18 |
| | 50 | rnd | 21199 | 20890.8 | 195.48 | 21182 | 20747.3 | 259.05 | 21141 | 20821.43 | 182.92 | 21212 | 20865.4 | 207.35 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 1.1 | 20829 | 20828.8 | 1.1 | 20987 | 20845.1 | 48.09 |

Table A.1357: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20831.87 | 233.29 | 21135 | 20907.77 | 168.9 | 21166 | 20807.47 | 217.94 | 21233 | 20848.9 | 212.81 |
| | | 2op | 21154 | 20870.9 | 112.89 | 21207 | 20870.8 | 104.06 | 21119 | 20882.7 | 129.72 | 21162 | 20905.47 | 184.72 |
| | 50 | rnd | 21233 | 20871.33 | 227.66 | 21206 | 20981.33 | 142.41 | 21113 | 20725.43 | 230.55 | 21157 | 20846 | 178.94 |
| | | 2op | 21077 | 20887.97 | 103.86 | 21116 | 20975.17 | 76.39 | 21139 | 20867.7 | 141.68 | 21173 | 20916 | 204.3 |
| 51 | 20 | rnd | 21157 | 20822.73 | 232.04 | 21160 | 20883.4 | 203.24 | 21197 | 20813.57 | 259.64 | 21212 | 20854.97 | 187.9 |
| | | 2op | 21052 | 20856.2 | 67.4 | 21193 | 20913.2 | 94.1 | 21052 | 20848.67 | 61.13 | 21148 | 20886.63 | 92.62 |
| | 50 | rnd | 21122 | 20860 | 212.71 | 21176 | 20946.97 | 175.15 | 21161 | 20952.57 | 119.87 | 21168 | 20847.63 | 169.31 |
| | | 2op | 21123 | 20856.63 | 95.2 | 21094 | 20970.97 | 84.43 | 21042 | 20884.3 | 82.91 | 21166 | 20891.83 | 108.51 |

Table A.1358: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21159 | 20799.33 | 185.26 | 21212 | 20815.6 | 208.4 | 21212 | 20857.57 | 256.52 | 21132 | 20857.67 | 213.98 |
| | | 2op | 20829 | 20828.77 | 1.1 | 20829 | 20829 | 0 | 20987 | 20849.9 | 54.54 | 21037 | 20884.3 | 73.2 |
| | 50 | rnd | 21198 | 20886.33 | 180.87 | 21149 | 20860.67 | 204.53 | 21184 | 20778.57 | 214.77 | 21162 | 20832.6 | 183.47 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20987 | 20834.33 | 28.86 | 20987 | 20879.93 | 70.58 |
| 51 | 20 | rnd | 21152 | 20896.9 | 152.23 | 21186 | 20843.73 | 200.29 | 21172 | 20737.6 | 239.79 | 21160 | 20873.87 | 170.82 |
| | | 2op | 20867 | 20830.27 | 6.94 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20987 | 20854.3 | 54.09 |
| | 50 | rnd | 21182 | 20870 | 209.59 | 21161 | 20784.97 | 219.06 | 21151 | 20867.3 | 175.2 | 21195 | 20882.77 | 215.54 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 1.1 | 20829 | 20828.8 | 1.1 | 20987 | 20845.2 | 48.02 |

Table A.1359: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21215 | 20858.97 | 210.35 | 21260 | 20946.47 | 147.93 | 21169 | 20869.83 | 205.33 | 21246 | 20852.7 | 204.59 |
| | | 2op | 21018 | 20839.23 | 38.41 | 21193 | 20900.8 | 102.06 | 21159 | 20897.4 | 99.88 | 21206 | 20931.47 | 138.35 |
| | 50 | rnd | 21271 | 20862.33 | 160.94 | 21164 | 20967.33 | 138.63 | 21190 | 20808.07 | 181.92 | 21160 | 20817.83 | 187.75 |
| | | 2op | 21019 | 20857.93 | 59.09 | 21193 | 20912.97 | 113.89 | 21210 | 20917.47 | 119.2 | 21207 | 20899.67 | 158.16 |
| 51 | 20 | rnd | 21157 | 20848.57 | 201.83 | 21164 | 20887.2 | 187.65 | 21132 | 20885.77 | 214.88 | 21224 | 20819 | 223.81 |
| | | 2op | 20889 | 20831 | 10.95 | 21047 | 20888.37 | 73.29 | 20987 | 20839.33 | 43.14 | 21218 | 20893.33 | 91.88 |
| | 50 | rnd | 21145 | 20848.07 | 187.4 | 21166 | 20860.1 | 186.52 | 21211 | 20873.1 | 230.4 | 21178 | 20849.07 | 189.47 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21193 | 20980.57 | 125.61 | 21009 | 20858.63 | 69.44 | 21159 | 20908.33 | 95.85 |

Table A.1360: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21207 | 20899.17 | 200.27 | 21165 | 20797.23 | 244.8 | 21160 | 20790.6 | 228.93 | 21130 | 20761.17 | 192.23 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.97 | 0.18 | 20987 | 20846.2 | 48.13 | 21152 | 20902.43 | 104.28 |
| | 50 | rnd | 21218 | 20830.13 | 265.92 | 21156 | 20799.3 | 208.06 | 21160 | 20802.07 | 212.69 | 21087 | 20795.5 | 177.88 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20987 | 20845.43 | 48.06 | 20987 | 20870.9 | 66.19 |
| 51 | 20 | rnd | 21203 | 20836.03 | 221.55 | 21159 | 20841.6 | 224.83 | 21271 | 20873.13 | 233.25 | 21114 | 20830.47 | 199.72 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20987 | 20839.83 | 40.05 | 20987 | 20864.37 | 62.77 |
| | 50 | rnd | 21203 | 20840.67 | 176.38 | 21182 | 20890.33 | 209.7 | 21075 | 20772.83 | 207.53 | 21186 | 20839.33 | 215.68 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20986 | 20834.97 | 28.64 | 20987 | 20848.6 | 48.82 |

Table A.1361: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.2 | 2.95 | 596 | 593.47 | 1.87 | 596 | 592.7 | 2.2 | 596 | 590.03 | 2.82 |
| | | 2op | 596 | 592.47 | 2.54 | 596 | 593.9 | 1.56 | 596 | 593.4 | 2.04 | 595 | 590.83 | 2.44 |
| | 50 | rnd | 596 | 592.1 | 2.95 | 596 | 594.27 | 1.36 | 596 | 594.6 | 1.1 | 595 | 589.7 | 3.65 |
| | | 2op | 595 | 593.07 | 1.8 | 596 | 594.2 | 1.27 | 596 | 594.1 | 1.6 | 595 | 590.63 | 2.58 |
| 51 | 20 | rnd | 595 | 591.03 | 2.41 | 596 | 593.47 | 1.66 | 596 | 594.13 | 1.46 | 596 | 592.83 | 2.18 |
| | | 2op | 595 | 593.57 | 1.48 | 596 | 594.53 | 1.07 | 596 | 595.03 | 0.61 | 596 | 594.63 | 0.72 |
| | 50 | rnd | 596 | 592.4 | 2.31 | 596 | 594.43 | 1.19 | 596 | 594.5 | 1.11 | 596 | 593.77 | 1.81 |
| | | 2op | 595 | 592.87 | 2.37 | 596 | 594.83 | 1.02 | 596 | 595.23 | 0.63 | 596 | 594.27 | 0.94 |

Table A.1362: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 589.7 | 4.21 | 595 | 591.6 | 3.21 | 596 | 592.33 | 2.6 | 596 | 590.77 | 3.06 |
| | | 2op | 594 | 590.7 | 2.32 | 595 | 594.67 | 0.96 | 595 | 593.97 | 1.07 | 594 | 592.7 | 2.52 |
| | 50 | rnd | 596 | 590.73 | 3.93 | 596 | 591.23 | 2.42 | 596 | 592.83 | 2.31 | 595 | 591.47 | 2.86 |
| | | 2op | 594 | 590.83 | 2.25 | 595 | 594.9 | 0.31 | 595 | 594.87 | 0.35 | 595 | 593.93 | 0.69 |
| 51 | 20 | rnd | 596 | 590.57 | 4.51 | 596 | 590.23 | 4.92 | 596 | 591.23 | 3.14 | 595 | 590.87 | 2.8 |
| | | 2op | 594 | 591.03 | 2.3 | 595 | 594.27 | 0.94 | 595 | 594.67 | 0.55 | 595 | 594.13 | 0.51 |
| | 50 | rnd | 596 | 591.4 | 3.15 | 596 | 589.27 | 5.32 | 596 | 590.9 | 5.02 | 596 | 591.57 | 2.42 |
| | | 2op | 594 | 591.23 | 2.31 | 595 | 594.4 | 0.5 | 595 | 594.9 | 0.31 | 595 | 594.1 | 0.48 |

Table A.1363: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 590.9 | 3.36 | 596 | 593.67 | 1.77 | 596 | 592.73 | 2.03 | 595 | 590.6 | 2.84 |
| | | 2op | 596 | 591.73 | 2.83 | 596 | 593.73 | 1.82 | 596 | 593.1 | 1.77 | 596 | 590.87 | 3.1 |
| | 50 | rnd | 595 | 591.03 | 2.83 | 596 | 593.9 | 1.73 | 596 | 593.9 | 1.42 | 595 | 591 | 3.01 |
| | | 2op | 596 | 592.6 | 2.09 | 596 | 594.33 | 1.42 | 596 | 593.97 | 1.67 | 595 | 590.93 | 2.95 |
| 51 | 20 | rnd | 595 | 590.5 | 3.31 | 596 | 593.27 | 1.84 | 596 | 594.4 | 1.67 | 595 | 592.73 | 1.72 |
| | | 2op | 595 | 593.23 | 1.48 | 596 | 594.63 | 0.67 | 596 | 594.83 | 0.87 | 596 | 594.77 | 0.94 |
| | 50 | rnd | 596 | 591.63 | 2.7 | 596 | 594.67 | 0.96 | 596 | 594.5 | 1.25 | 596 | 593.2 | 1.97 |
| | | 2op | 596 | 593.3 | 2.28 | 596 | 594.9 | 0.84 | 596 | 595.07 | 0.87 | 596 | 593.3 | 1.76 |

Table A.1364: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 590.2 | 5.09 | 596 | 591.37 | 3.93 | 595 | 591.37 | 2.57 | 596 | 590.87 | 3.28 |
| | | 2op | 594 | 591.4 | 2.16 | 595 | 594.43 | 1.19 | 595 | 594 | 0.74 | 595 | 591.97 | 2.36 |
| | 50 | rnd | 596 | 590.7 | 3.42 | 596 | 591.23 | 3.41 | 595 | 591.13 | 3.26 | 596 | 590.6 | 3.01 |
| | | 2op | 594 | 591.4 | 2.42 | 596 | 594.87 | 0.43 | 595 | 594.73 | 0.45 | 595 | 593.8 | 0.96 |
| 51 | 20 | rnd | 595 | 589.3 | 5.94 | 596 | 589.87 | 5.32 | 596 | 592.53 | 2.7 | 595 | 591.8 | 2.47 |
| | | 2op | 594 | 591.07 | 2.29 | 595 | 594.53 | 0.51 | 595 | 594.67 | 0.48 | 595 | 594.03 | 0.32 |
| | 50 | rnd | 596 | 590.33 | 5.09 | 596 | 590.5 | 3.17 | 596 | 590.93 | 2.89 | 595 | 590.9 | 3.2 |
| | | 2op | 594 | 591.13 | 2.27 | 595 | 594.3 | 0.47 | 595 | 594.9 | 0.31 | 595 | 594.17 | 0.46 |

Table A.1365: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.37 | 2.61 | 596 | 593.97 | 1.33 | 595 | 591.23 | 2.86 | 595 | 589.03 | 3.42 |
| | | 2op | 596 | 594.33 | 0.71 | 596 | 595.03 | 0.61 | 595 | 590.87 | 2.71 | 595 | 588.7 | 3.53 |
| | 50 | rnd | 595 | 591.77 | 2.01 | 595 | 593.2 | 1.75 | 595 | 590.57 | 2.93 | 595 | 588.7 | 3.65 |
| | | 2op | 596 | 593.93 | 1.41 | 596 | 594.8 | 0.66 | 596 | 591.73 | 2.05 | 596 | 589.87 | 3.72 |
| 51 | 20 | rnd | 596 | 592.6 | 1.98 | 596 | 594.17 | 1.23 | 596 | 592.37 | 2.04 | 596 | 591.77 | 2.11 |
| | | 2op | 595 | 594.13 | 0.35 | 596 | 595.03 | 0.41 | 595 | 594.2 | 0.61 | 595 | 591.3 | 2.68 |
| | 50 | rnd | 596 | 592.77 | 1.7 | 596 | 593.77 | 1.55 | 596 | 592.07 | 2.32 | 595 | 589.17 | 3.65 |
| | | 2op | 596 | 594.67 | 0.55 | 596 | 595 | 0.37 | 595 | 593.13 | 1.74 | 595 | 590.03 | 2.92 |

Table A.1366: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.37 | 3.49 | 596 | 591.07 | 2.65 | 596 | 590.57 | 3.66 | 595 | 589.97 | 4.09 |
| | | 2op | 594 | 592.93 | 1.8 | 595 | 593.8 | 0.76 | 595 | 591.17 | 2.41 | 595 | 589.37 | 3.52 |
| | 50 | rnd | 595 | 591.57 | 2.36 | 595 | 590.57 | 3.09 | 595 | 590.57 | 2.98 | 595 | 589.27 | 3.78 |
| | | 2op | 594 | 593.1 | 1.6 | 595 | 594.07 | 0.25 | 595 | 593 | 1.58 | 594 | 588.47 | 3.25 |
| 51 | 20 | rnd | 596 | 589.67 | 3.79 | 595 | 589.77 | 3.23 | 596 | 591.07 | 2.68 | 595 | 589.77 | 2.74 |
| | | 2op | 595 | 593.53 | 1.2 | 594 | 594 | 0 | 595 | 593.97 | 0.41 | 595 | 589.9 | 2.23 |
| | 50 | rnd | 596 | 589.83 | 5.07 | 596 | 590.97 | 3.15 | 596 | 591.3 | 2.9 | 595 | 588.7 | 3.88 |
| | | 2op | 594 | 593.37 | 1.38 | 594 | 594 | 0 | 595 | 594.07 | 0.25 | 595 | 589.7 | 2.37 |

Table A.1367: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 770.53 | 5.83 | 777 | 774.13 | 2.26 | 777 | 773.63 | 2.51 | 776 | 770.8 | 5.59 |
| | | 2op | 775 | 768.87 | 3.15 | 777 | 774.43 | 2.06 | 777 | 773.13 | 1.81 | 775 | 769.27 | 3.59 |
| | 50 | rnd | 777 | 772.03 | 5.08 | 777 | 775.33 | 1.47 | 777 | 775 | 1.86 | 777 | 770.77 | 3.28 |
| | | 2op | 775 | 770.27 | 4.92 | 777 | 775.37 | 1.43 | 777 | 774.43 | 1.77 | 777 | 771.9 | 3 |
| 51 | 20 | rnd | 777 | 770.87 | 5.27 | 776 | 773.2 | 2.48 | 777 | 773.93 | 1.96 | 777 | 772.4 | 2.54 |
| | | 2op | 775 | 769 | 2.32 | 777 | 773.1 | 1.65 | 775 | 773.17 | 1.15 | 774 | 771.77 | 1.48 |
| | 50 | rnd | 777 | 771.97 | 4.59 | 777 | 774.5 | 1.55 | 777 | 775.27 | 1.48 | 777 | 773.97 | 1.88 |
| | | 2op | 774 | 769.53 | 2.05 | 777 | 774.2 | 2.14 | 777 | 774.97 | 1.85 | 775 | 772.27 | 1.6 |

Table A.1368: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 762.67 | 9.85 | 777 | 773.03 | 3.07 | 777 | 771.47 | 5.54 | 777 | 769.47 | 8.24 |
| | | 2op | 770 | 767.93 | 2.02 | 772 | 769.6 | 0.77 | 774 | 770 | 1.58 | 772 | 769.47 | 1.14 |
| | 50 | rnd | 772 | 763.7 | 7.86 | 776 | 770.97 | 4.86 | 777 | 773.03 | 2.62 | 777 | 769.07 | 7.57 |
| | | 2op | 770 | 767.23 | 2.27 | 770 | 769.6 | 0.5 | 772 | 769.73 | 0.64 | 770 | 769.57 | 0.5 |
| 51 | 20 | rnd | 775 | 762.77 | 9.59 | 775 | 769.3 | 6.6 | 777 | 772.23 | 3.33 | 777 | 769.63 | 7.78 |
| | | 2op | 770 | 767.9 | 2.17 | 774 | 769.6 | 1.28 | 774 | 769.7 | 1.26 | 774 | 769.83 | 1.23 |
| | 50 | rnd | 775 | 762.7 | 9.08 | 775 | 767.03 | 6.92 | 777 | 770.17 | 5.4 | 777 | 771.8 | 3.66 |
| | | 2op | 770 | 767.17 | 2.18 | 770 | 769.47 | 0.51 | 772 | 769.63 | 0.67 | 772 | 769.7 | 0.79 |

Table A.1369: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.6 | 2.77 | 777 | 774.5 | 1.85 | 777 | 773.83 | 2.1 | 777 | 768.67 | 6.28 |
| | | 2op | 777 | 771.17 | 2.38 | 777 | 774.47 | 2.03 | 777 | 772.4 | 2.13 | 777 | 769.43 | 5.96 |
| | 50 | rnd | 777 | 772.6 | 2.97 | 777 | 774.77 | 1.38 | 777 | 774.67 | 1.52 | 775 | 770.77 | 3.14 |
| | | 2op | 775 | 770.8 | 1.92 | 777 | 774.73 | 1.7 | 777 | 775.33 | 1.21 | 777 | 769.87 | 3.7 |
| 51 | 20 | rnd | 777 | 770.87 | 4.82 | 777 | 773.67 | 2.4 | 777 | 774.1 | 1.84 | 777 | 772.93 | 3.11 |
| | | 2op | 775 | 767.83 | 4.58 | 776 | 773.13 | 1.38 | 777 | 773.47 | 1.59 | 775 | 772.27 | 1.55 |
| | 50 | rnd | 777 | 773.5 | 1.93 | 777 | 774.6 | 1.73 | 777 | 775.7 | 1.15 | 777 | 773.07 | 3.04 |
| | | 2op | 775 | 769.97 | 2.51 | 777 | 773.93 | 1.48 | 777 | 775 | 1.84 | 777 | 772.63 | 1.94 |

Table A.1370: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 770 | 760.5 | 10.38 | 776 | 770.47 | 6.53 | 777 | 772 | 2.96 | 777 | 770.03 | 8.07 |
| | | 2op | 770 | 767.27 | 2.18 | 774 | 769.77 | 1.33 | 772 | 769.6 | 0.67 | 770 | 769.27 | 1.08 |
| | 50 | rnd | 775 | 764.6 | 9.73 | 777 | 766.8 | 9.93 | 777 | 772.13 | 3.03 | 777 | 769.27 | 5.84 |
| | | 2op | 770 | 767.2 | 2.12 | 770 | 769.43 | 0.5 | 772 | 769.87 | 0.86 | 775 | 769.8 | 1.1 |
| 51 | 20 | rnd | 775 | 763.83 | 10.5 | 777 | 765.9 | 10.51 | 777 | 770.8 | 5.61 | 776 | 772.07 | 3.15 |
| | | 2op | 770 | 767.33 | 2.55 | 774 | 769.7 | 0.95 | 772 | 769.67 | 0.92 | 774 | 769.63 | 0.96 |
| | 50 | rnd | 775 | 765.77 | 7.53 | 777 | 766.77 | 10.38 | 777 | 770.1 | 5.27 | 777 | 772.73 | 3.65 |
| | | 2op | 770 | 767.6 | 2.24 | 770 | 769.4 | 0.5 | 770 | 769.3 | 0.47 | 770 | 769.6 | 0.5 |

Table A.1371: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 770.5 | 3.4 | 776 | 773.73 | 1.8 | 777 | 770.97 | 3.77 | 775 | 766.7 | 9.4 |
| | | 2op | 775 | 769.4 | 2.03 | 777 | 773.83 | 1.6 | 773 | 768.13 | 2.67 | 775 | 769.07 | 4 |
| | 50 | rnd | 777 | 772.43 | 2.66 | 777 | 774.77 | 1.55 | 777 | 770.73 | 4.27 | 776 | 767.27 | 6.55 |
| | | 2op | 777 | 770.37 | 2.98 | 777 | 774.07 | 1.62 | 776 | 770.6 | 2.87 | 775 | 767.3 | 6.45 |
| 51 | 20 | rnd | 777 | 771.47 | 2.75 | 777 | 773.33 | 2.48 | 777 | 772.37 | 2.67 | 777 | 771.1 | 3.14 |
| | | 2op | 772 | 769.43 | 1.22 | 777 | 772.07 | 1.82 | 774 | 771.2 | 1.42 | 772 | 768.5 | 2.33 |
| | 50 | rnd | 777 | 773.7 | 2.32 | 777 | 773.83 | 2.05 | 777 | 773.1 | 2.67 | 776 | 769.07 | 4.93 |
| | | 2op | 775 | 770.53 | 1.8 | 777 | 773.17 | 1.78 | 776 | 771.33 | 2.04 | 774 | 768.93 | 1.84 |

Table A.1372: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 774 | 763.13 | 10.14 | 776 | 770.03 | 3.4 | 777 | 770.7 | 3.72 | 777 | 769.13 | 5.63 |
| | | 2op | 770 | 768.23 | 1.63 | 770 | 769.17 | 1.26 | 774 | 768.07 | 2.35 | 774 | 768.57 | 3.3 |
| | 50 | rnd | 775 | 764.63 | 7.52 | 775 | 768.17 | 7.4 | 777 | 770.77 | 3.76 | 777 | 770.13 | 3.95 |
| | | 2op | 770 | 768.6 | 1.67 | 770 | 769.53 | 0.51 | 772 | 769.07 | 1.31 | 775 | 766.93 | 4.11 |
| 51 | 20 | rnd | 775 | 764.33 | 9.26 | 775 | 764.93 | 9.48 | 777 | 771.6 | 3.79 | 775 | 770.6 | 3.57 |
| | | 2op | 770 | 769.17 | 1.09 | 770 | 769.67 | 0.48 | 770 | 769.43 | 0.5 | 772 | 767.27 | 2.15 |
| | 50 | rnd | 775 | 764.3 | 9.07 | 774 | 766.5 | 6.63 | 777 | 769.73 | 4.73 | 777 | 769.93 | 4.84 |
| | | 2op | 770 | 769.03 | 1.13 | 770 | 769.3 | 1.02 | 770 | 769.4 | 0.5 | 770 | 766.97 | 2.01 |

Table A.1373: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 913.97 | 3.37 | 921 | 916.63 | 2.61 | 921 | 915.9 | 2.6 | 919 | 913.07 | 3.94 |
| | | 2op | 919 | 913.47 | 3.91 | 921 | 917.6 | 1.52 | 921 | 916.93 | 1.95 | 919 | 914.03 | 2.86 |
| | 50 | rnd | 921 | 915.1 | 2.99 | 921 | 917.8 | 2.35 | 921 | 918.2 | 2.04 | 919 | 912.97 | 3.84 |
| | | 2op | 921 | 914.83 | 2.73 | 921 | 918 | 2.05 | 921 | 918.9 | 2.09 | 921 | 914.97 | 3.67 |
| 51 | 20 | rnd | 919 | 913.47 | 3.53 | 921 | 915.77 | 2.45 | 921 | 917.53 | 2.24 | 921 | 915.93 | 2.96 |
| | | 2op | 917 | 914.23 | 2.27 | 919 | 916.63 | 1.07 | 921 | 917.73 | 1.72 | 921 | 916.2 | 1.45 |
| | 50 | rnd | 919 | 914.1 | 3.2 | 921 | 916.1 | 2.62 | 921 | 917.23 | 2.14 | 921 | 914.87 | 3.56 |
| | | 2op | 917 | 915.07 | 1.91 | 921 | 918.6 | 2.09 | 921 | 919.17 | 1.72 | 921 | 916.7 | 1.68 |

Table A.1374: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 912.97 | 6.41 | 919 | 913.6 | 2.7 | 919 | 915.03 | 3.27 | 921 | 915.3 | 3.23 |
| | | 2op | 916 | 911.43 | 3.26 | 918 | 915.57 | 1.59 | 916 | 916 | 0 | 918 | 915.5 | 1.87 |
| | 50 | rnd | 919 | 912.13 | 6.33 | 919 | 912.83 | 6.22 | 921 | 915.13 | 2.87 | 921 | 914.2 | 3.21 |
| | | 2op | 916 | 912.57 | 3.49 | 916 | 915.9 | 0.55 | 921 | 916.23 | 0.97 | 916 | 915.7 | 1.06 |
| 51 | 20 | rnd | 918 | 909.8 | 9.5 | 919 | 914.17 | 3.75 | 919 | 914.53 | 3.4 | 919 | 914.3 | 2.82 |
| | | 2op | 916 | 911.8 | 3.78 | 918 | 916.07 | 0.37 | 918 | 916.07 | 0.37 | 916 | 915.97 | 0.18 |
| | 50 | rnd | 921 | 912.5 | 4.53 | 919 | 913.67 | 3.67 | 921 | 912.67 | 3.64 | 921 | 915.17 | 2.61 |
| | | 2op | 916 | 911.5 | 3.66 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 915.97 | 0.18 |

Table A.1375: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.93 | 3.84 | 921 | 917.3 | 2.02 | 921 | 916.27 | 2.55 | 919 | 913.27 | 3.19 |
| | | 2op | 919 | 914 | 2.38 | 921 | 918.1 | 1.99 | 921 | 916.93 | 2.02 | 919 | 913.97 | 3.13 |
| | 50 | rnd | 921 | 913.83 | 3.12 | 921 | 916.83 | 2.12 | 921 | 917.8 | 2.06 | 919 | 914.83 | 3.12 |
| | | 2op | 921 | 915.13 | 3.54 | 921 | 918.37 | 1.92 | 921 | 918.2 | 2.64 | 919 | 914.2 | 3.18 |
| 51 | 20 | rnd | 919 | 914.13 | 2.32 | 919 | 915.53 | 2.3 | 921 | 916.3 | 2.38 | 921 | 915.9 | 3.13 |
| | | 2op | 917 | 914.73 | 2.21 | 921 | 916.43 | 2.3 | 921 | 918.27 | 1.98 | 921 | 916.77 | 1.68 |
| | 50 | rnd | 921 | 914.97 | 3.16 | 921 | 916.83 | 2 | 921 | 918.1 | 1.6 | 919 | 915 | 2.73 |
| | | 2op | 919 | 914.57 | 2.43 | 921 | 918.3 | 1.73 | 921 | 918.6 | 1.81 | 921 | 916.7 | 1.9 |

Table A.1376: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 910.67 | 7.08 | 919 | 914.23 | 3.39 | 921 | 915.73 | 2.42 | 919 | 913.07 | 5.52 |
| | | 2op | 916 | 912.27 | 3.32 | 916 | 915.87 | 0.57 | 918 | 916.23 | 0.63 | 919 | 915.93 | 1.41 |
| | 50 | rnd | 919 | 911.6 | 7.67 | 919 | 913.63 | 3.46 | 921 | 914.97 | 2.74 | 919 | 914.7 | 3.71 |
| | | 2op | 916 | 911.5 | 3.88 | 916 | 915.87 | 0.57 | 921 | 916.4 | 1.59 | 918 | 916.07 | 0.37 |
| 51 | 20 | rnd | 918 | 911.37 | 4.67 | 919 | 913.07 | 4.52 | 919 | 914.1 | 2.78 | 919 | 915.3 | 3.01 |
| | | 2op | 916 | 911.7 | 3.65 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 915.9 | 0.55 |
| | 50 | rnd | 918 | 911.2 | 3.39 | 918 | 913.23 | 4.11 | 919 | 914.57 | 3.21 | 921 | 914.43 | 3.65 |
| | | 2op | 916 | 910.73 | 3.85 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.1377: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.57 | 2.91 | 921 | 916.8 | 2.3 | 917 | 911.47 | 2.49 | 918 | 910.83 | 4.74 |
| | | 2op | 918 | 914.6 | 2.31 | 921 | 917.43 | 1.77 | 918 | 911.2 | 3.46 | 919 | 912.6 | 3.93 |
| | 50 | rnd | 919 | 915.2 | 2.71 | 921 | 918 | 1.93 | 919 | 913.77 | 3.41 | 918 | 912.43 | 3.65 |
| | | 2op | 918 | 914.73 | 2.36 | 921 | 917.53 | 1.74 | 919 | 912.77 | 3.95 | 919 | 912.2 | 4.16 |
| 51 | 20 | rnd | 921 | 915.27 | 2.56 | 921 | 917.1 | 2.51 | 921 | 915.97 | 2.65 | 921 | 914.17 | 3.29 |
| | | 2op | 916 | 915.83 | 0.91 | 921 | 916.73 | 1.55 | 917 | 916.03 | 0.18 | 921 | 914.6 | 3.41 |
| | 50 | rnd | 921 | 916.23 | 3.4 | 921 | 916.43 | 3.06 | 921 | 915.53 | 2.79 | 921 | 913.67 | 3.29 |
| | | 2op | 916 | 915.97 | 0.18 | 921 | 916.33 | 1.09 | 919 | 915.27 | 2.13 | 919 | 911.07 | 4.17 |

Table A.1378: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 911.07 | 5.37 | 921 | 914.23 | 3.83 | 921 | 914.13 | 3.26 | 921 | 913.03 | 3.93 |
| | | 2op | 916 | 913.93 | 2.42 | 916 | 916 | 0 | 919 | 915.13 | 2.4 | 919 | 911.3 | 4.04 |
| | 50 | rnd | 921 | 913.5 | 3.93 | 921 | 912.7 | 5.49 | 921 | 915.03 | 2.93 | 919 | 913.43 | 3.84 |
| | | 2op | 916 | 914.17 | 2.31 | 916 | 916 | 0 | 916 | 916 | 0 | 921 | 911.7 | 4.17 |
| 51 | 20 | rnd | 918 | 912.43 | 5.06 | 921 | 910.53 | 8.58 | 919 | 913.7 | 4.85 | 919 | 912.6 | 4.47 |
| | | 2op | 916 | 915.87 | 0.73 | 916 | 916 | 0 | 916 | 916 | 0 | 919 | 912.17 | 4.27 |
| | 50 | rnd | 919 | 912.73 | 3.3 | 921 | 912.9 | 7.1 | 918 | 913.23 | 3.1 | 919 | 912.83 | 3.18 |
| | | 2op | 916 | 915.3 | 1.6 | 916 | 916 | 0 | 916 | 916 | 0 | 919 | 911.67 | 4.12 |

Table A.1379: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1577 | 1559.2 | 13.02 | 1572 | 1559.67 | 7.57 | 1572 | 1557.87 | 10.34 | 1573 | 1556.77 | 11.97 |
| | | 2op | 1575 | 1559.4 | 7.76 | 1573 | 1559.9 | 6.89 | 1572 | 1556.27 | 9.76 | 1572 | 1556.93 | 7.71 |
| | 50 | rnd | 1572 | 1558.97 | 9.22 | 1574 | 1560.2 | 6.89 | 1575 | 1560.03 | 8.06 | 1568 | 1553.8 | 12.88 |
| | | 2op | 1572 | 1558.83 | 8.19 | 1571 | 1562.03 | 5.12 | 1574 | 1556.73 | 8.84 | 1569 | 1558.47 | 7.43 |
| 51 | 20 | rnd | 1571 | 1559.2 | 10.68 | 1572 | 1559.37 | 8.34 | 1573 | 1559.7 | 10.56 | 1570 | 1553.83 | 11.19 |
| | | 2op | 1573 | 1558.1 | 6.49 | 1570 | 1558.63 | 7.37 | 1575 | 1559.03 | 7.33 | 1568 | 1557.4 | 6.43 |
| | 50 | rnd | 1568 | 1554.9 | 10.05 | 1578 | 1562.03 | 7.48 | 1577 | 1558.9 | 6.95 | 1573 | 1555.77 | 9.33 |
| | | 2op | 1568 | 1558.33 | 5.42 | 1571 | 1562.1 | 5.36 | 1569 | 1559.13 | 5.92 | 1574 | 1556.1 | 7.87 |

Table A.1380: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1555.7 | 10.99 | 1577 | 1554.13 | 12.09 | 1572 | 1555.43 | 11.5 | 1577 | 1553.13 | 14.23 |
| | | 2op | 1567 | 1555.23 | 2.69 | 1569 | 1558.53 | 4.01 | 1575 | 1559.77 | 6.53 | 1575 | 1557.1 | 9.27 |
| | 50 | rnd | 1573 | 1558.77 | 7.03 | 1576 | 1560.7 | 6.65 | 1568 | 1551.4 | 11.31 | 1573 | 1552.73 | 14.14 |
| | | 2op | 1558 | 1553.7 | 1.6 | 1572 | 1564.47 | 4.68 | 1570 | 1558.4 | 5 | 1575 | 1559.43 | 5.47 |
| 51 | 20 | rnd | 1578 | 1555.43 | 10.7 | 1576 | 1556.03 | 10.81 | 1578 | 1559.07 | 10.39 | 1575 | 1557.33 | 9.8 |
| | | 2op | 1565 | 1554.33 | 2.77 | 1572 | 1562.6 | 6.25 | 1572 | 1560.87 | 6.16 | 1572 | 1557.8 | 6.11 |
| | 50 | rnd | 1574 | 1554.6 | 12.34 | 1577 | 1558.6 | 9.76 | 1577 | 1560.57 | 9.77 | 1571 | 1556 | 9.86 |
| | | 2op | 1558 | 1554.27 | 1.57 | 1573 | 1562.43 | 5.78 | 1575 | 1563.73 | 4.96 | 1567 | 1557.07 | 4.48 |

Table A.1381: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1557.03 | 9.7 | 1573 | 1558.37 | 7.81 | 1573 | 1555.9 | 9.26 | 1580 | 1557.3 | 10.89 |
| | | 2op | 1575 | 1557.97 | 9.56 | 1575 | 1559.2 | 8.1 | 1567 | 1554.2 | 9.23 | 1575 | 1557.93 | 10.09 |
| | 50 | rnd | 1575 | 1558.47 | 9.16 | 1576 | 1559.27 | 8.28 | 1574 | 1558.1 | 10.57 | 1574 | 1553.93 | 10.01 |
| | | 2op | 1574 | 1560.4 | 7.68 | 1577 | 1560.73 | 8.96 | 1575 | 1558.1 | 10.26 | 1569 | 1554.9 | 10.39 |
| 51 | 20 | rnd | 1577 | 1559.3 | 8.7 | 1580 | 1558.5 | 9.03 | 1574 | 1559.07 | 8.97 | 1573 | 1555.37 | 10.5 |
| | | 2op | 1568 | 1558.83 | 5.96 | 1574 | 1559.4 | 7.22 | 1569 | 1558.33 | 5.38 | 1573 | 1558.13 | 5.26 |
| | 50 | rnd | 1576 | 1560.07 | 9.95 | 1579 | 1561.07 | 8.3 | 1579 | 1559.8 | 7.99 | 1573 | 1555.77 | 10.71 |
| | | 2op | 1569 | 1558.43 | 6.42 | 1574 | 1561.07 | 7.23 | 1575 | 1562.67 | 7.4 | 1570 | 1559 | 5.96 |

Table A.1382: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1555.27 | 11.11 | 1575 | 1556.6 | 10.75 | 1576 | 1556.03 | 10.9 | 1574 | 1552.93 | 13.69 |
| | | 2op | 1558 | 1553.8 | 1.58 | 1571 | 1561.07 | 5.05 | 1564 | 1556.4 | 4.75 | 1573 | 1557.3 | 7.65 |
| | 50 | rnd | 1575 | 1557.8 | 8.38 | 1574 | 1556.8 | 10.6 | 1573 | 1557.47 | 7.86 | 1571 | 1553.97 | 12.12 |
| | | 2op | 1558 | 1553.9 | 1.63 | 1575 | 1563.8 | 4.9 | 1572 | 1558.47 | 6 | 1569 | 1559.4 | 6.22 |
| 51 | 20 | rnd | 1577 | 1558.8 | 11.59 | 1574 | 1554.33 | 13.46 | 1572 | 1555.13 | 10.77 | 1570 | 1551.1 | 13.85 |
| | | 2op | 1558 | 1554.1 | 1.54 | 1569 | 1562.5 | 4.85 | 1569 | 1558.23 | 3.92 | 1570 | 1556.47 | 5.86 |
| | 50 | rnd | 1572 | 1556.17 | 9.6 | 1572 | 1557.37 | 10.56 | 1572 | 1554.4 | 11.22 | 1578 | 1557.07 | 12.3 |
| | | 2op | 1556 | 1553.93 | 1.23 | 1572 | 1564.43 | 5.07 | 1569 | 1561.7 | 4.95 | 1573 | 1557.7 | 5.94 |

Table A.1383: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1580 | 1558.57 | 9.1 | 1575 | 1558 | 8.87 | 1573 | 1553.5 | 14 | 1568 | 1553.6 | 9.64 |
| | | 2op | 1568 | 1558.43 | 5.14 | 1573 | 1561.87 | 7.24 | 1571 | 1554.97 | 9.55 | 1575 | 1558.6 | 7.44 |
| | 50 | rnd | 1574 | 1558.77 | 8.72 | 1572 | 1557.33 | 7.25 | 1578 | 1556.23 | 8.91 | 1570 | 1556.37 | 11.53 |
| | | 2op | 1571 | 1559.57 | 6.27 | 1573 | 1559.17 | 6.5 | 1568 | 1555.87 | 8.61 | 1578 | 1560.9 | 7.67 |
| 51 | 20 | rnd | 1577 | 1559 | 7.76 | 1576 | 1560.83 | 6.57 | 1575 | 1557.7 | 10.63 | 1574 | 1554.6 | 10.49 |
| | | 2op | 1564 | 1556.63 | 2.63 | 1571 | 1567.2 | 3.36 | 1571 | 1557.27 | 5.24 | 1577 | 1556.13 | 8.95 |
| | 50 | rnd | 1572 | 1559.1 | 7.37 | 1573 | 1559.03 | 7.17 | 1576 | 1556.27 | 8.9 | 1577 | 1559.17 | 9.12 |
| | | 2op | 1568 | 1559.17 | 4.51 | 1570 | 1559.6 | 5.18 | 1572 | 1556.27 | 8.84 | 1575 | 1555.9 | 11.1 |

Table A.1384: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1558.63 | 7.84 | 1571 | 1553.47 | 13.88 | 1570 | 1552.23 | 16.69 | 1574 | 1553.87 | 13.78 |
| | | 2op | 1558 | 1554.07 | 1.28 | 1567 | 1554.5 | 2.66 | 1573 | 1557.6 | 6.45 | 1568 | 1554.97 | 8.27 |
| | 50 | rnd | 1570 | 1555.27 | 9.21 | 1578 | 1555.33 | 10.42 | 1572 | 1558.6 | 10.21 | 1577 | 1555.53 | 11.79 |
| | | 2op | 1558 | 1554.8 | 1.35 | 1563 | 1555.27 | 2.3 | 1570 | 1558.57 | 6 | 1569 | 1556.2 | 7.44 |
| 51 | 20 | rnd | 1571 | 1555.87 | 13.41 | 1571 | 1555.87 | 11.44 | 1570 | 1555.4 | 11.17 | 1568 | 1552.77 | 10.66 |
| | | 2op | 1558 | 1554.4 | 1.22 | 1572 | 1555.83 | 4.03 | 1565 | 1555.33 | 4.44 | 1570 | 1556.4 | 6.52 |
| | 50 | rnd | 1574 | 1558.8 | 9.81 | 1570 | 1554.87 | 9.79 | 1571 | 1555.4 | 12.59 | 1573 | 1555.33 | 12.57 |
| | | 2op | 1564 | 1555.57 | 2.42 | 1573 | 1557.2 | 5.34 | 1574 | 1556.27 | 4.39 | 1571 | 1555.47 | 7.2 |

Table A.1385: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1553.3 | 10.49 | 1569 | 1555.2 | 7.87 | 1566 | 1550.1 | 12.51 | 1565 | 1548.37 | 11.71 |
| | | 2op | 1567 | 1549.67 | 9.5 | 1563 | 1554.2 | 5.92 | 1569 | 1548.53 | 10.71 | 1560 | 1544 | 13.33 |
| | 50 | rnd | 1571 | 1552.67 | 9.59 | 1570 | 1555.2 | 7.2 | 1564 | 1553.77 | 8.77 | 1564 | 1551.73 | 9.46 |
| | | 2op | 1569 | 1547.97 | 12 | 1573 | 1556 | 7.38 | 1565 | 1552.43 | 8.97 | 1566 | 1543.73 | 15.53 |
| 51 | 20 | rnd | 1567 | 1553.93 | 10.9 | 1571 | 1554.67 | 9.62 | 1570 | 1556.4 | 7.84 | 1570 | 1550.67 | 10.04 |
| | | 2op | 1564 | 1548 | 12.09 | 1570 | 1553.33 | 8.04 | 1567 | 1554.5 | 9.06 | 1566 | 1545.6 | 12.19 |
| | 50 | rnd | 1570 | 1551.4 | 7.72 | 1567 | 1555.2 | 7.63 | 1568 | 1557.8 | 5.94 | 1567 | 1550.57 | 11.79 |
| | | 2op | 1568 | 1552.13 | 10.2 | 1568 | 1553.2 | 8.48 | 1570 | 1555.7 | 7.88 | 1563 | 1546.37 | 10.58 |

Table A.1386: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1542 | 15.66 | 1570 | 1548.1 | 12.66 | 1566 | 1548.37 | 12.2 | 1568 | 1547.53 | 9.28 |
| | | 2op | 1540 | 1531.7 | 3.03 | 1564 | 1536.07 | 8.61 | 1566 | 1539.07 | 11.14 | 1565 | 1542.9 | 11.65 |
| | 50 | rnd | 1563 | 1542.9 | 12.22 | 1569 | 1551.87 | 11.75 | 1569 | 1554.6 | 10.57 | 1564 | 1549.67 | 10.32 |
| | | 2op | 1540 | 1531.23 | 1.77 | 1565 | 1544.83 | 11.45 | 1554 | 1535.5 | 7.25 | 1566 | 1542.67 | 12.55 |
| 51 | 20 | rnd | 1563 | 1543.5 | 11.97 | 1565 | 1549.57 | 10.44 | 1568 | 1555.13 | 8.17 | 1569 | 1552.27 | 10.55 |
| | | 2op | 1554 | 1532.83 | 5.9 | 1569 | 1543.23 | 12.54 | 1555 | 1534.93 | 6.66 | 1565 | 1537.53 | 11.29 |
| | 50 | rnd | 1563 | 1543.6 | 12.79 | 1566 | 1546.63 | 11.06 | 1567 | 1549 | 12.45 | 1568 | 1551.47 | 12.71 |
| | | 2op | 1531 | 1530.93 | 0.37 | 1563 | 1536.3 | 9.89 | 1565 | 1537.43 | 8.46 | 1556 | 1535.13 | 9.42 |

Table A.1387: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1551.43 | 10.42 | 1569 | 1556.23 | 9.1 | 1569 | 1549.57 | 11.03 | 1566 | 1545.67 | 11.58 |
| | | 2op | 1572 | 1552.17 | 8.2 | 1570 | 1554.6 | 8.94 | 1563 | 1547.97 | 14.47 | 1567 | 1546.9 | 12.53 |
| | 50 | rnd | 1566 | 1554.5 | 9.5 | 1570 | 1554 | 7.47 | 1568 | 1552.67 | 9.01 | 1567 | 1546.6 | 13.18 |
| | | 2op | 1566 | 1548.67 | 11.98 | 1567 | 1553.23 | 8.67 | 1565 | 1551.47 | 7.6 | 1564 | 1548.7 | 10.39 |
| 51 | 20 | rnd | 1565 | 1552.83 | 8.17 | 1568 | 1550.8 | 9.13 | 1569 | 1553.3 | 8.46 | 1564 | 1552.73 | 7.95 |
| | | 2op | 1565 | 1548.03 | 12.55 | 1571 | 1552.93 | 9.43 | 1569 | 1553.1 | 8.17 | 1570 | 1548.03 | 12.21 |
| | 50 | rnd | 1565 | 1553.8 | 8.51 | 1568 | 1555.23 | 9.09 | 1568 | 1557.1 | 7.27 | 1566 | 1554.23 | 12.49 |
| | | 2op | 1566 | 1551.77 | 10.86 | 1567 | 1556.17 | 8.04 | 1567 | 1555.87 | 6.66 | 1568 | 1548.2 | 10.93 |

Table A.1388: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1543.43 | 11.3 | 1566 | 1551.33 | 9.91 | 1565 | 1547.37 | 15.16 | 1567 | 1550.73 | 10.18 |
| | | 2op | 1540 | 1531.5 | 2.54 | 1566 | 1539.13 | 11.33 | 1567 | 1538.87 | 9.74 | 1569 | 1542.87 | 12.31 |
| | 50 | rnd | 1561 | 1544.97 | 11.3 | 1563 | 1553.07 | 7.76 | 1569 | 1550.47 | 10.01 | 1569 | 1551.57 | 10.49 |
| | | 2op | 1531 | 1530.93 | 0.37 | 1565 | 1548.5 | 10.66 | 1560 | 1533.2 | 6.46 | 1556 | 1538.13 | 9.35 |
| 51 | 20 | rnd | 1565 | 1540.07 | 12.04 | 1564 | 1549.97 | 10.16 | 1565 | 1551.87 | 9.8 | 1567 | 1549 | 11.02 |
| | | 2op | 1554 | 1532.5 | 5.73 | 1565 | 1539.9 | 11.65 | 1568 | 1537.13 | 10.6 | 1565 | 1538.77 | 10.78 |
| | 50 | rnd | 1566 | 1547.57 | 12.42 | 1567 | 1547.97 | 11.82 | 1566 | 1550.23 | 9.58 | 1562 | 1547.63 | 9.81 |
| | | 2op | 1531 | 1530.93 | 0.37 | 1561 | 1536.3 | 8.28 | 1557 | 1538.1 | 9.87 | 1554 | 1534.73 | 5.73 |

Table A.1389: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1551.1 | 10.81 | 1569 | 1556.13 | 6.72 | 1564 | 1547.63 | 10.01 | 1570 | 1550.87 | 10.14 |
| | | 2op | 1569 | 1548.1 | 11.88 | 1568 | 1551.6 | 9.23 | 1562 | 1542.37 | 13.52 | 1564 | 1542.9 | 13.02 |
| | 50 | rnd | 1570 | 1551.57 | 7.61 | 1568 | 1556.07 | 7.41 | 1566 | 1548.4 | 12.35 | 1560 | 1544.2 | 11.4 |
| | | 2op | 1570 | 1552.47 | 9.5 | 1567 | 1554.83 | 7.79 | 1569 | 1548.2 | 13.25 | 1566 | 1542.43 | 10.17 |
| 51 | 20 | rnd | 1572 | 1555.4 | 9.51 | 1570 | 1556.23 | 9.55 | 1564 | 1550.5 | 9.92 | 1567 | 1550.73 | 9.67 |
| | | 2op | 1564 | 1552.63 | 7.39 | 1565 | 1557.1 | 3.39 | 1566 | 1543.13 | 11.72 | 1564 | 1538.47 | 10.15 |
| | 50 | rnd | 1567 | 1554.93 | 8.76 | 1568 | 1555.2 | 7.92 | 1569 | 1554.33 | 10.91 | 1571 | 1551.27 | 11.24 |
| | | 2op | 1565 | 1553.77 | 8.84 | 1565 | 1554.33 | 6.54 | 1567 | 1548.37 | 12.96 | 1565 | 1542.67 | 14.2 |

Table A.1390: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1542.97 | 10.46 | 1562 | 1547.93 | 8.25 | 1569 | 1548.73 | 9.75 | 1566 | 1546.33 | 12.98 |
| | | 2op | 1540 | 1531.3 | 1.64 | 1540 | 1531.57 | 2.16 | 1556 | 1539.47 | 9.39 | 1560 | 1539.77 | 11.21 |
| | 50 | rnd | 1565 | 1546.13 | 10.84 | 1569 | 1549.67 | 12.99 | 1563 | 1547.23 | 12.29 | 1569 | 1544.83 | 11.33 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.27 | 1.66 | 1566 | 1539.97 | 9.55 | 1559 | 1540.3 | 9.72 |
| 51 | 20 | rnd | 1565 | 1548.6 | 11.72 | 1566 | 1551.97 | 8.79 | 1568 | 1550.03 | 12.66 | 1570 | 1551.2 | 12.33 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.9 | 2.75 | 1563 | 1534 | 8.61 | 1556 | 1534.73 | 10.02 |
| | 50 | rnd | 1565 | 1544.03 | 11.56 | 1565 | 1548.07 | 8.64 | 1568 | 1547.97 | 12.74 | 1565 | 1544.83 | 12.66 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1554 | 1533.4 | 5.82 | 1563 | 1537.03 | 9.24 |

Table A.1391: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1548.8 | 9.33 | 1564 | 1553.57 | 6.07 | 1568 | 1547.3 | 9.19 | 1562 | 1547.33 | 8.82 |
| | | 2op | 1563 | 1549.03 | 6.99 | 1565 | 1552.87 | 7.29 | 1559 | 1546.73 | 7.38 | 1560 | 1547.83 | 8.13 |
| | 50 | rnd | 1563 | 1549.9 | 8.28 | 1565 | 1550.5 | 6.92 | 1566 | 1550.3 | 8.38 | 1561 | 1548.5 | 8.73 |
| | | 2op | 1565 | 1552.37 | 8.71 | 1568 | 1550.13 | 10.89 | 1570 | 1551.73 | 8.32 | 1564 | 1548.27 | 10.66 |
| 51 | 20 | rnd | 1562 | 1550.57 | 8.11 | 1566 | 1550.5 | 9.3 | 1565 | 1551.33 | 7.87 | 1562 | 1549.47 | 9.47 |
| | | 2op | 1563 | 1549.87 | 6.73 | 1565 | 1551.87 | 5.95 | 1561 | 1551.13 | 5.76 | 1564 | 1552.03 | 6.23 |
| | 50 | rnd | 1561 | 1549.27 | 8.37 | 1562 | 1550.23 | 6.73 | 1563 | 1551.77 | 7.55 | 1564 | 1548.3 | 9.23 |
| | | 2op | 1565 | 1550.3 | 6.18 | 1566 | 1554.13 | 6.41 | 1568 | 1552.23 | 8.99 | 1566 | 1552.3 | 9.68 |

Table A.1392: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1558 | 1547.3 | 8.48 | 1566 | 1550.27 | 8 | 1567 | 1547.8 | 9.26 | 1565 | 1548.53 | 7.4 |
| | | 2op | 1553 | 1548.67 | 1.49 | 1555 | 1548.43 | 1.38 | 1557 | 1549.03 | 3.45 | 1563 | 1550.97 | 7.29 |
| | 50 | rnd | 1562 | 1547.93 | 9.28 | 1565 | 1548.8 | 7.48 | 1566 | 1550 | 9.87 | 1561 | 1551.47 | 6.48 |
| | | 2op | 1548 | 1547.5 | 2.11 | 1556 | 1548.7 | 1.88 | 1557 | 1548.27 | 1.66 | 1562 | 1551.27 | 5.46 |
| 51 | 20 | rnd | 1559 | 1545.77 | 8.34 | 1565 | 1549.27 | 9.87 | 1567 | 1548.63 | 10.98 | 1559 | 1548.03 | 7.21 |
| | | 2op | 1557 | 1548.37 | 1.67 | 1558 | 1548.47 | 2.67 | 1557 | 1548.27 | 2.03 | 1560 | 1550.03 | 4.8 |
| | 50 | rnd | 1565 | 1548.27 | 9.15 | 1564 | 1549 | 7.31 | 1568 | 1549.07 | 8.66 | 1566 | 1549.5 | 8.96 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1558 | 1549.4 | 3.37 |

Table A.1393: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1549.67 | 10.98 | 1564 | 1549.23 | 9.9 | 1563 | 1549.9 | 9.51 | 1563 | 1547.27 | 8.66 |
| | | 2op | 1566 | 1548.87 | 7.14 | 1570 | 1552.87 | 8.48 | 1563 | 1551.13 | 7.59 | 1563 | 1549.23 | 8.47 |
| | 50 | rnd | 1565 | 1546.3 | 9.63 | 1563 | 1550.93 | 7.16 | 1560 | 1548.83 | 8.52 | 1563 | 1546.9 | 10.66 |
| | | 2op | 1566 | 1553.47 | 6.98 | 1564 | 1550.1 | 9.4 | 1562 | 1549.1 | 7.33 | 1563 | 1551.8 | 6.41 |
| 51 | 20 | rnd | 1562 | 1548.9 | 10.7 | 1565 | 1551.77 | 7.3 | 1565 | 1546.97 | 8.35 | 1564 | 1548.43 | 8.79 |
| | | 2op | 1560 | 1549.93 | 5.88 | 1564 | 1549.53 | 6.65 | 1566 | 1548.6 | 7.15 | 1567 | 1551.7 | 5.93 |
| | 50 | rnd | 1563 | 1550.17 | 7.33 | 1568 | 1550.83 | 9.07 | 1565 | 1551.97 | 10.29 | 1561 | 1549.77 | 7.32 |
| | | 2op | 1560 | 1547.9 | 9.05 | 1564 | 1551.33 | 5.92 | 1561 | 1551.4 | 6.09 | 1561 | 1549.7 | 8.54 |

Table A.1394: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1545.77 | 9.94 | 1566 | 1547.7 | 9.69 | 1567 | 1547.53 | 11.36 | 1567 | 1551 | 8.52 |
| | | 2op | 1560 | 1548.93 | 2.86 | 1552 | 1547.97 | 2.33 | 1557 | 1549.47 | 2.93 | 1563 | 1552.03 | 6.08 |
| | 50 | rnd | 1558 | 1546.33 | 7.64 | 1565 | 1548.5 | 8.41 | 1565 | 1547.3 | 11.87 | 1564 | 1550.43 | 9.27 |
| | | 2op | 1553 | 1548.17 | 0.91 | 1553 | 1548.3 | 1.02 | 1557 | 1548.27 | 3.7 | 1561 | 1550.6 | 6.2 |
| 51 | 20 | rnd | 1566 | 1547.1 | 8.81 | 1566 | 1547.27 | 9.63 | 1568 | 1549.13 | 9.03 | 1565 | 1543.83 | 13.08 |
| | | 2op | 1553 | 1547.93 | 2.36 | 1556 | 1548.7 | 1.99 | 1557 | 1548.83 | 2.36 | 1557 | 1549.43 | 4.39 |
| | 50 | rnd | 1561 | 1547.4 | 8.4 | 1566 | 1551.17 | 6.85 | 1564 | 1548 | 8.9 | 1563 | 1549.87 | 7.2 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1557 | 1549.53 | 2.45 |

Table A.1395: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1552.73 | 8.31 | 1565 | 1550.77 | 10.16 | 1568 | 1547.73 | 10.51 | 1565 | 1548.47 | 10.21 |
| | | 2op | 1564 | 1550.07 | 5.63 | 1559 | 1550.33 | 4.75 | 1563 | 1548.07 | 9.04 | 1565 | 1552.67 | 8.38 |
| | 50 | rnd | 1567 | 1548.1 | 7.48 | 1564 | 1552.63 | 6.17 | 1566 | 1547.43 | 10.62 | 1562 | 1547.4 | 9.25 |
| | | 2op | 1561 | 1551.83 | 4.86 | 1561 | 1552.77 | 5.03 | 1562 | 1551.33 | 8.61 | 1566 | 1549.37 | 9.99 |
| 51 | 20 | rnd | 1565 | 1550.57 | 8.08 | 1563 | 1553.23 | 7.76 | 1565 | 1547.73 | 10.14 | 1564 | 1547.47 | 11.39 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1561 | 1549.77 | 2.85 | 1561 | 1549.87 | 5.81 | 1564 | 1553.47 | 6.55 |
| | 50 | rnd | 1567 | 1548.57 | 7.96 | 1570 | 1552.33 | 8.53 | 1565 | 1548.33 | 8.47 | 1562 | 1547.57 | 9.65 |
| | | 2op | 1553 | 1548.53 | 1.68 | 1561 | 1549.23 | 3.24 | 1560 | 1549.77 | 6.85 | 1563 | 1549.37 | 9.56 |

Table A.1396: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1545.97 | 9.85 | 1559 | 1547 | 8.21 | 1560 | 1543.6 | 10.77 | 1566 | 1548.53 | 8.9 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1557 | 1550.43 | 5.59 | 1562 | 1551.07 | 7.88 |
| | 50 | rnd | 1564 | 1547 | 8.09 | 1563 | 1550 | 8.94 | 1565 | 1549.53 | 9.82 | 1564 | 1546.97 | 10.68 |
| | | 2op | 1548 | 1548 | 0 | 1557 | 1548.3 | 1.64 | 1558 | 1550.5 | 4.99 | 1565 | 1551.57 | 6.43 |
| 51 | 20 | rnd | 1558 | 1546.9 | 6.5 | 1562 | 1546.6 | 11.81 | 1566 | 1547.73 | 8.39 | 1565 | 1548.07 | 10.01 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1560 | 1548.5 | 2.42 | 1560 | 1549.67 | 4.65 |
| | 50 | rnd | 1564 | 1547.53 | 7.87 | 1560 | 1544.17 | 9.46 | 1566 | 1548.57 | 8.95 | 1568 | 1546.17 | 10.18 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1557 | 1549 | 2.45 | 1561 | 1551.33 | 5.37 |

Table A.1397: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2775 | 2745.43 | 12.37 | 2771 | 2746.93 | 12.52 | 2771 | 2742.87 | 15.5 | 2757 | 2740.63 | 10.76 |
| | | 2op | 2771 | 2743.07 | 15.15 | 2775 | 2750.4 | 14.19 | 2777 | 2746.27 | 16.89 | 2767 | 2742.03 | 14.44 |
| | 50 | rnd | 2759 | 2741.7 | 10.47 | 2758 | 2742.2 | 12.08 | 2764 | 2741.27 | 12.31 | 2765 | 2742.07 | 13.61 |
| | | 2op | 2768 | 2746.73 | 14.51 | 2765 | 2746.97 | 13.03 | 2770 | 2748.1 | 13.6 | 2767 | 2745.87 | 12.79 |
| 51 | 20 | rnd | 2768 | 2741.37 | 12.51 | 2762 | 2745.47 | 9.22 | 2767 | 2740.8 | 14.58 | 2764 | 2736.3 | 14.14 |
| | | 2op | 2774 | 2752.43 | 12.61 | 2770 | 2754.57 | 9.39 | 2766 | 2750.5 | 13.48 | 2771 | 2746.5 | 12.4 |
| | 50 | rnd | 2771 | 2747.43 | 11.83 | 2764 | 2745.03 | 12.43 | 2763 | 2741.27 | 9.71 | 2763 | 2743.03 | 9.73 |
| | | 2op | 2778 | 2755.87 | 15.7 | 2776 | 2751.8 | 14.15 | 2773 | 2748.6 | 15.77 | 2768 | 2748.8 | 10.64 |

Table A.1398: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2762 | 2739.93 | 11.6 | 2780 | 2743.2 | 15.47 | 2758 | 2736.83 | 12.41 | 2767 | 2735.77 | 15.51 |
| | | 2op | 2778 | 2763 | 5.08 | 2778 | 2764.6 | 6.11 | 2778 | 2759.23 | 9.96 | 2775 | 2754.47 | 9.77 |
| | 50 | rnd | 2763 | 2741.9 | 12.86 | 2765 | 2741.13 | 12.04 | 2771 | 2746.7 | 13.43 | 2763 | 2733.1 | 12.9 |
| | | 2op | 2778 | 2763.8 | 4.4 | 2779 | 2764.03 | 5.09 | 2778 | 2761.6 | 10.77 | 2774 | 2755.53 | 10.15 |
| 51 | 20 | rnd | 2767 | 2741.37 | 15.33 | 2771 | 2745.07 | 13.38 | 2764 | 2738.07 | 15.62 | 2773 | 2738.73 | 17.81 |
| | | 2op | 2771 | 2762.77 | 3.1 | 2771 | 2763.17 | 3.38 | 2776 | 2761.87 | 8.67 | 2774 | 2758.07 | 9.79 |
| | 50 | rnd | 2762 | 2735.7 | 17.59 | 2766 | 2742.03 | 14.95 | 2767 | 2740.5 | 11.45 | 2772 | 2741.27 | 15 |
| | | 2op | 2775 | 2762.53 | 4.32 | 2774 | 2762.5 | 4.22 | 2775 | 2763.43 | 3.87 | 2772 | 2762.3 | 6.42 |

Table A.1399: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2769 | 2744.13 | 18.01 | 2770 | 2743.97 | 13.74 | 2766 | 2741.4 | 13.77 | 2766 | 2746.3 | 10.41 |
| | | 2op | 2779 | 2749.87 | 11.55 | 2774 | 2747.67 | 14.03 | 2770 | 2748.6 | 11.68 | 2767 | 2747.8 | 12.23 |
| | 50 | rnd | 2773 | 2746.87 | 12.22 | 2768 | 2741.8 | 12.79 | 2765 | 2742.2 | 13.94 | 2763 | 2743.27 | 12.24 |
| | | 2op | 2776 | 2746.9 | 11.74 | 2770 | 2750.43 | 12.24 | 2768 | 2744.3 | 14.55 | 2768 | 2743.7 | 14.1 |
| 51 | 20 | rnd | 2764 | 2739.07 | 13.93 | 2774 | 2743.77 | 14.69 | 2763 | 2742.63 | 9.87 | 2767 | 2740.3 | 14.69 |
| | | 2op | 2775 | 2756.13 | 9.48 | 2775 | 2754.07 | 10.38 | 2781 | 2751.97 | 11.96 | 2774 | 2752.6 | 11.15 |
| | 50 | rnd | 2773 | 2742.37 | 11.93 | 2770 | 2745.67 | 10.48 | 2760 | 2741.83 | 9.08 | 2762 | 2740.23 | 16.01 |
| | | 2op | 2770 | 2754.3 | 9.69 | 2770 | 2753.8 | 8.64 | 2764 | 2747.77 | 11.98 | 2768 | 2749.97 | 12.08 |

Table A.1400: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2773 | 2740.47 | 17.39 | 2764 | 2740.67 | 14.86 | 2761 | 2741.47 | 11.95 | 2766 | 2741.37 | 19.15 |
| | | 2op | 2775 | 2762.83 | 6.03 | 2778 | 2762.4 | 8.62 | 2775 | 2755.73 | 11.11 | 2776 | 2750.43 | 11.24 |
| | 50 | rnd | 2772 | 2742.53 | 11.68 | 2761 | 2739.87 | 15.75 | 2761 | 2742.83 | 11.19 | 2768 | 2740.03 | 15.66 |
| | | 2op | 2770 | 2762.63 | 1.96 | 2773 | 2763.43 | 5.05 | 2778 | 2764.77 | 6.12 | 2774 | 2757.37 | 9.44 |
| 51 | 20 | rnd | 2770 | 2739.2 | 13.97 | 2762 | 2739.87 | 15.91 | 2759 | 2737.03 | 15.24 | 2770 | 2739.6 | 18.61 |
| | | 2op | 2771 | 2762.37 | 1.75 | 2778 | 2763.27 | 3.64 | 2773 | 2762.97 | 5.86 | 2779 | 2758.47 | 11.37 |
| | 50 | rnd | 2775 | 2739.57 | 12.79 | 2772 | 2740.17 | 19.26 | 2767 | 2742.3 | 13.43 | 2759 | 2741.6 | 12.01 |
| | | 2op | 2768 | 2762.07 | 1.6 | 2773 | 2762.57 | 3.01 | 2770 | 2763.53 | 3.5 | 2773 | 2758.3 | 9.31 |

Table A.1401: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2766 | 2745.63 | 12.84 | 2771 | 2742.47 | 13.99 | 2760 | 2740.33 | 12.4 | 2765 | 2738.1 | 14.19 |
| | | 2op | 2777 | 2754.17 | 9.02 | 2776 | 2752.17 | 11.56 | 2767 | 2748.93 | 9.15 | 2770 | 2745.63 | 13.11 |
| | 50 | rnd | 2763 | 2741.43 | 12.74 | 2766 | 2742.23 | 14.44 | 2761 | 2743.03 | 10.45 | 2763 | 2736.83 | 13.97 |
| | | 2op | 2774 | 2751.33 | 11.1 | 2773 | 2754.03 | 13.28 | 2767 | 2746.8 | 13.31 | 2772 | 2746.33 | 14.52 |
| 51 | 20 | rnd | 2769 | 2746.37 | 14.21 | 2766 | 2746.27 | 9.4 | 2766 | 2744.27 | 12.45 | 2768 | 2743.83 | 15.24 |
| | | 2op | 2775 | 2763.23 | 4.85 | 2770 | 2763.23 | 4.06 | 2774 | 2759.6 | 7.17 | 2779 | 2749.23 | 12.77 |
| | 50 | rnd | 2769 | 2748.07 | 12.73 | 2763 | 2743.77 | 11.5 | 2764 | 2744.3 | 12.49 | 2761 | 2739.5 | 12.81 |
| | | 2op | 2776 | 2762.27 | 6.8 | 2772 | 2759.87 | 7.62 | 2774 | 2754.47 | 11.28 | 2771 | 2748.37 | 10.65 |

Table A.1402: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2740.83 | 13.99 | 2767 | 2743 | 14.82 | 2767 | 2744.6 | 14.09 | 2770 | 2741.4 | 13.37 |
| | | 2op | 2770 | 2762.43 | 1.79 | 2771 | 2761.97 | 3.25 | 2770 | 2758.87 | 8.61 | 2773 | 2752.03 | 11.8 |
| | 50 | rnd | 2773 | 2739.73 | 12.51 | 2766 | 2743.4 | 11.52 | 2772 | 2742.53 | 15.67 | 2763 | 2743.23 | 11.83 |
| | | 2op | 2769 | 2762.23 | 1.38 | 2770 | 2762.63 | 2.01 | 2778 | 2762.1 | 7.04 | 2770 | 2749.23 | 12.95 |
| 51 | 20 | rnd | 2767 | 2738.87 | 16.12 | 2757 | 2737.37 | 13.92 | 2768 | 2738.93 | 17.31 | 2773 | 2740.37 | 14.28 |
| | | 2op | 2762 | 2761.93 | 0.37 | 2771 | 2762.13 | 1.8 | 2773 | 2764.13 | 5.37 | 2775 | 2755.03 | 11.44 |
| | 50 | rnd | 2759 | 2737.43 | 18.67 | 2759 | 2739.83 | 11.53 | 2769 | 2740.83 | 15.59 | 2773 | 2742.83 | 13.22 |
| | | 2op | 2762 | 2762 | 0 | 2767 | 2762.4 | 1.13 | 2774 | 2762.93 | 5.95 | 2779 | 2757.03 | 10.03 |

Table A.1403: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2810.7 | 14.63 | 2843 | 2814.37 | 14.41 | 2837 | 2814.13 | 15.34 | 2839 | 2813.9 | 12.79 |
| | | 2op | 2841 | 2811.83 | 14.99 | 2839 | 2811.43 | 13.93 | 2833 | 2810.03 | 13.19 | 2832 | 2810.13 | 11.23 |
| | 50 | rnd | 2837 | 2815.63 | 11.82 | 2838 | 2817.2 | 9.24 | 2840 | 2812.57 | 12.91 | 2835 | 2811.07 | 12.23 |
| | | 2op | 2841 | 2814.93 | 13.26 | 2835 | 2812.57 | 11.58 | 2835 | 2809.3 | 13.31 | 2830 | 2808.13 | 11.57 |
| 51 | 20 | rnd | 2831 | 2813.33 | 12.46 | 2835 | 2818.8 | 12.93 | 2835 | 2810.7 | 18.77 | 2844 | 2811.87 | 12.11 |
| | | 2op | 2844 | 2804.23 | 18.04 | 2835 | 2814.1 | 8.11 | 2839 | 2811.5 | 16.38 | 2825 | 2805.23 | 12.55 |
| | 50 | rnd | 2837 | 2813.9 | 10.56 | 2838 | 2813 | 14.67 | 2832 | 2814.43 | 10.66 | 2842 | 2815.47 | 13.99 |
| | | 2op | 2830 | 2809.6 | 13.74 | 2842 | 2811.77 | 14.54 | 2848 | 2811.47 | 14 | 2835 | 2810.3 | 13.37 |

Table A.1404: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2834 | 2810.1 | 14.44 | 2838 | 2814.1 | 13.2 | 2845 | 2809.4 | 16.84 | 2835 | 2808.7 | 12.44 |
| | | 2op | 2820 | 2807.6 | 5.01 | 2821 | 2808.73 | 5.44 | 2833 | 2808.23 | 8.07 | 2835 | 2812.1 | 9.2 |
| | 50 | rnd | 2837 | 2813.87 | 16.35 | 2830 | 2811.4 | 14.13 | 2834 | 2807.53 | 17.03 | 2837 | 2805.97 | 14.87 |
| | | 2op | 2812 | 2806.53 | 3.57 | 2827 | 2807.4 | 6.09 | 2842 | 2808.63 | 8.26 | 2831 | 2809.67 | 11.48 |
| 51 | 20 | rnd | 2834 | 2809.7 | 14.7 | 2842 | 2815.6 | 9.57 | 2844 | 2813.63 | 12.79 | 2837 | 2809.1 | 16.26 |
| | | 2op | 2818 | 2807.87 | 4.44 | 2821 | 2807.1 | 5.59 | 2828 | 2808.93 | 7.65 | 2839 | 2814.1 | 11.95 |
| | 50 | rnd | 2827 | 2808.7 | 10.57 | 2837 | 2811.73 | 18.95 | 2834 | 2812.4 | 12.84 | 2829 | 2806.13 | 12.85 |
| | | 2op | 2813 | 2806.63 | 3.58 | 2817 | 2806.73 | 5.22 | 2817 | 2807.73 | 5.75 | 2833 | 2808.23 | 11.47 |

Table A.1405: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2836 | 2814.27 | 12.29 | 2837 | 2810.27 | 15.73 | 2838 | 2814.8 | 14.12 | 2837 | 2814.8 | 10.91 |
| | | 2op | 2839 | 2814.93 | 13.03 | 2831 | 2816.87 | 9.04 | 2841 | 2814.4 | 13.76 | 2831 | 2808.03 | 14.14 |
| | 50 | rnd | 2839 | 2815.5 | 12.86 | 2840 | 2817.27 | 10.52 | 2840 | 2814.5 | 14.17 | 2843 | 2812.33 | 11.7 |
| | | 2op | 2841 | 2814.5 | 14.69 | 2837 | 2812.77 | 14.94 | 2835 | 2810.53 | 12.12 | 2838 | 2813.7 | 14.72 |
| 51 | 20 | rnd | 2837 | 2814.83 | 13.12 | 2848 | 2819.23 | 13.25 | 2836 | 2812.47 | 13.27 | 2833 | 2810.93 | 14.23 |
| | | 2op | 2833 | 2807.43 | 11.23 | 2845 | 2814.6 | 13.91 | 2830 | 2807 | 11.75 | 2837 | 2812.53 | 14.48 |
| | 50 | rnd | 2839 | 2812 | 15.11 | 2838 | 2815.6 | 14.18 | 2842 | 2815.5 | 12.56 | 2838 | 2812.47 | 17.08 |
| | | 2op | 2843 | 2813.53 | 12.64 | 2841 | 2817.33 | 11.59 | 2840 | 2812.13 | 17.98 | 2841 | 2815.33 | 13.97 |

Table A.1406: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2827 | 2813.33 | 10.91 | 2830 | 2810.43 | 15.93 | 2838 | 2810.03 | 16.83 | 2838 | 2809.8 | 16.1 |
| | | 2op | 2824 | 2807.27 | 6.73 | 2823 | 2808.97 | 6.85 | 2835 | 2809.53 | 12.29 | 2834 | 2814.33 | 11.66 |
| | 50 | rnd | 2828 | 2813.37 | 8.71 | 2829 | 2813.1 | 9.13 | 2846 | 2812.37 | 16.9 | 2845 | 2813.27 | 13.93 |
| | | 2op | 2814 | 2805.67 | 4.64 | 2820 | 2808.6 | 7.46 | 2833 | 2810.57 | 7.3 | 2834 | 2811.53 | 10.13 |
| 51 | 20 | rnd | 2833 | 2807.73 | 14.14 | 2832 | 2812.53 | 14.3 | 2838 | 2810.37 | 13.69 | 2838 | 2814.4 | 10.51 |
| | | 2op | 2816 | 2806.23 | 5.76 | 2829 | 2808.7 | 7.5 | 2826 | 2807.2 | 8.04 | 2834 | 2811.87 | 10.59 |
| | 50 | rnd | 2842 | 2808.77 | 12.38 | 2835 | 2811.57 | 16.53 | 2838 | 2813.83 | 15.64 | 2836 | 2813.47 | 11.78 |
| | | 2op | 2814 | 2806.6 | 3.89 | 2816 | 2807.47 | 3.57 | 2821 | 2807.23 | 6.54 | 2837 | 2806.6 | 14.73 |

Table A.1407: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2815.5 | 13.96 | 2835 | 2810.17 | 13.51 | 2837 | 2811.47 | 13.81 | 2825 | 2805.8 | 13.12 |
| | | 2op | 2841 | 2813.37 | 13.46 | 2834 | 2807.43 | 11.41 | 2838 | 2810.57 | 13.35 | 2846 | 2814 | 12.91 |
| | 50 | rnd | 2841 | 2814.5 | 14.51 | 2842 | 2815.57 | 14.3 | 2835 | 2805.03 | 15.11 | 2835 | 2814.8 | 11.06 |
| | | 2op | 2833 | 2812.3 | 10.97 | 2838 | 2816.43 | 11.25 | 2843 | 2811.8 | 18.07 | 2835 | 2815.2 | 11.07 |
| 51 | 20 | rnd | 2835 | 2814.77 | 11.36 | 2838 | 2816.23 | 15.99 | 2835 | 2811.67 | 13.78 | 2842 | 2814.87 | 15.36 |
| | | 2op | 2830 | 2806.67 | 6.97 | 2830 | 2805.83 | 7.93 | 2836 | 2813.17 | 8 | 2835 | 2806.7 | 14.19 |
| | 50 | rnd | 2842 | 2817.2 | 13.78 | 2838 | 2817.8 | 12.26 | 2834 | 2813.77 | 12.71 | 2845 | 2811.83 | 16.74 |
| | | 2op | 2845 | 2813.87 | 11.03 | 2838 | 2814.6 | 9.56 | 2834 | 2810.1 | 11.97 | 2838 | 2813.2 | 11.26 |

Table A.1408: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2837 | 2810.47 | 16.11 | 2833 | 2807.57 | 17.14 | 2833 | 2813.1 | 12.89 | 2833 | 2809.67 | 15.24 |
| | | 2op | 2814 | 2805.83 | 5.98 | 2814 | 2805.57 | 5.91 | 2832 | 2809.93 | 10.52 | 2835 | 2809.7 | 15.52 |
| | 50 | rnd | 2839 | 2809.97 | 15.41 | 2839 | 2811.97 | 14.07 | 2840 | 2811.47 | 11.83 | 2837 | 2811.77 | 12.66 |
| | | 2op | 2816 | 2806.67 | 3.56 | 2829 | 2808.53 | 4.99 | 2830 | 2808.6 | 8.89 | 2842 | 2809.17 | 17.74 |
| 51 | 20 | rnd | 2836 | 2811.07 | 13.13 | 2842 | 2810.2 | 13.18 | 2839 | 2809.77 | 17.31 | 2835 | 2810.37 | 13.57 |
| | | 2op | 2813 | 2806.77 | 3.49 | 2813 | 2805.73 | 4.23 | 2824 | 2807.13 | 6.94 | 2834 | 2810.73 | 11.86 |
| | 50 | rnd | 2836 | 2811.63 | 9.95 | 2838 | 2807.2 | 13.97 | 2836 | 2814.77 | 10.4 | 2847 | 2811.97 | 15.89 |
| | | 2op | 2810 | 2805.8 | 2.8 | 2810 | 2805.9 | 3 | 2822 | 2809.57 | 7.58 | 2831 | 2809.2 | 10.97 |

Table A.1409: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2682.97 | 12.42 | 2718 | 2688.87 | 15.28 | 2705 | 2686.83 | 11.3 | 2709 | 2684.5 | 13.12 |
| | | 2op | 2708 | 2689.37 | 14.07 | 2712 | 2689.93 | 11.12 | 2706 | 2687.33 | 10.87 | 2716 | 2684.17 | 14.99 |
| | 50 | rnd | 2708 | 2685.5 | 12.61 | 2708 | 2685.87 | 13.31 | 2704 | 2681.97 | 13.66 | 2710 | 2683.67 | 13.6 |
| | | 2op | 2708 | 2692.07 | 10.3 | 2707 | 2689.1 | 12 | 2711 | 2688.7 | 12.78 | 2707 | 2686.23 | 12.72 |
| 51 | 20 | rnd | 2712 | 2683.77 | 13.71 | 2700 | 2686.17 | 9.48 | 2705 | 2685.6 | 14.7 | 2709 | 2683.37 | 10.8 |
| | | 2op | 2708 | 2694.73 | 8.66 | 2707 | 2690.5 | 11.8 | 2716 | 2693.67 | 11.59 | 2706 | 2688.83 | 12.19 |
| | 50 | rnd | 2711 | 2690.43 | 13.68 | 2713 | 2688.63 | 11.68 | 2707 | 2684.73 | 14.17 | 2699 | 2680.3 | 15.67 |
| | | 2op | 2713 | 2691.4 | 10.58 | 2710 | 2695 | 10.01 | 2711 | 2693.4 | 9.01 | 2708 | 2688.8 | 11.99 |

Table A.1410: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2709 | 2682.07 | 13.94 | 2710 | 2683.53 | 14.76 | 2714 | 2686.57 | 14.43 | 2702 | 2680.13 | 14.46 |
| | | 2op | 2700 | 2693.17 | 4.63 | 2706 | 2696.83 | 5.69 | 2708 | 2692.33 | 8.49 | 2708 | 2689.03 | 10.91 |
| | 50 | rnd | 2700 | 2683.37 | 13.28 | 2710 | 2684.37 | 17.53 | 2716 | 2683.37 | 11.39 | 2708 | 2687.77 | 11.23 |
| | | 2op | 2706 | 2691.37 | 6.99 | 2704 | 2696.93 | 5.19 | 2706 | 2694.17 | 6.06 | 2716 | 2691.2 | 11.75 |
| 51 | 20 | rnd | 2706 | 2683.07 | 12.72 | 2711 | 2685.7 | 15.65 | 2715 | 2687.43 | 14.11 | 2706 | 2684.3 | 10.92 |
| | | 2op | 2701 | 2693.17 | 4.62 | 2715 | 2696.1 | 5.84 | 2707 | 2695.6 | 5.17 | 2710 | 2692.33 | 9.88 |
| | 50 | rnd | 2708 | 2678.43 | 14.62 | 2713 | 2683.13 | 18.89 | 2710 | 2684.67 | 12.44 | 2710 | 2682.93 | 13.94 |
| | | 2op | 2699 | 2693.23 | 4.55 | 2702 | 2695.57 | 2.9 | 2705 | 2694.43 | 6.22 | 2709 | 2690.73 | 10.37 |

Table A.1411: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2713 | 2686.87 | 13.88 | 2706 | 2689.07 | 11.16 | 2707 | 2688.2 | 9.3 | 2703 | 2685.03 | 13.53 |
| | | 2op | 2708 | 2687.03 | 9.77 | 2711 | 2689.23 | 11.92 | 2714 | 2684.53 | 14.37 | 2702 | 2686.17 | 11.07 |
| | 50 | rnd | 2702 | 2685.6 | 11.51 | 2712 | 2693.47 | 11 | 2703 | 2686.97 | 12.54 | 2709 | 2682.37 | 13.88 |
| | | 2op | 2711 | 2692.77 | 13.12 | 2705 | 2688.67 | 10.07 | 2706 | 2691.6 | 8.91 | 2702 | 2685.57 | 11.86 |
| 51 | 20 | rnd | 2709 | 2688 | 11.42 | 2708 | 2684.97 | 11.7 | 2709 | 2683.2 | 15.57 | 2717 | 2685.5 | 16.35 |
| | | 2op | 2708 | 2689 | 13.6 | 2711 | 2691.83 | 9.61 | 2713 | 2692.7 | 9.97 | 2707 | 2687.63 | 11.26 |
| | 50 | rnd | 2708 | 2683.97 | 11.42 | 2712 | 2688.8 | 13.32 | 2705 | 2682.83 | 11.9 | 2703 | 2684.17 | 16.39 |
| | | 2op | 2709 | 2689.7 | 11.52 | 2703 | 2692.53 | 8.99 | 2704 | 2688.8 | 10.19 | 2708 | 2691.47 | 10.5 |

Table A.1412: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2700 | 2678.9 | 11.61 | 2713 | 2685.23 | 15.38 | 2710 | 2684.07 | 12.28 | 2706 | 2684.17 | 14.9 |
| | | 2op | 2704 | 2693.47 | 6 | 2703 | 2693.67 | 5.94 | 2710 | 2693.03 | 9.85 | 2708 | 2690 | 11.37 |
| | 50 | rnd | 2703 | 2684.07 | 11.43 | 2703 | 2683.47 | 10.51 | 2718 | 2683.87 | 12.34 | 2709 | 2682.33 | 14.12 |
| | | 2op | 2703 | 2692.67 | 6.42 | 2711 | 2695.03 | 5.96 | 2710 | 2693.53 | 8.14 | 2717 | 2688.7 | 12.19 |
| 51 | 20 | rnd | 2704 | 2679.5 | 12.68 | 2708 | 2685.97 | 13.7 | 2704 | 2682.23 | 13.35 | 2698 | 2678.97 | 14.18 |
| | | 2op | 2701 | 2693.97 | 5.73 | 2707 | 2697.77 | 4.81 | 2704 | 2692.8 | 7.68 | 2711 | 2693.73 | 9.72 |
| | 50 | rnd | 2703 | 2679.27 | 13.84 | 2708 | 2685.97 | 14.42 | 2707 | 2687.6 | 12.16 | 2707 | 2687.33 | 12.29 |
| | | 2op | 2703 | 2692.03 | 5.99 | 2701 | 2694.9 | 3.26 | 2709 | 2696.83 | 6.73 | 2711 | 2693.27 | 8.36 |

Table A.1413: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2707 | 2689.37 | 10.71 | 2714 | 2689.07 | 12.02 | 2710 | 2684.97 | 14.67 | 2701 | 2682.2 | 15.84 |
| | | 2op | 2715 | 2695.7 | 12.86 | 2709 | 2693.87 | 9.85 | 2709 | 2690.2 | 9.02 | 2710 | 2689.03 | 12.31 |
| | 50 | rnd | 2711 | 2688.4 | 13.69 | 2708 | 2684.6 | 15.89 | 2703 | 2684.63 | 13.24 | 2711 | 2685.67 | 11.35 |
| | | 2op | 2708 | 2690 | 9.49 | 2711 | 2690 | 9.18 | 2709 | 2689.37 | 11.57 | 2705 | 2687.77 | 10.24 |
| 51 | 20 | rnd | 2706 | 2685.93 | 12.66 | 2702 | 2688.43 | 8.88 | 2711 | 2686.83 | 15.97 | 2709 | 2683.83 | 12.16 |
| | | 2op | 2705 | 2696.37 | 3.76 | 2705 | 2695.57 | 4.84 | 2708 | 2693.67 | 7.98 | 2709 | 2690.5 | 13.29 |
| | 50 | rnd | 2709 | 2683.93 | 14.92 | 2702 | 2681.03 | 13.44 | 2710 | 2686.57 | 11.45 | 2713 | 2686.7 | 14.63 |
| | | 2op | 2708 | 2695.2 | 7.6 | 2713 | 2695.33 | 8.71 | 2704 | 2689.7 | 10.01 | 2713 | 2690.17 | 11.39 |

Table A.1414: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2705 | 2678.3 | 11.29 | 2708 | 2683.83 | 12.38 | 2707 | 2687.23 | 11.59 | 2711 | 2689.4 | 16.56 |
| | | 2op | 2700 | 2694.77 | 3.19 | 2704 | 2694.57 | 4.47 | 2711 | 2695.3 | 8.5 | 2713 | 2693.47 | 11.01 |
| | 50 | rnd | 2702 | 2682.13 | 10.54 | 2706 | 2684.9 | 13.14 | 2706 | 2686.9 | 13.52 | 2711 | 2686.7 | 13 |
| | | 2op | 2698 | 2694.3 | 2.53 | 2701 | 2694.83 | 3.62 | 2707 | 2691.63 | 8.36 | 2712 | 2692.17 | 9.43 |
| 51 | 20 | rnd | 2700 | 2678.83 | 13.61 | 2703 | 2676.73 | 16.45 | 2705 | 2688.47 | 8.96 | 2713 | 2684.53 | 12.4 |
| | | 2op | 2700 | 2693.47 | 4.65 | 2706 | 2693.3 | 5.03 | 2704 | 2693.27 | 8.23 | 2705 | 2693.9 | 7.74 |
| | 50 | rnd | 2698 | 2684 | 11.47 | 2708 | 2685.73 | 13.76 | 2715 | 2687.6 | 12.83 | 2716 | 2685.53 | 14.8 |
| | | 2op | 2696 | 2695.07 | 0.25 | 2703 | 2694.8 | 3.13 | 2706 | 2691.2 | 8.16 | 2706 | 2692.47 | 9.2 |

Table A.1415: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17882 | 17786.2 | 42.05 | 17841 | 17796.1 | 32.29 | 17871 | 17789.2 | 39.13 | 17863 | 17792.4 | 41.13 |
| | | 2op | 17864 | 17808.1 | 31.07 | 17894 | 17811.73 | 38.35 | 17862 | 17810.9 | 28.35 | 17880 | 17807.67 | 36.53 |
| | 50 | rnd | 17871 | 17807.37 | 32.64 | 17878 | 17798.63 | 36.52 | 17877 | 17803.53 | 41.03 | 17855 | 17782.07 | 37.76 |
| | | 2op | 17883 | 17808.13 | 34.12 | 17887 | 17805.6 | 44.44 | 17896 | 17814.6 | 36.82 | 17857 | 17801.1 | 29.46 |
| 51 | 20 | rnd | 17857 | 17791.1 | 41.11 | 17876 | 17812.03 | 35.42 | 17834 | 17786.23 | 41.81 | 17848 | 17785.43 | 39.5 |
| | | 2op | 17889 | 17825.17 | 33.4 | 17889 | 17820.37 | 37.66 | 17875 | 17807.57 | 35.04 | 17875 | 17809.3 | 33.69 |
| | 50 | rnd | 17866 | 17801.43 | 38.79 | 17869 | 17792.57 | 39.73 | 17878 | 17799.2 | 47.72 | 17889 | 17802.93 | 49.79 |
| | | 2op | 17882 | 17815.6 | 36.87 | 17877 | 17823.63 | 33.78 | 17882 | 17805.4 | 33.21 | 17896 | 17816.23 | 30.74 |

Table A.1416: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17870 | 17791.77 | 36.7 | 17886 | 17803 | 34.56 | 17887 | 17788.53 | 47.04 | 17845 | 17779.9 | 44.85 |
| | | 2op | 17863 | 17824.6 | 16.04 | 17879 | 17833.97 | 20.41 | 17896 | 17841.83 | 25.57 | 17866 | 17814.9 | 30.42 |
| | 50 | rnd | 17906 | 17800.47 | 45 | 17856 | 17799.73 | 35.11 | 17899 | 17799.47 | 35.64 | 17878 | 17785.33 | 46.37 |
| | | 2op | 17863 | 17821.53 | 18.21 | 17891 | 17831.27 | 22.35 | 17896 | 17833.13 | 26.91 | 17891 | 17836.7 | 30.8 |
| 51 | 20 | rnd | 17899 | 17802.9 | 38.21 | 17871 | 17798.8 | 34.96 | 17866 | 17793.8 | 42.53 | 17860 | 17796.47 | 36.81 |
| | | 2op | 17851 | 17825 | 16.06 | 17867 | 17833.3 | 19.58 | 17888 | 17829.83 | 25.55 | 17886 | 17836.5 | 27.95 |
| | 50 | rnd | 17859 | 17792.17 | 35.18 | 17847 | 17781.93 | 38.19 | 17921 | 17808.7 | 37.78 | 17876 | 17791 | 48.27 |
| | | 2op | 17871 | 17821.8 | 19.39 | 17875 | 17826.5 | 23.11 | 17884 | 17835.53 | 22.87 | 17899 | 17837.07 | 26.08 |

Table A.1417: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17844 | 17790.5 | 29.01 | 17910 | 17801.73 | 44 | 17880 | 17794.73 | 46.31 | 17887 | 17806.9 | 31.33 |
| | | 2op | 17880 | 17812.33 | 40.03 | 17880 | 17808.53 | 47.04 | 17856 | 17804.33 | 33.49 | 17883 | 17810.4 | 38.24 |
| | 50 | rnd | 17886 | 17803.37 | 36.65 | 17879 | 17804.57 | 36.42 | 17882 | 17815.67 | 30.07 | 17843 | 17789.63 | 32.32 |
| | | 2op | 17881 | 17813.33 | 37.47 | 17877 | 17817.1 | 38.58 | 17881 | 17811.7 | 40.25 | 17863 | 17805.37 | 34.76 |
| 51 | 20 | rnd | 17925 | 17796.87 | 41.37 | 17868 | 17797 | 43.42 | 17887 | 17792.33 | 47.55 | 17868 | 17796.07 | 36.27 |
| | | 2op | 17909 | 17818.9 | 40.95 | 17888 | 17811.83 | 40.7 | 17888 | 17828.9 | 31.62 | 17874 | 17794.9 | 34.16 |
| | 50 | rnd | 17853 | 17796.07 | 33.06 | 17861 | 17801.5 | 33.06 | 17898 | 17808.4 | 30.79 | 17833 | 17792.77 | 34.09 |
| | | 2op | 17877 | 17821.13 | 31.69 | 17883 | 17817.33 | 28.69 | 17877 | 17817.53 | 34.99 | 17888 | 17807.2 | 37.05 |

Table A.1418: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17880 | 17792.03 | 40.22 | 17880 | 17804.97 | 33.95 | 17886 | 17787.7 | 45.68 | 17882 | 17796.63 | 40.29 |
| | | 2op | 17863 | 17828.73 | 18.07 | 17889 | 17833 | 20.9 | 17888 | 17832.73 | 25.74 | 17887 | 17826.53 | 31.52 |
| | 50 | rnd | 17861 | 17798.4 | 33.86 | 17850 | 17798.53 | 31.82 | 17884 | 17790.37 | 44.28 | 17877 | 17796.9 | 45.64 |
| | | 2op | 17913 | 17818.8 | 29.31 | 17859 | 17825.4 | 18.97 | 17885 | 17838.37 | 23.8 | 17894 | 17833.33 | 31.55 |
| 51 | 20 | rnd | 17897 | 17797.2 | 39.64 | 17861 | 17796.23 | 35.58 | 17866 | 17793.8 | 41.1 | 17863 | 17800.83 | 36.76 |
| | | 2op | 17872 | 17832.8 | 17.88 | 17876 | 17827 | 21.24 | 17885 | 17829.73 | 24.64 | 17897 | 17836.03 | 25.27 |
| | 50 | rnd | 17921 | 17803.57 | 41.35 | 17876 | 17793.77 | 44.69 | 17866 | 17783 | 44.78 | 17893 | 17808.33 | 41.73 |
| | | 2op | 17871 | 17820.87 | 20.8 | 17860 | 17825.47 | 21.61 | 17896 | 17823.57 | 27.55 | 17906 | 17833.17 | 28.47 |

Table A.1419: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17879 | 17798.03 | 37.31 | 17899 | 17790.47 | 53.04 | 17880 | 17790.57 | 40.15 | 17866 | 17795.7 | 37.21 |
| | | 2op | 17886 | 17822.77 | 30.58 | 17896 | 17814.67 | 31.22 | 17869 | 17812.97 | 33.77 | 17870 | 17800.17 | 33.01 |
| | 50 | rnd | 17865 | 17800.23 | 28 | 17859 | 17809.8 | 30.08 | 17901 | 17814.67 | 40.25 | 17888 | 17806.53 | 43.87 |
| | | 2op | 17891 | 17819.87 | 40.14 | 17872 | 17820.17 | 31.39 | 17893 | 17812.2 | 34.02 | 17887 | 17801.67 | 35.39 |
| 51 | 20 | rnd | 17865 | 17804.77 | 32.95 | 17862 | 17802.3 | 27.88 | 17849 | 17797 | 36.03 | 17906 | 17810.43 | 39.77 |
| | | 2op | 17891 | 17822.67 | 27.54 | 17891 | 17829.83 | 27.84 | 17870 | 17817.87 | 26.03 | 17874 | 17817.73 | 29.8 |
| | 50 | rnd | 17836 | 17782.27 | 32.19 | 17874 | 17789.47 | 36.63 | 17853 | 17790.17 | 31.19 | 17867 | 17801.9 | 37.22 |
| | | 2op | 17896 | 17822.67 | 39.57 | 17896 | 17822.97 | 39.74 | 17889 | 17814.1 | 32.68 | 17864 | 17807.03 | 38.19 |

Table A.1420: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17853 | 17797.6 | 40.81 | 17877 | 17789.93 | 35.25 | 17843 | 17788.17 | 32.32 | 17862 | 17793.07 | 43.34 |
| | | 2op | 17867 | 17821.9 | 18.08 | 17882 | 17822.4 | 23.29 | 17876 | 17836.33 | 24.01 | 17888 | 17812.73 | 36.49 |
| | 50 | rnd | 17868 | 17797.23 | 44.88 | 17883 | 17806.77 | 36.28 | 17866 | 17800.07 | 29.95 | 17881 | 17793.03 | 46.05 |
| | | 2op | 17850 | 17819.1 | 17.11 | 17861 | 17827.87 | 20.35 | 17911 | 17849.87 | 26.3 | 17900 | 17828.17 | 25.88 |
| 51 | 20 | rnd | 17841 | 17789.63 | 38.56 | 17834 | 17782.23 | 31.52 | 17904 | 17785.93 | 43.57 | 17883 | 17795.3 | 43.21 |
| | | 2op | 17881 | 17829.83 | 18.65 | 17860 | 17824 | 20.35 | 17896 | 17840.87 | 30.04 | 17920 | 17835.9 | 36.35 |
| | 50 | rnd | 17899 | 17797.63 | 44.4 | 17851 | 17800.33 | 31.84 | 17861 | 17803.53 | 32.55 | 17872 | 17798.73 | 37.59 |
| | | 2op | 17868 | 17819.8 | 20.93 | 17855 | 17825.53 | 17.08 | 17884 | 17825.37 | 24.21 | 17914 | 17833.93 | 27.64 |

Table A.1421: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22138 | 22071.3 | 45.43 | 22170 | 22064.8 | 43.43 | 22183 | 22056.63 | 48.21 | 22133 | 22060.53 | 36.71 |
| | | 2op | 22174 | 22079.07 | 54.78 | 22156 | 22084.07 | 38.95 | 22132 | 22062.47 | 38.29 | 22177 | 22072.13 | 44.87 |
| | 50 | rnd | 22167 | 22082.03 | 39.55 | 22143 | 22070.47 | 43.39 | 22161 | 22075.33 | 47.57 | 22170 | 22080.4 | 39.39 |
| | | 2op | 22165 | 22087.8 | 39.93 | 22139 | 22077.43 | 34.16 | 22173 | 22079.73 | 52.92 | 22164 | 22080.5 | 39.25 |
| 51 | 20 | rnd | 22164 | 22082 | 51.82 | 22146 | 22066.33 | 34.85 | 22170 | 22065.7 | 44.12 | 22193 | 22066.6 | 54.18 |
| | | 2op | 22160 | 22093.23 | 38.37 | 22150 | 22080.93 | 38.23 | 22164 | 22083.43 | 39.86 | 22195 | 22081.33 | 51.71 |
| | 50 | rnd | 22137 | 22069.23 | 43.42 | 22143 | 22057.6 | 48.01 | 22139 | 22065.53 | 46.61 | 22202 | 22084.37 | 46.51 |
| | | 2op | 22154 | 22084.23 | 35.39 | 22170 | 22093.33 | 41.93 | 22171 | 22087.8 | 45.49 | 22123 | 22070.1 | 31.31 |

Table A.1422: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22166 | 22068.7 | 38.72 | 22124 | 22045.63 | 51.44 | 22139 | 22066.67 | 39.99 | 22154 | 22049.23 | 46.84 |
| | | 2op | 22167 | 22130.67 | 18.82 | 22180 | 22121.93 | 30.73 | 22199 | 22145.3 | 32.38 | 22175 | 22107.3 | 47.96 |
| | 50 | rnd | 22137 | 22063.8 | 53.57 | 22180 | 22076.07 | 47.99 | 22141 | 22059.43 | 50.97 | 22129 | 22064.27 | 35.39 |
| | | 2op | 22162 | 22121.73 | 26.96 | 22198 | 22132.9 | 25.85 | 22214 | 22133.97 | 35.34 | 22220 | 22117.93 | 38.48 |
| 51 | 20 | rnd | 22138 | 22068.4 | 38.27 | 22178 | 22072.13 | 52.6 | 22133 | 22064.53 | 40.4 | 22123 | 22064.33 | 41.55 |
| | | 2op | 22165 | 22128.93 | 27.66 | 22177 | 22125.97 | 27.84 | 22196 | 22140.53 | 26.23 | 22192 | 22126.77 | 35.6 |
| | 50 | rnd | 22175 | 22065.27 | 54.99 | 22162 | 22065.77 | 38.94 | 22146 | 22061.5 | 42.27 | 22171 | 22066.8 | 48.14 |
| | | 2op | 22178 | 22123.13 | 26.74 | 22169 | 22125.8 | 21.39 | 22199 | 22134.77 | 28.07 | 22178 | 22133.87 | 26.15 |

Table A.1423: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22140 | 22059.03 | 36.75 | 22184 | 22082.97 | 46.58 | 22146 | 22057.5 | 46.54 | 22145 | 22065.43 | 42.4 |
| | | 2op | 22183 | 22082.93 | 38.96 | 22163 | 22076.7 | 41.61 | 22168 | 22074.17 | 36.61 | 22156 | 22080.7 | 43.51 |
| | 50 | rnd | 22141 | 22068.53 | 46.9 | 22145 | 22060.7 | 37.7 | 22155 | 22067.73 | 51.82 | 22161 | 22070.83 | 43.84 |
| | | 2op | 22188 | 22086.6 | 45.39 | 22178 | 22087.07 | 45.14 | 22219 | 22077.8 | 46.91 | 22142 | 22073.47 | 38.71 |
| 51 | 20 | rnd | 22144 | 22071.83 | 43.05 | 22157 | 22073.23 | 43.72 | 22183 | 22055.93 | 44.98 | 22144 | 22067.37 | 43.53 |
| | | 2op | 22157 | 22094.47 | 37.08 | 22185 | 22093.47 | 45.41 | 22175 | 22088.4 | 38.22 | 22143 | 22065.43 | 54.76 |
| | 50 | rnd | 22120 | 22066.67 | 35.27 | 22136 | 22065.27 | 45.87 | 22143 | 22047 | 58.62 | 22155 | 22060.2 | 46.45 |
| | | 2op | 22164 | 22092.13 | 49.41 | 22160 | 22096.23 | 45.81 | 22164 | 22075.23 | 54.71 | 22170 | 22094.43 | 39.52 |

Table A.1424: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22163 | 22078.77 | 47.16 | 22160 | 22080.27 | 45.12 | 22130 | 22050 | 42.62 | 22133 | 22053.47 | 42.87 |
| | | 2op | 22192 | 22126.63 | 29.19 | 22183 | 22138.07 | 31.52 | 22187 | 22134.1 | 28.98 | 22196 | 22116.47 | 34.86 |
| | 50 | rnd | 22162 | 22057 | 46.54 | 22134 | 22058.33 | 42.67 | 22148 | 22055.83 | 45.7 | 22135 | 22063.97 | 41.79 |
| | | 2op | 22178 | 22129.1 | 29.36 | 22184 | 22128.67 | 26.73 | 22199 | 22138.47 | 34.91 | 22183 | 22112.03 | 44.15 |
| 51 | 20 | rnd | 22192 | 22068.07 | 47.16 | 22155 | 22073.33 | 51.26 | 22146 | 22065.43 | 42.14 | 22154 | 22061.8 | 50.3 |
| | | 2op | 22164 | 22129.93 | 22.78 | 22189 | 22136.07 | 30.74 | 22203 | 22135.9 | 32.81 | 22229 | 22127.37 | 40.23 |
| | 50 | rnd | 22148 | 22064.6 | 43.2 | 22160 | 22058.07 | 45.14 | 22168 | 22067.17 | 35.91 | 22168 | 22071.2 | 43.66 |
| | | 2op | 22172 | 22120.07 | 26.71 | 22178 | 22122.13 | 31.14 | 22191 | 22138.97 | 29.77 | 22198 | 22124.4 | 34.03 |

Table A.1425: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22178 | 22084.53 | 48.81 | 22150 | 22075.37 | 52.84 | 22203 | 22078.03 | 50.14 | 22133 | 22049.13 | 43.7 |
| | | 2op | 22179 | 22097.27 | 39.56 | 22148 | 22094.6 | 32.7 | 22158 | 22080.03 | 34.52 | 22136 | 22072.3 | 33.35 |
| | 50 | rnd | 22163 | 22065.93 | 48.08 | 22153 | 22060.87 | 52.35 | 22130 | 22048.6 | 45.97 | 22128 | 22056.87 | 47.98 |
| | | 2op | 22173 | 22098.9 | 34.28 | 22186 | 22092.23 | 41.87 | 22180 | 22075.53 | 48.18 | 22153 | 22076.43 | 40.73 |
| 51 | 20 | rnd | 22199 | 22068.6 | 47.82 | 22199 | 22068.6 | 47.82 | 22143 | 22067.33 | 44.74 | 22200 | 22068.97 | 60.78 |
| | | 2op | 22204 | 22121.6 | 35.19 | 22204 | 22115.53 | 33.89 | 22179 | 22103.37 | 39.02 | 22201 | 22096.33 | 47.68 |
| | 50 | rnd | 22155 | 22076.93 | 44.65 | 22155 | 22078.97 | 42.31 | 22154 | 22072.8 | 43.81 | 22166 | 22062.43 | 45.63 |
| | | 2op | 22175 | 22106.07 | 41.22 | 22198 | 22113.47 | 42.78 | 22169 | 22097.5 | 30.35 | 22165 | 22095.27 | 43.2 |

Table A.1426: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22164 | 22058.03 | 51.71 | 22155 | 22063.5 | 43.82 | 22137 | 22065.53 | 38.39 | 22220 | 22069 | 53.22 |
| | | 2op | 22181 | 22121.93 | 26.19 | 22194 | 22133.33 | 25.57 | 22198 | 22132.4 | 37.25 | 22187 | 22106.43 | 42.42 |
| | 50 | rnd | 22136 | 22061.77 | 35.82 | 22128 | 22063.03 | 44.63 | 22176 | 22077.53 | 40.82 | 22157 | 22060.33 | 47.29 |
| | | 2op | 22186 | 22126.77 | 30.31 | 22192 | 22127.57 | 28.44 | 22200 | 22129.07 | 33.92 | 22194 | 22105.83 | 44.64 |
| 51 | 20 | rnd | 22142 | 22076.33 | 44.3 | 22158 | 22068.6 | 49.43 | 22182 | 22087.17 | 43.58 | 22146 | 22066.73 | 47.13 |
| | | 2op | 22171 | 22122.07 | 26.72 | 22177 | 22120.3 | 31 | 22192 | 22132 | 30.58 | 22177 | 22102.87 | 38.51 |
| | 50 | rnd | 22128 | 22042.77 | 54.62 | 22169 | 22065.13 | 39.38 | 22176 | 22065.6 | 46.62 | 22148 | 22060.73 | 48.87 |
| | | 2op | 22172 | 22126.93 | 27.66 | 22206 | 22132.6 | 34.71 | 22176 | 22129.7 | 27.72 | 22218 | 22133.4 | 33.48 |

Table A.1427: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24737 | 24662.73 | 44.97 | 24747 | 24639.5 | 56.87 | 24752 | 24672.57 | 49.29 | 24776 | 24660.43 | 50.57 |
| | | 2op | 24816 | 24672.03 | 46.28 | 24728 | 24664.77 | 37.49 | 24733 | 24664.87 | 41.35 | 24769 | 24667.77 | 50.36 |
| | 50 | rnd | 24759 | 24667.47 | 51.05 | 24771 | 24656.47 | 51.22 | 24728 | 24664.8 | 39.58 | 24747 | 24655.83 | 41.04 |
| | | 2op | 24773 | 24680.4 | 41.5 | 24755 | 24689 | 49.2 | 24764 | 24662.27 | 48.58 | 24763 | 24676.33 | 43.19 |
| 51 | 20 | rnd | 24782 | 24673.73 | 50.69 | 24791 | 24669.97 | 50.42 | 24744 | 24664.77 | 52.91 | 24746 | 24655.37 | 44.26 |
| | | 2op | 24764 | 24690.03 | 33.14 | 24774 | 24686.67 | 48.27 | 24786 | 24668.33 | 48.5 | 24761 | 24674.53 | 38.26 |
| | 50 | rnd | 24777 | 24664.43 | 53.11 | 24746 | 24674.87 | 36.95 | 24795 | 24653.17 | 57.01 | 24746 | 24653.8 | 46.42 |
| | | 2op | 24796 | 24680.9 | 43.98 | 24754 | 24675.87 | 39.95 | 24776 | 24684.4 | 49.12 | 24766 | 24664.6 | 50.86 |

Table A.1428: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24735 | 24674.03 | 43.38 | 24731 | 24659.37 | 49.11 | 24762 | 24667.8 | 51.36 | 24741 | 24671.9 | 43.3 |
| | | 2op | 24758 | 24686.27 | 37.67 | 24778 | 24700.63 | 35.18 | 24794 | 24699.57 | 39.98 | 24760 | 24669.5 | 35.95 |
| | 50 | rnd | 24754 | 24651.7 | 60.03 | 24775 | 24656.33 | 39.57 | 24732 | 24663.2 | 40.92 | 24764 | 24683.3 | 43.68 |
| | | 2op | 24760 | 24674.97 | 42.56 | 24757 | 24695.77 | 38.78 | 24754 | 24683.3 | 33.48 | 24757 | 24687.47 | 39.31 |
| 51 | 20 | rnd | 24808 | 24662.53 | 65.95 | 24731 | 24665.37 | 34.7 | 24790 | 24681.97 | 49.91 | 24747 | 24658.4 | 48.67 |
| | | 2op | 24769 | 24694.57 | 40.81 | 24746 | 24689.8 | 36.73 | 24769 | 24688.63 | 41.29 | 24778 | 24697.3 | 35.47 |
| | 50 | rnd | 24742 | 24655.17 | 49.91 | 24767 | 24664.9 | 48.45 | 24754 | 24658.63 | 51.39 | 24746 | 24671.27 | 47.59 |
| | | 2op | 24726 | 24684 | 28.83 | 24767 | 24693.43 | 37.32 | 24763 | 24701.8 | 32.8 | 24776 | 24701.53 | 40.43 |

Table A.1429: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24770 | 24680.73 | 38.89 | 24744 | 24665.7 | 55.27 | 24752 | 24660.63 | 59.78 | 24772 | 24673.63 | 46.01 |
| | | 2op | 24844 | 24661.1 | 62.73 | 24803 | 24670.23 | 50.18 | 24776 | 24668.37 | 54.44 | 24770 | 24683.27 | 46.38 |
| | 50 | rnd | 24752 | 24663.53 | 50.09 | 24727 | 24665.1 | 38.52 | 24771 | 24647.43 | 62.5 | 24778 | 24664.53 | 54.67 |
| | | 2op | 24754 | 24662.83 | 54.36 | 24771 | 24686.4 | 43.51 | 24733 | 24659.17 | 35.85 | 24749 | 24687.43 | 48.58 |
| 51 | 20 | rnd | 24763 | 24674.6 | 47.46 | 24770 | 24665.4 | 53.88 | 24800 | 24659.97 | 49.22 | 24746 | 24662 | 54.21 |
| | | 2op | 24747 | 24684.87 | 38.28 | 24744 | 24672.23 | 38.67 | 24772 | 24662.1 | 46.08 | 24720 | 24662.57 | 37.64 |
| | 50 | rnd | 24775 | 24683.23 | 49.99 | 24730 | 24671.83 | 38.58 | 24767 | 24679.8 | 42.61 | 24760 | 24675.63 | 53.21 |
| | | 2op | 24756 | 24678.07 | 50.28 | 24796 | 24680 | 54.64 | 24787 | 24685.6 | 40.08 | 24741 | 24669.87 | 40.71 |

Table A.1430: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24753 | 24667.9 | 54.58 | 24771 | 24682.13 | 50.59 | 24762 | 24668.57 | 53.11 | 24784 | 24665.27 | 51.19 |
| | | 2op | 24730 | 24686.73 | 29.37 | 24785 | 24699.57 | 35.22 | 24795 | 24688.87 | 33.36 | 24749 | 24695.37 | 34.59 |
| | 50 | rnd | 24729 | 24661.23 | 40.52 | 24744 | 24670.93 | 41.89 | 24788 | 24661.23 | 48.81 | 24754 | 24669.67 | 41.53 |
| | | 2op | 24728 | 24679.8 | 32.73 | 24763 | 24692.43 | 43.14 | 24790 | 24697.83 | 34.95 | 24793 | 24690.53 | 49.59 |
| 51 | 20 | rnd | 24747 | 24667.6 | 49.15 | 24788 | 24678.7 | 46.57 | 24781 | 24663.57 | 53.57 | 24734 | 24666.8 | 46.16 |
| | | 2op | 24729 | 24669.03 | 26.96 | 24746 | 24688.23 | 30.4 | 24774 | 24692.17 | 29.69 | 24778 | 24687.77 | 35.74 |
| | 50 | rnd | 24745 | 24664.7 | 49.48 | 24811 | 24683.17 | 62.38 | 24812 | 24659 | 53.61 | 24736 | 24649.9 | 41.68 |
| | | 2op | 24732 | 24679.93 | 29.93 | 24763 | 24692.57 | 36.63 | 24775 | 24697.63 | 37.68 | 24772 | 24692.97 | 40.52 |

Table A.1431: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24757 | 24675.83 | 47.13 | 24732 | 24657.53 | 41.06 | 24720 | 24640.67 | 46.92 | 24754 | 24657.37 | 43.04 |
| | | 2op | 24790 | 24675.77 | 52.45 | 24748 | 24666.1 | 50.84 | 24777 | 24662.73 | 48.91 | 24767 | 24679.2 | 49.43 |
| | 50 | rnd | 24739 | 24651.23 | 53.09 | 24732 | 24652.4 | 45.58 | 24759 | 24657.27 | 56.2 | 24751 | 24675.67 | 32.95 |
| | | 2op | 24752 | 24667.23 | 39.05 | 24781 | 24682.93 | 38.61 | 24767 | 24681.87 | 47.78 | 24772 | 24679.3 | 44.62 |
| 51 | 20 | rnd | 24782 | 24672.13 | 54.39 | 24782 | 24672.13 | 54.39 | 24766 | 24673.33 | 52.29 | 24797 | 24667.97 | 61.86 |
| | | 2op | 24774 | 24683.83 | 38.46 | 24774 | 24683.83 | 38.46 | 24778 | 24671 | 55.37 | 24786 | 24667.57 | 58.67 |
| | 50 | rnd | 24754 | 24674.3 | 41.95 | 24754 | 24674.3 | 41.95 | 24757 | 24650.8 | 53.14 | 24734 | 24661.07 | 34.91 |
| | | 2op | 24780 | 24705.2 | 32.24 | 24780 | 24705.2 | 32.24 | 24736 | 24657.47 | 43.8 | 24760 | 24678.9 | 48.06 |

Table A.1432: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24809 | 24674.27 | 43.08 | 24787 | 24666.63 | 43.53 | 24750 | 24659.13 | 57.33 | 24796 | 24681.93 | 53.35 |
| | | 2op | 24778 | 24687.57 | 34.29 | 24751 | 24686.2 | 38.87 | 24798 | 24689.13 | 44.55 | 24790 | 24680.73 | 44.59 |
| | 50 | rnd | 24727 | 24646.43 | 41.62 | 24742 | 24662.17 | 45.47 | 24771 | 24656.37 | 59.25 | 24750 | 24666.93 | 45.65 |
| | | 2op | 24740 | 24678.57 | 33.48 | 24754 | 24681.27 | 34.04 | 24796 | 24706.7 | 37.16 | 24775 | 24706.03 | 35.91 |
| 51 | 20 | rnd | 24778 | 24664.87 | 53.45 | 24755 | 24674.7 | 51.6 | 24775 | 24657.97 | 49.92 | 24729 | 24642.2 | 48.06 |
| | | 2op | 24756 | 24682 | 34.36 | 24742 | 24682.8 | 30.55 | 24757 | 24691.7 | 32.02 | 24792 | 24689.73 | 45.61 |
| | 50 | rnd | 24749 | 24661.1 | 46 | 24778 | 24668.43 | 44.53 | 24791 | 24672.3 | 52.43 | 24757 | 24665.63 | 49.5 |
| | | 2op | 24757 | 24681.8 | 33.33 | 24758 | 24681.6 | 38.16 | 24737 | 24695.43 | 22.23 | 24790 | 24693.3 | 43.89 |

Table A.1433: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47970 | 47857.6 | 61.56 | 47974 | 47860.57 | 83.4 | 47985 | 47841.37 | 83.33 | 48016 | 47857.93 | 80.98 |
| | | 2op | 48104 | 47872.77 | 99.07 | 47990 | 47871.77 | 69.75 | 48058 | 47881.13 | 55.18 | 48004 | 47858.17 | 63.21 |
| | 50 | rnd | 48057 | 47894.67 | 84.9 | 47986 | 47856.03 | 77.18 | 48017 | 47836 | 76.2 | 48025 | 47848.67 | 70.98 |
| | | 2op | 48080 | 47908.57 | 74.1 | 48007 | 47860.73 | 58.27 | 48012 | 47869.03 | 74.37 | 48015 | 47888.53 | 59.38 |
| 51 | 20 | rnd | 48067 | 47877.27 | 70.49 | 48067 | 47868.37 | 89.96 | 47960 | 47867.07 | 67.08 | 48024 | 47849.87 | 72.61 |
| | | 2op | 48003 | 47891.6 | 69.31 | 48055 | 47886.97 | 67.93 | 48039 | 47882.47 | 63.55 | 48031 | 47875.43 | 67.32 |
| | 50 | rnd | 48042 | 47865.43 | 71.56 | 48096 | 47840.37 | 97.09 | 48030 | 47855.27 | 79.85 | 48029 | 47847.23 | 90.2 |
| | | 2op | 48079 | 47908.27 | 71.27 | 48028 | 47892.33 | 87.67 | 48041 | 47884.13 | 69.93 | 48078 | 47886.13 | 80.9 |

Table A.1434: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48003 | 47857.47 | 99.4 | 47998 | 47840.37 | 91 | 47965 | 47832.73 | 69.6 | 47964 | 47815.27 | 76.6 |
| | | 2op | 48007 | 47905.9 | 50.89 | 48043 | 47910.87 | 55.24 | 48124 | 47927.4 | 91.19 | 48103 | 47915.97 | 69.44 |
| | 50 | rnd | 47997 | 47846.03 | 83.05 | 47970 | 47854.77 | 63.47 | 47983 | 47837.47 | 66.1 | 47994 | 47866.53 | 59.53 |
| | | 2op | 48027 | 47887.67 | 59.75 | 48030 | 47920.13 | 70.36 | 48067 | 47960.3 | 61.83 | 48030 | 47919.9 | 58.29 |
| 51 | 20 | rnd | 47959 | 47815.17 | 67.55 | 47973 | 47863.53 | 67.3 | 48090 | 47831.73 | 108.29 | 47999 | 47810 | 102.62 |
| | | 2op | 48007 | 47918.37 | 54.99 | 48022 | 47924.17 | 59.65 | 48154 | 47930.6 | 63.03 | 48091 | 47945.07 | 81.32 |
| | 50 | rnd | 48012 | 47852.37 | 88.23 | 48002 | 47834.47 | 75.25 | 47957 | 47856.5 | 71.38 | 47979 | 47846.3 | 79.58 |
| | | 2op | 47994 | 47895.97 | 51.61 | 48010 | 47914.9 | 54.56 | 48029 | 47915.3 | 52.35 | 48094 | 47948.17 | 68.4 |

Table A.1435: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48033 | 47858.03 | 76.76 | 48077 | 47848.13 | 100.18 | 47967 | 47832.2 | 79.98 | 47971 | 47849.3 | 83.01 |
| | | 2op | 48016 | 47896.63 | 76.49 | 48051 | 47878 | 65.94 | 48030 | 47876.03 | 81.42 | 48008 | 47865.6 | 71.59 |
| | 50 | rnd | 48000 | 47861.3 | 84.69 | 48025 | 47861.37 | 72.3 | 48032 | 47823.83 | 101.51 | 48043 | 47863.1 | 87.03 |
| | | 2op | 48096 | 47870.2 | 95.19 | 48040 | 47858.57 | 82.46 | 48050 | 47852.9 | 85.44 | 48013 | 47880.5 | 75.12 |
| 51 | 20 | rnd | 48051 | 47907.73 | 77.27 | 47993 | 47864.2 | 76.6 | 47960 | 47831.37 | 75.98 | 48098 | 47871.6 | 92.92 |
| | | 2op | 48108 | 47903.37 | 77.76 | 48017 | 47872.97 | 83.35 | 48048 | 47879.63 | 72.11 | 48046 | 47884.37 | 68.98 |
| | 50 | rnd | 48021 | 47851.93 | 80.68 | 47990 | 47861.6 | 68.72 | 47940 | 47824.3 | 60.56 | 47979 | 47849.33 | 73.33 |
| | | 2op | 48056 | 47920.03 | 77.32 | 48132 | 47918.07 | 79.27 | 48029 | 47875.47 | 70.79 | 48108 | 47864.83 | 96.88 |

Table A.1436: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47993 | 47850.57 | 75.47 | 48010 | 47877.1 | 74.91 | 48003 | 47828.13 | 114.68 | 48041 | 47867.13 | 74.19 |
| | | 2op | 48010 | 47913.97 | 57.44 | 48032 | 47928.17 | 60.18 | 48039 | 47925.3 | 60.57 | 48094 | 47913.53 | 69.16 |
| | 50 | rnd | 47982 | 47856.47 | 81.14 | 48081 | 47850.5 | 73.37 | 48033 | 47860.53 | 87.26 | 47993 | 47858.43 | 86.78 |
| | | 2op | 47984 | 47899.43 | 56.69 | 48021 | 47915.53 | 57.08 | 48072 | 47932.43 | 67.82 | 48036 | 47911.2 | 69.82 |
| 51 | 20 | rnd | 48059 | 47876 | 88.89 | 47978 | 47843.5 | 76.05 | 47970 | 47867 | 63.03 | 47996 | 47857.13 | 84.33 |
| | | 2op | 48025 | 47918.8 | 53.21 | 48084 | 47945.2 | 60.64 | 48052 | 47942.5 | 50.02 | 48061 | 47934.83 | 65.38 |
| | 50 | rnd | 48016 | 47851.97 | 74.44 | 47948 | 47848.83 | 67.03 | 48029 | 47825.8 | 63.68 | 48027 | 47845.27 | 96.44 |
| | | 2op | 48059 | 47920.77 | 61.83 | 48018 | 47925.97 | 55.69 | 48061 | 47933.3 | 66.43 | 48045 | 47924.63 | 71.21 |

Table A.1437: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48002 | 47844.03 | 68.81 | 48002 | 47844.03 | 68.81 | 47998 | 47865.57 | 70.59 | 48008 | 47838.6 | 81.28 |
| | | 2op | 48087 | 47927.4 | 67.38 | 48087 | 47927.4 | 67.38 | 48104 | 47877.97 | 75.13 | 48040 | 47884.5 | 69.46 |
| | 50 | rnd | 47964 | 47864.73 | 63.01 | 47964 | 47864.73 | 63.01 | 47983 | 47848.3 | 68.07 | 47998 | 47858.77 | 61.59 |
| | | 2op | 48054 | 47892.23 | 82.12 | 48054 | 47892.23 | 82.12 | 48004 | 47865.87 | 74.99 | 48009 | 47877.5 | 77.4 |
| 51 | 20 | rnd | 48035 | 47861 | 70.01 | 48035 | 47861 | 70.01 | 47962 | 47856.27 | 61.44 | 47942 | 47832.03 | 60.48 |
| | | 2op | 48086 | 47910.27 | 76.76 | 48086 | 47910.27 | 76.76 | 48024 | 47895.77 | 66.64 | 48098 | 47887.67 | 80.97 |
| | 50 | rnd | 48042 | 47841.27 | 77.04 | 48042 | 47841.27 | 77.04 | 47976 | 47809.13 | 85.75 | 47991 | 47810.1 | 89.97 |
| | | 2op | 48161 | 47899.9 | 81.34 | 48161 | 47899.9 | 81.34 | 47986 | 47886.07 | 47.49 | 48031 | 47869.2 | 74.26 |

Table A.1438: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48067 | 47865.93 | 79.66 | 47977 | 47860.63 | 76.74 | 47978 | 47866.5 | 67.57 | 47976 | 47854.8 | 59.08 |
| | | 2op | 48046 | 47931 | 60.32 | 48090 | 47937.3 | 53.94 | 48068 | 47945 | 68.12 | 48069 | 47911.1 | 76.17 |
| | 50 | rnd | 47965 | 47854.07 | 64.58 | 47957 | 47855.57 | 70.13 | 48090 | 47887.67 | 82.34 | 47966 | 47838.6 | 63.15 |
| | | 2op | 48013 | 47908.23 | 60.7 | 48007 | 47900.53 | 56.1 | 48047 | 47921.53 | 76.96 | 48092 | 47952.47 | 76.02 |
| 51 | 20 | rnd | 48092 | 47864.67 | 79.98 | 48092 | 47864.67 | 79.98 | 48112 | 47844.97 | 110.85 | 47945 | 47840.17 | 60.56 |
| | | 2op | 48168 | 47945.23 | 77.72 | 48062 | 47926.7 | 55.95 | 48010 | 47919.5 | 58.49 | 47988 | 47912.83 | 44.89 |
| | 50 | rnd | 47995 | 47860.03 | 93.25 | 47990 | 47844.83 | 80.31 | 48015 | 47871.93 | 64.9 | 48039 | 47866.63 | 91.73 |
| | | 2op | 47997 | 47907.7 | 53.85 | 48024 | 47912.67 | 58.02 | 48013 | 47934.73 | 50.45 | 48105 | 47957.3 | 71.6 |

Table A.1439: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56133 | 55944.5 | 86.47 | 56108 | 55940.9 | 94.81 | 56055 | 55922.33 | 79.46 | 56131 | 55911.13 | 113.25 |
| | | 2op | 56133 | 55964.17 | 95.99 | 56122 | 55963.73 | 89.3 | 56214 | 55938.43 | 102.21 | 56114 | 55953.93 | 109.64 |
| | 50 | rnd | 56124 | 55930.8 | 81.75 | 56130 | 55927.27 | 102.67 | 56098 | 55902.5 | 89.02 | 56205 | 55937.6 | 104.6 |
| | | 2op | 56179 | 55989.73 | 81.19 | 56098 | 55958.3 | 82.79 | 56103 | 55950.03 | 76.22 | 56193 | 55978.1 | 88.92 |
| 51 | 20 | rnd | 56100 | 55935.07 | 82.69 | 56086 | 55939.1 | 83.46 | 56147 | 55900.13 | 85.57 | 56088 | 55925.9 | 71.94 |
| | | 2op | 56202 | 55979.4 | 83.12 | 56102 | 55959.7 | 88.69 | 56105 | 55958.93 | 93.49 | 56111 | 55974.3 | 80.33 |
| | 50 | rnd | 56151 | 55970.2 | 79.4 | 56144 | 55959.33 | 88.91 | 56105 | 55913.97 | 85.75 | 56045 | 55929.27 | 67.48 |
| | | 2op | 56134 | 55987.6 | 68.41 | 56193 | 55986.1 | 82.81 | 56131 | 55967.3 | 82.61 | 56064 | 55949.07 | 53.55 |

Table A.1440: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56093 | 55893.87 | 103.21 | 56148 | 55945 | 80.61 | 56182 | 55942.17 | 98.7 | 56047 | 55916.13 | 85 |
| | | 2op | 56156 | 55984.27 | 70.12 | 56116 | 55978.77 | 62.46 | 56161 | 56024.27 | 69.23 | 56171 | 56016.57 | 83.75 |
| | 50 | rnd | 56152 | 55916 | 105.66 | 56131 | 55959.53 | 72.93 | 56110 | 55936.77 | 76.84 | 56051 | 55898.37 | 77.95 |
| | | 2op | 56168 | 55946.73 | 69.47 | 56170 | 55977.33 | 71.19 | 56161 | 56027.8 | 61.93 | 56168 | 56020.8 | 79.09 |
| 51 | 20 | rnd | 56065 | 55928.83 | 83.98 | 56104 | 55955.53 | 72.05 | 56120 | 55945.33 | 80.11 | 56077 | 55903.77 | 83.29 |
| | | 2op | 56056 | 55949.4 | 55.61 | 56093 | 55962.4 | 56.59 | 56124 | 56006.87 | 60.58 | 56161 | 56024.9 | 62.77 |
| | 50 | rnd | 56030 | 55909.7 | 59.99 | 56057 | 55941.67 | 87.74 | 56083 | 55909.87 | 72.49 | 56168 | 55943.4 | 116.23 |
| | | 2op | 56041 | 55939.43 | 57.72 | 56084 | 55960.2 | 53.98 | 56104 | 55980.77 | 59.95 | 56151 | 56025.13 | 57.35 |

Table A.1441: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56168 | 55962.37 | 104.1 | 56088 | 55941.73 | 88.05 | 56080 | 55927.8 | 74.91 | 56125 | 55936.5 | 96.18 |
| | | 2op | 56159 | 55993.77 | 69.24 | 56145 | 55996.2 | 77.4 | 56121 | 55968.6 | 90.05 | 56145 | 55953.63 | 72.82 |
| | 50 | rnd | 56172 | 55960.07 | 92.73 | 56066 | 55931.37 | 76.16 | 56083 | 55955.5 | 81.91 | 56029 | 55916 | 87.14 |
| | | 2op | 56129 | 56006.67 | 77.86 | 56137 | 55952.73 | 97.68 | 56094 | 55963.1 | 90.63 | 56067 | 55951.73 | 77.18 |
| 51 | 20 | rnd | 56099 | 55953.03 | 78.58 | 56098 | 55965 | 83.41 | 56168 | 55952.97 | 96.98 | 56068 | 55935.03 | 84.74 |
| | | 2op | 56156 | 55996.27 | 82.24 | 56142 | 56004.8 | 77.38 | 56099 | 55936.9 | 75.27 | 56098 | 55988.07 | 65.89 |
| | 50 | rnd | 56099 | 55933.73 | 76.18 | 56177 | 55936 | 89.32 | 56073 | 55933.33 | 80.87 | 56092 | 55925.3 | 73.22 |
| | | 2op | 56106 | 55987.3 | 78.26 | 56169 | 56002.03 | 69.78 | 56155 | 55969.33 | 109.15 | 56113 | 55979.23 | 72.3 |

Table A.1442: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56139 | 55909.33 | 104.41 | 56107 | 55949.2 | 80.46 | 56020 | 55898.47 | 69.87 | 56155 | 55955.43 | 91.27 |
| | | 2op | 56116 | 55960.2 | 65.95 | 56127 | 55993.93 | 75.13 | 56215 | 55991.83 | 68.17 | 56108 | 55992.1 | 69.72 |
| | 50 | rnd | 56114 | 55947.03 | 86.19 | 56147 | 55923.97 | 84.33 | 56086 | 55908.3 | 84.58 | 55996 | 55914.43 | 64.7 |
| | | 2op | 56084 | 55951.9 | 50.51 | 56113 | 55976 | 52.47 | 56108 | 56018.67 | 51.3 | 56169 | 56006 | 68.87 |
| 51 | 20 | rnd | 56108 | 55933.53 | 89.43 | 56092 | 55926.57 | 82.01 | 56091 | 55914.23 | 75.41 | 56109 | 55929.4 | 102.67 |
| | | 2op | 56161 | 55990.43 | 65.73 | 56085 | 55986.5 | 69.03 | 56100 | 55999.43 | 56.98 | 56145 | 56031.3 | 69.98 |
| | 50 | rnd | 56120 | 55946.63 | 82.67 | 56170 | 55908.63 | 89.4 | 56083 | 55945.7 | 60.2 | 56137 | 55959.2 | 78.54 |
| | | 2op | 56062 | 55962.17 | 46.28 | 56150 | 55969.33 | 55.09 | 56110 | 55985.3 | 60.84 | 56193 | 56018.17 | 69.68 |

Table A.1443: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56123 | 55919.67 | 87.96 | 56123 | 55919.67 | 87.96 | 56129 | 55913.2 | 84.72 | 56070 | 55951.27 | 71.9 |
| | | 2op | 56118 | 55981.7 | 73.73 | 56118 | 55981.7 | 73.73 | 56138 | 55954.27 | 101.76 | 56152 | 55987.17 | 97.54 |
| | 50 | rnd | 56195 | 55923.87 | 111.28 | 56195 | 55923.87 | 111.28 | 56103 | 55914.03 | 84.23 | 56053 | 55928.33 | 69.87 |
| | | 2op | 56122 | 55983 | 69.65 | 56122 | 55983 | 69.65 | 56096 | 55985.37 | 70.72 | 56109 | 55977.47 | 84.61 |
| 51 | 20 | rnd | 56193 | 55940.7 | 96.72 | 56193 | 55940.7 | 96.72 | 56091 | 55940.33 | 90.3 | 56061 | 55941.63 | 69.33 |
| | | 2op | 56178 | 56018.9 | 75.05 | 56178 | 56018.9 | 75.05 | 56098 | 55946.43 | 92.29 | 56119 | 55991.17 | 62.32 |
| | 50 | rnd | 56062 | 55915.77 | 74.41 | 56062 | 55915.77 | 74.41 | 56074 | 55928.83 | 69.66 | 56115 | 55956.57 | 79.61 |
| | | 2op | 56110 | 55979.1 | 77.78 | 56110 | 55979.1 | 77.78 | 56139 | 55985.57 | 80.84 | 56139 | 55958.97 | 88.77 |

Table A.1444: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56143 | 55942.57 | 98.83 | 56139 | 55931.73 | 78.41 | 56100 | 55948.57 | 85.87 | 56075 | 55925.97 | 87.59 |
| | | 2op | 56091 | 55962.57 | 57.34 | 56186 | 55982.97 | 71.6 | 56204 | 56047.07 | 70.69 | 56143 | 56004.7 | 62.06 |
| | 50 | rnd | 56069 | 55937.1 | 100.55 | 56076 | 55938.93 | 75.2 | 56077 | 55947.6 | 69.34 | 56159 | 55938.77 | 86.67 |
| | | 2op | 56077 | 55945.03 | 76.71 | 56142 | 55983.93 | 52.84 | 56161 | 56008 | 73.97 | 56148 | 56003.23 | 74.02 |
| 51 | 20 | rnd | 56059 | 55947.2 | 70.21 | 56059 | 55947.2 | 70.21 | 56060 | 55940.7 | 70.49 | 56136 | 55945.4 | 84.8 |
| | | 2op | 56098 | 55938.93 | 71.43 | 56058 | 55950.67 | 67.89 | 56159 | 56000.43 | 57.46 | 56187 | 56024.47 | 80.53 |
| | 50 | rnd | 56146 | 55944 | 88.23 | 56146 | 55942.13 | 75.78 | 56175 | 55940 | 97.49 | 56091 | 55929.03 | 98.32 |
| | | 2op | 56056 | 55938.6 | 59.05 | 56102 | 55981.33 | 57.37 | 56138 | 55995.97 | 76 | 56160 | 56019.53 | 95.26 |

Table A.1445: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

### A.6.3 Third Set of Results

**Results With No Post Optimization and No Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47286 | 47054.33 | 124.55 | 47270 | 47048.3 | 111.16 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47238 | 47043 | 117.89 | 47269 | 47055.97 | 111.47 | 47274 | 47272.03 | 10.77 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47333 | 47143.93 | 103.26 | 47339 | 47150.37 | 103.67 | 47392 | 47139.23 | 123.14 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47262 | 47118.77 | 97.81 | 47278 | 47119.33 | 113.72 | 47356 | 47144.17 | 126.42 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.1446: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47334 | 47236.83 | 59.63 | 47343 | 47210.2 | 58.8 | 47394 | 47211.87 | 80.39 | 47344 | 47225.17 | 77.3 |
| | | 2op | 47377 | 47310.33 | 31.07 | 47359 | 47280.23 | 21.13 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47382 | 47256.4 | 75.48 | 47443 | 47298.73 | 64.56 | 47336 | 47210.73 | 75.7 | 47321 | 47177.3 | 66.83 |
| | | 2op | 47432 | 47335.73 | 32.2 | 47368 | 47312.17 | 35.04 | 47325 | 47275.7 | 9.31 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47361 | 47247.9 | 72.95 | 47421 | 47325.27 | 48.51 | 47338 | 47207 | 70.03 | 47341 | 47208.73 | 87.12 |
| | | 2op | 47395 | 47323.7 | 35.64 | 47412 | 47339.97 | 38.2 | 47365 | 47279.37 | 20.61 | 47274 | 47274 | 0 |
| | 50 | rnd | 47356 | 47260.4 | 61.62 | 47444 | 47351.4 | 52.67 | 47386 | 47250.67 | 67.36 | 47359 | 47243.27 | 86.58 |
| | | 2op | 47401 | 47329.33 | 30.68 | 47437 | 47375.93 | 26.36 | 47344 | 47276.33 | 12.78 | 47274 | 47274 | 0 |

Table A.1447: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47270 | 47088.13 | 102.88 | 47284 | 47078.87 | 131.36 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47354 | 47059.07 | 131.45 | 47271 | 47086.77 | 126.83 | 47274 | 47253.6 | 67.1 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47332 | 47124.53 | 85.24 | 47332 | 47125.33 | 87.53 | 47292 | 47149.57 | 78.18 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47278 | 47089.7 | 112.54 | 47286 | 47099.7 | 111.08 | 47358 | 47115.27 | 124.75 | 47274 | 47271.8 | 12.05 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.1448: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47336 | 47235.77 | 67.08 | 47344 | 47244.27 | 65.01 | 47365 | 47205.9 | 76.91 | 47429 | 47206.93 | 96.41 |
| | | 2op | 47390 | 47327.87 | 35.71 | 47360 | 47283.57 | 22.98 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47448 | 47244.07 | 58.29 | 47416 | 47281.47 | 76.51 | 47345 | 47172.8 | 89.31 | 47310 | 47174.8 | 86.64 |
| | | 2op | 47398 | 47342.43 | 33.62 | 47398 | 47317.23 | 39.7 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47350 | 47264.67 | 62.89 | 47421 | 47328.17 | 47.1 | 47340 | 47203.83 | 70.13 | 47356 | 47180.4 | 112.18 |
| | | 2op | 47393 | 47310.57 | 36.22 | 47426 | 47349.4 | 37.48 | 47357 | 47276.77 | 15.15 | 47274 | 47274 | 0 |
| | 50 | rnd | 47391 | 47269.67 | 59.19 | 47418 | 47359.2 | 39.3 | 47402 | 47257.5 | 66.53 | 47409 | 47242 | 77.51 |
| | | 2op | 47410 | 47331.2 | 38.92 | 47426 | 47383.47 | 21.45 | 47359 | 47283.93 | 22.75 | 47274 | 47274 | 0 |

Table A.1449: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47303 | 47117.63 | 89.14 | 47310 | 47111.4 | 92.22 | 47274 | 47265.97 | 44 | 47274 | 47274 | 0 |
| | | 2op | 47348 | 47276.47 | 13.51 | 47348 | 47276.47 | 13.51 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47369 | 47160.63 | 109.99 | 47369 | 47160.07 | 110.67 | 47274 | 47252.83 | 55.15 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47350 | 47240.8 | 58.03 | 47383 | 47240 | 61.26 | 47419 | 47229.07 | 92.89 | 47274 | 47274 | 0 |
| | | 2op | 47378 | 47306.5 | 36 | 47378 | 47306.5 | 36 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47380 | 47279.9 | 56.94 | 47380 | 47277.53 | 53.72 | 47367 | 47186.63 | 76.51 | 47274 | 47274 | 0 |
| | | 2op | 47436 | 47309.4 | 49.57 | 47436 | 47308.97 | 49.56 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.1450: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47325 | 47239.33 | 54.97 | 47355 | 47233.57 | 61.29 | 47354 | 47209.63 | 74.77 | 47362 | 47197.83 | 71.68 |
| | | 2op | 47419 | 47334.47 | 33.29 | 47386 | 47304.3 | 35.98 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47371 | 47272.67 | 47.8 | 47383 | 47251.07 | 61.45 | 47328 | 47223.47 | 65.37 | 47330 | 47211.03 | 88.71 |
| | | 2op | 47423 | 47348.5 | 33.52 | 47401 | 47320.07 | 36.49 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47324 | 47244.9 | 51.22 | 47387 | 47250 | 58.52 | 47320 | 47189.03 | 66.29 | 47399 | 47213.5 | 87.51 |
| | | 2op | 47388 | 47343.17 | 25.8 | 47388 | 47339.67 | 26.48 | 47313 | 47275.3 | 7.12 | 47274 | 47274 | 0 |
| | 50 | rnd | 47386 | 47299.27 | 40.3 | 47385 | 47266 | 64.75 | 47367 | 47245.07 | 70.29 | 47304 | 47183.93 | 91.43 |
| | | 2op | 47396 | 47356.7 | 18.47 | 47395 | 47317.7 | 36.13 | 47290 | 47274.53 | 2.92 | 47274 | 47274 | 0 |

Table A.1451: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151224 | 150900.67 | 352 | 151256 | 151153.53 | 19.35 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151210 | 150940.8 | 284.93 | 151249 | 151037.9 | 283.29 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151244 | 150961.13 | 315.84 | 151249 | 150890.43 | 369.07 | 151150 | 151147.2 | 15.34 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151059.1 | 231.88 | 151295 | 151061.53 | 238.86 | 151227 | 151117.5 | 117.12 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1452: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151322 | 151152.63 | 125.35 | 151271 | 151147.33 | 116.02 | 151231 | 151110.33 | 160.91 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151169.1 | 51.02 | 151291 | 151166.2 | 60.73 | 151255 | 151124.43 | 146.59 | 151171 | 151150.7 | 3.83 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151279 | 151120.77 | 125.61 | 151216 | 151149.03 | 53.11 | 151291 | 151149.17 | 112.13 | 151228 | 151151.3 | 21.59 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151249 | 151138.93 | 45.97 | 151229 | 151160.2 | 48.91 | 151279 | 151161.67 | 53.54 | 151215 | 151086.2 | 177.9 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1453: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151275 | 151065.8 | 202.88 | 151245 | 151128.6 | 108.42 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151220 | 150989.1 | 280.14 | 151267 | 151039.07 | 309.08 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151280 | 151023.7 | 289.64 | 151306 | 151071 | 235.96 | 151170 | 151129.17 | 117.94 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151233 | 151026.97 | 219.88 | 151237 | 151033.77 | 277.53 | 151172 | 151046.43 | 256.19 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1454: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151288 | 151139.57 | 118.36 | 151260 | 151139.43 | 113.88 | 151220 | 151145.6 | 28.64 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151272 | 151151.3 | 47.2 | 151237 | 151156.8 | 51.07 | 151226 | 151121.77 | 149.72 | 151150 | 151149.8 | 1.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151262 | 151142.3 | 117.27 | 151293 | 151153.13 | 64.68 | 151229 | 151087.33 | 184.83 | 151259 | 151153 | 34.39 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151236 | 151140.43 | 47.58 | 151249 | 151160.63 | 43.71 | 151273 | 151173.67 | 47.23 | 151223 | 151125.5 | 110.01 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1455: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151265 | 151105.13 | 188.01 | 151255 | 151095.3 | 202.53 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151068.93 | 288.32 | 151227 | 150968.7 | 306.24 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151290 | 151109.23 | 210.85 | 151290 | 151112.23 | 210.97 | 151249 | 151105.17 | 170.81 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151228 | 151081.07 | 207.51 | 151235 | 151076.93 | 207.62 | 151266 | 151093.37 | 218.88 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1456: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151241 | 151159.63 | 44.85 | 151263 | 151159.03 | 49.54 | 151228 | 151133.9 | 107.77 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151165.7 | 46.99 | 151217 | 151126.1 | 104.71 | 151297 | 151119.27 | 178.83 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151240 | 151146.23 | 49.16 | 151245 | 151157.07 | 45.82 | 151256 | 151169.07 | 57.18 | 151150 | 151149.27 | 4.02 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151299 | 151167.47 | 51.98 | 151259 | 151159.23 | 58.32 | 151222 | 151151.7 | 43.52 | 151295 | 151147.47 | 38.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1457: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167083 | 166465.67 | 294.78 | 166879 | 166513.23 | 271.97 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166980 | 166376 | 300.81 | 166903 | 166410.9 | 325.13 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167096 | 166520.43 | 344.98 | 166930 | 166509.13 | 287.68 | 166880 | 166536.73 | 153.41 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166921 | 166497.47 | 320.52 | 166768 | 166518.6 | 227.41 | 166911 | 166501.33 | 291.39 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1458: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167325 | 166955.17 | 205.51 | 167284 | 166868.83 | 248.66 | 167320 | 166836.37 | 259.86 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167309 | 166967.6 | 176.45 | 167416 | 167042.27 | 237.21 | 167304 | 166918.57 | 180.5 | 167256 | 166586.87 | 187.24 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167332 | 166960.43 | 228.42 | 167331 | 167031.3 | 182.67 | 167335 | 166817.03 | 263.63 | 167127 | 166653.47 | 228.62 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167363 | 166965.77 | 172.33 | 167351 | 167124.5 | 175.11 | 167282 | 166869.1 | 247.93 | 167235 | 166857.63 | 212.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1459: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166930 | 166544.23 | 300.66 | 166749 | 166470.63 | 256.37 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166976 | 166466.13 | 344.2 | 166876 | 166408 | 317.92 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 166952 | 166532.33 | 267.19 | 166967 | 166482.87 | 267.92 | 166751 | 166491.67 | 152.46 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166964 | 166578.67 | 336.85 | 167015 | 166527.3 | 314.2 | 166894 | 166541.67 | 217.32 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1460: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167387 | 166917.97 | 218.43 | 167216 | 166874.57 | 199.53 | 167287 | 166731.03 | 229.52 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167403 | 166940.03 | 232.47 | 167337 | 166942.97 | 216.17 | 167350 | 166823.83 | 198.99 | 167018 | 166578.4 | 143.63 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167395 | 166992.37 | 185.38 | 167318 | 167002.63 | 203.72 | 167292 | 166878.47 | 208.76 | 167126 | 166740 | 227.78 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167314 | 166955.27 | 193.81 | 167404 | 167183.33 | 141.43 | 167284 | 166907.6 | 217.01 | 167156 | 166867.97 | 194.35 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1461: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166934 | 166528.37 | 295.43 | 166921 | 166517.4 | 318.91 | 166773 | 166526.6 | 49.18 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167029 | 166545.23 | 326.64 | 166862 | 166544.97 | 217.39 | 166929 | 166544.03 | 81.85 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167068 | 166723.37 | 199.72 | 167124 | 166727.47 | 199.16 | 167149 | 166739.63 | 193.94 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167016 | 166713.73 | 187.05 | 167016 | 166715.1 | 187.35 | 166922 | 166696.03 | 179.51 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1462: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167318 | 167006.8 | 203.65 | 167301 | 166973.4 | 193.54 | 167368 | 166960.43 | 219.45 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167360 | 167025 | 183.2 | 167395 | 167012.03 | 227 | 167321 | 166876.83 | 170.75 | 166815 | 166529.83 | 53.86 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167330 | 167008.57 | 155.69 | 167315 | 167009.43 | 169.14 | 167234 | 166925.63 | 200.5 | 166974 | 166549.3 | 111.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167373 | 167032.73 | 199.07 | 167413 | 167015.2 | 192.34 | 167363 | 166940.4 | 227.5 | 167245 | 166841.43 | 222.73 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1463: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163097 | 162964.47 | 81.77 | 163080 | 162929.63 | 89.01 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163171 | 162939.33 | 118.26 | 163114 | 162934.1 | 84.08 | 163089 | 162980.57 | 50.75 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163106 | 162983.1 | 75.81 | 163120 | 162955.2 | 111.5 | 163086 | 162917.43 | 101.17 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163129 | 162970.5 | 111.37 | 163141 | 162953.2 | 108.07 | 163177 | 162928.1 | 105.23 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1464: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163162 | 162964 | 82.69 | 163168 | 162983 | 90.22 | 163195 | 162993.23 | 89.87 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163191 | 162980.97 | 85.15 | 163085 | 162956.7 | 69.52 | 163112 | 162984.5 | 79.44 | 163118 | 162973.13 | 71.26 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163151 | 162984.43 | 88.72 | 163150 | 163015.8 | 69.48 | 163093 | 162972.6 | 73.01 | 163182 | 162988.37 | 71.15 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163078 | 162971.73 | 65.78 | 163073 | 162981.23 | 66.59 | 163126 | 162949.43 | 92.28 | 163120 | 162980.43 | 70.72 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1465: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163070 | 162932.63 | 94.57 | 163100 | 162920.9 | 117.33 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163067 | 162925.13 | 113.67 | 163068 | 162937.23 | 102.08 | 163082 | 162960.2 | 81.58 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163120 | 162971.23 | 65.97 | 163085 | 162952.1 | 71.66 | 163092 | 162950.57 | 71.54 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162945.23 | 109.16 | 163167 | 162943.3 | 86.03 | 163075 | 162940.57 | 108.62 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1466: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163148 | 162965.5 | 68.67 | 163119 | 162971.9 | 75.51 | 163068 | 162973.47 | 45.34 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163098 | 162965.7 | 64.09 | 163095 | 162948 | 70.81 | 163100 | 162993.53 | 71.77 | 163083 | 162990.17 | 29.74 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163099 | 162990.73 | 76.52 | 163182 | 162995.73 | 73.74 | 163133 | 162968.67 | 70.55 | 163083 | 162969.97 | 56.31 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163155 | 162973.47 | 112.53 | 163103 | 162966.57 | 94.87 | 163093 | 162941.97 | 80.95 | 163116 | 162976.83 | 80.34 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1467: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163047 | 162938.13 | 99.39 | 163116 | 162950.73 | 91.84 | 163056 | 162912.03 | 86.1 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163075 | 162970.9 | 64.49 | 163101 | 162944.57 | 78.29 | 163081 | 162948.13 | 78.24 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163043 | 162914.07 | 85.06 | 163043 | 162914.07 | 85.06 | 163047 | 162929.43 | 100.07 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163150 | 162967.63 | 89 | 163150 | 162967.63 | 89 | 163144 | 162920.8 | 93.27 | 162995 | 162986.37 | 10.35 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1468: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163134 | 162978.3 | 80.52 | 163117 | 162984.67 | 79.61 | 163118 | 162947.5 | 78.29 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162973.1 | 87.98 | 163093 | 162997.8 | 56.61 | 163144 | 162984.17 | 77.96 | 163065 | 162961.67 | 114.09 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163161 | 162984.13 | 75.67 | 163133 | 162975.77 | 66.1 | 163154 | 162991.3 | 82.11 | 163104 | 162981.7 | 36.81 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163118 | 162985.87 | 71.3 | 163108 | 162979.93 | 91.08 | 163143 | 162997.37 | 64.08 | 163177 | 162976.97 | 111.1 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1469: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179812 | 179677.5 | 88.01 | 179815 | 179690.97 | 76.49 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179878 | 179699.8 | 92.46 | 179860 | 179671.17 | 101.55 | 179839 | 179625.2 | 78.25 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179922 | 179737.67 | 99.98 | 179841 | 179684.13 | 97.48 | 179856 | 179686.1 | 79.61 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179874 | 179707.1 | 86.07 | 179970 | 179709.27 | 120.48 | 179901 | 179686.87 | 90.38 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1470: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179884 | 179702.27 | 91.18 | 179868 | 179681.67 | 88.27 | 179865 | 179629.23 | 78.58 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179973 | 179737.87 | 97.25 | 179892 | 179717.17 | 94.65 | 179862 | 179682.43 | 102.86 | 179822 | 179620.43 | 44.13 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179881 | 179721.77 | 85.33 | 179893 | 179678.23 | 111.08 | 179921 | 179699.43 | 100.01 | 179866 | 179653 | 86.12 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179846 | 179703.67 | 74.2 | 179961 | 179702.6 | 121.55 | 179869 | 179711.2 | 73.49 | 179975 | 179703.97 | 96.23 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1471: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179843 | 179698.07 | 83.7 | 179907 | 179688.4 | 91.56 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179870 | 179732.7 | 74.4 | 179892 | 179698.73 | 85 | 179872 | 179655.6 | 71.1 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179927 | 179724.2 | 85.27 | 179900 | 179686.1 | 111.9 | 179888 | 179681.8 | 86.82 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179833 | 179681.07 | 92.49 | 179848 | 179702.13 | 84.07 | 179920 | 179682.33 | 85.62 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1472: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179865 | 179702.3 | 101.36 | 179891 | 179687.47 | 96.02 | 179937 | 179673.83 | 102.83 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179885 | 179702.5 | 87.81 | 179920 | 179702.07 | 87.97 | 179898 | 179707.27 | 87.84 | 179734 | 179615.7 | 53.58 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179913 | 179738.73 | 87.62 | 179952 | 179730.4 | 92.83 | 180023 | 179712.1 | 102.42 | 179785 | 179645.03 | 55.96 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179949 | 179706.1 | 104.97 | 179836 | 179674.03 | 89.98 | 179931 | 179711.4 | 82.88 | 179932 | 179705.83 | 98.77 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1473: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179816 | 179685.17 | 86.78 | 179882 | 179677.47 | 89.57 | 179828 | 179676.57 | 87.56 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179901 | 179693.7 | 103.67 | 179958 | 179710.83 | 110.59 | 179872 | 179665.33 | 94.3 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179879 | 179695.03 | 85.52 | 179879 | 179695.03 | 85.52 | 179858 | 179678.13 | 98.57 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179916 | 179710.17 | 93.31 | 179916 | 179710.17 | 93.31 | 179827 | 179686.13 | 90.2 | 179642 | 179609.13 | 8.16 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1474: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179831 | 179719 | 80.84 | 179996 | 179707.37 | 90.83 | 179910 | 179710.17 | 85.27 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179854 | 179739.67 | 62.47 | 179911 | 179696.83 | 124.46 | 179854 | 179703.67 | 89.17 | 179759 | 179612.07 | 27.75 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179843 | 179709.4 | 89.13 | 179841 | 179686.77 | 81.47 | 179959 | 179708.97 | 82.57 | 179733 | 179613.83 | 26.73 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179845 | 179687.6 | 85.28 | 179877 | 179694.7 | 102.34 | 179952 | 179712.87 | 103.4 | 179879 | 179657.97 | 76.54 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1475: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343090 | 342627.93 | 408.14 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343130 | 342584.93 | 446.18 | 342835 | 342694.9 | 241.36 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343107 | 342631.63 | 402.65 | 343032 | 342629.67 | 374.91 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342996 | 342643.97 | 288.44 | 343092 | 342626.77 | 384.89 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1476: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343123 | 342867.97 | 134.26 | 343158 | 342851.93 | 215.75 | 343012 | 342805.37 | 114.07 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343171 | 342878.6 | 134.05 | 343131 | 342833.07 | 243.58 | 343099 | 342755.8 | 290.48 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343011 | 342846 | 122.13 | 343203 | 342882.63 | 168.5 | 343022 | 342814.7 | 173.26 | 342915 | 342771.93 | 34.32 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343120 | 342896.7 | 96.94 | 343118 | 342872.3 | 137.17 | 343084 | 342881.3 | 179.5 | 343110 | 342726.5 | 234.13 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1477: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343093 | 342585.37 | 392.07 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343091 | 342580.7 | 393.26 | 342861 | 342717.93 | 190.04 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343064 | 342596.8 | 428.76 | 343168 | 342543.17 | 452.8 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343111 | 342806 | 235.38 | 343034 | 342764.27 | 252.67 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1478: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343109 | 342870 | 117.2 | 343163 | 342796.17 | 306.15 | 343051 | 342799.57 | 106.84 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343100 | 342903.2 | 107.83 | 343049 | 342828.03 | 216.63 | 343173 | 342797.07 | 225.63 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343049 | 342871.6 | 102.32 | 343156 | 342873.77 | 154.27 | 343126 | 342818.87 | 208.11 | 343007 | 342786.9 | 66 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343181 | 342884.13 | 133.46 | 343066 | 342787.4 | 276.02 | 343136 | 342845.23 | 256.17 | 343090 | 342820 | 223.44 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1479: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343140 | 342504.6 | 458.31 | 343140 | 342511.6 | 464.4 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342994 | 342546.4 | 432.62 | 342994 | 342524.03 | 428.31 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343079 | 342748.17 | 305.22 | 343079 | 342748.17 | 305.22 | 343067 | 342714.33 | 229.44 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343074 | 342683 | 321.63 | 343074 | 342683 | 321.63 | 343073 | 342567.6 | 373.35 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1480: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343125 | 342898.8 | 104.66 | 343129 | 342886.23 | 152.23 | 343091 | 342732.27 | 283.51 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343147 | 342945.97 | 91.11 | 343169 | 342926.93 | 94.31 | 343118 | 342760.43 | 244.79 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343118 | 342905 | 141.81 | 343092 | 342881.43 | 154.54 | 343208 | 342836.2 | 264.59 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343114 | 342874.8 | 108.34 | 343126 | 342884.17 | 100.63 | 343089 | 342893.83 | 133.37 | 342936 | 342760.27 | 70.6 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1481: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226996 | 225497.37 | 835.16 | 226232 | 225417.97 | 617.72 | 226732 | 225243.57 | 791.22 | 226468 | 225211 | 738.34 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227264 | 225345.53 | 793.51 | 226685 | 225411.77 | 681.01 | 226798 | 225190.73 | 780.58 | 227269 | 225514.2 | 941.39 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226415 | 225618.3 | 500.43 | 226633 | 225497.7 | 739.51 | 226681 | 225059.1 | 878.83 | 226622 | 225269.9 | 790.65 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226770 | 225514.73 | 617.17 | 227096 | 225392.13 | 817.39 | 226665 | 225187.33 | 666.87 | 226606 | 225125.97 | 887.35 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |

Table A.1482: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226296 | 225329.73 | 619.6 | 226756 | 225277.67 | 872.24 | 226217 | 224996.4 | 643.26 | 226451 | 225242.47 | 790.03 |
| | | 2op | 226441 | 225774.8 | 242.66 | 226609 | 225641.97 | 234.7 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226932 | 225215.7 | 771.87 | 226336 | 225250.4 | 609.76 | 226616 | 225263.7 | 622.15 | 227086 | 225248.2 | 898.4 |
| | | 2op | 226528 | 225834.6 | 271.25 | 226281 | 225742.1 | 263.19 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226744 | 225190.67 | 767.78 | 226600 | 225439.83 | 562.98 | 226529 | 225162.73 | 705.32 | 226476 | 225048.53 | 676.18 |
| | | 2op | 226364 | 225836.73 | 306.83 | 226698 | 226099.2 | 380.08 | 226370 | 225602.6 | 228.94 | 225517 | 225517 | 0 |
| | 50 | rnd | 226584 | 225207.37 | 861.09 | 227555 | 225759.9 | 756.35 | 226510 | 225342.33 | 813.17 | 226693 | 225005.33 | 850.79 |
| | | 2op | 226768 | 225873.07 | 371.28 | 226641 | 226244.7 | 186.53 | 226537 | 225603.17 | 283.54 | 225517 | 225517 | 0 |

Table A.1483: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226800 | 225637.37 | 683.45 | 226883 | 225426.57 | 684.01 | 226884 | 225486.57 | 681.11 | 226456 | 225038.6 | 690.35 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226436 | 225362.17 | 671.57 | 226792 | 225280.23 | 848.65 | 226874 | 225221.33 | 865.92 | 226134 | 225097.23 | 671.09 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226995 | 225515.9 | 767.23 | 226910 | 225464.63 | 742.02 | 227383 | 225321.47 | 647.89 | 226387 | 224877.07 | 969.09 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226858 | 225455.57 | 728.53 | 226335 | 225388.67 | 572.2 | 226785 | 225252.7 | 838.63 | 226633 | 225154.33 | 873.97 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |

Table A.1484: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226793 | 225313.53 | 805.16 | 226537 | 225144.47 | 816.79 | 227010 | 225286.23 | 869.92 | 226654 | 225032 | 824.1 |
| | | 2op | 226736 | 225965.2 | 299.68 | 226291 | 225699.17 | 261.06 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226699 | 225451.57 | 574.69 | 226609 | 225275.63 | 691.19 | 227570 | 225494.2 | 831.67 | 226312 | 224948.63 | 929.61 |
| | | 2op | 226844 | 225922.67 | 309.08 | 226879 | 225814.17 | 374.21 | 226233 | 225540.87 | 130.72 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226863 | 225347.17 | 833.82 | 226558 | 225359.03 | 618.29 | 227135 | 225112.07 | 734.83 | 226609 | 224999.33 | 851.49 |
| | | 2op | 226660 | 225842.03 | 314.48 | 226701 | 226033.53 | 311.15 | 226840 | 225565.07 | 241.63 | 225517 | 225517 | 0 |
| | 50 | rnd | 226840 | 225192.43 | 921.39 | 226783 | 225535.03 | 716.52 | 226733 | 225265.77 | 808.51 | 226723 | 225197.03 | 752.23 |
| | | 2op | 226374 | 225853.93 | 267.68 | 226618 | 226256.5 | 205.94 | 226512 | 225700.3 | 301.05 | 225517 | 225517 | 0 |

Table A.1485: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226411 | 225509.9 | 611.81 | 227184 | 225360.33 | 701.71 | 226376 | 225252.13 | 637.37 | 226380 | 225086.17 | 767.64 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226950 | 225330.77 | 803.07 | 226046 | 225025.4 | 598.59 | 226885 | 225224.7 | 760.07 | 226501 | 225059.43 | 923.67 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 227217 | 225467.53 | 834.74 | 226745 | 225401.1 | 776.12 | 226836 | 225393.53 | 683.59 | 226772 | 225165.97 | 702.34 |
| | | 2op | 226912 | 225777.37 | 370.32 | 226912 | 225777.37 | 370.32 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227024 | 225473.5 | 707.77 | 226451 | 225443.43 | 682.58 | 226708 | 225196.6 | 763.07 | 226709 | 225336.23 | 651.35 |
| | | 2op | 226586 | 225661.63 | 295.9 | 226586 | 225661.63 | 295.9 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |

Table A.1486: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226670 | 225323.13 | 860.68 | 226561 | 225288.2 | 816.76 | 226664 | 225134.2 | 705.25 | 226698 | 224937.13 | 928.79 |
| | | 2op | 226752 | 226010.37 | 339.07 | 226691 | 225896.3 | 386.8 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226916 | 225413 | 729.3 | 227024 | 225261.3 | 920.02 | 226991 | 225203.4 | 759.85 | 226308 | 225023.83 | 788.33 |
| | | 2op | 226297 | 225966.2 | 275.88 | 226849 | 226042.2 | 312.86 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226836 | 225274.57 | 935.65 | 226573 | 225471.07 | 666.99 | 226484 | 225227.07 | 726.26 | 226480 | 225165.97 | 649.12 |
| | | 2op | 226887 | 226124.1 | 304.88 | 226887 | 226153.33 | 304.63 | 226601 | 225646.73 | 285.36 | 225517 | 225517 | 0 |
| | 50 | rnd | 227383 | 225419.07 | 645.27 | 226449 | 225137.43 | 781.93 | 226318 | 224978.53 | 800.06 | 226531 | 225310.23 | 714.46 |
| | | 2op | 226430 | 226017.17 | 244.35 | 226448 | 226060.43 | 229.55 | 226181 | 225645.5 | 235.23 | 225517 | 225517 | 0 |

Table A.1487: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441145 | 438926.53 | 1276.86 | 440158 | 438691.07 | 1047.55 | 440394 | 438436.23 | 1329.59 | 440646 | 438355.07 | 1545.38 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 442381 | 439450.37 | 1290.37 | 440344 | 438574.67 | 1034.78 | 440614 | 438473.77 | 1252.12 | 440874 | 438311.43 | 1338.47 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440865 | 438524.87 | 1238.74 | 440406 | 438849.27 | 1044.33 | 440790 | 438350.3 | 1011.71 | 440361 | 438273.67 | 1262.72 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440822 | 438747.67 | 1114.99 | 441795 | 439248.7 | 1163.72 | 440309 | 438738.37 | 1125.23 | 440197 | 438220.8 | 1002.45 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.1488: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441014 | 438824.6 | 1314.49 | 441469 | 438682.77 | 1322.35 | 442079 | 438477.23 | 1231.64 | 441312 | 438675.77 | 1234.51 |
| | | 2op | 438680 | 437927.93 | 433.41 | 438642 | 437497 | 284.6 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441085 | 438438.37 | 1252.42 | 440537 | 438505.73 | 1140.14 | 440555 | 438831.67 | 1175.19 | 440145 | 438339.8 | 1030.8 |
| | | 2op | 438887 | 437804.13 | 392.25 | 438278 | 437560.6 | 288.92 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440731 | 438362.63 | 1176.61 | 440499 | 438079.4 | 1247.25 | 440297 | 438566.77 | 1277.91 | 440544 | 438110.77 | 1305.49 |
| | | 2op | 438645 | 437792.5 | 389.28 | 438735 | 437604.47 | 363.02 | 437775 | 437410.57 | 68.83 | 437398 | 437398 | 0 |
| | 50 | rnd | 440822 | 438406.33 | 1249.22 | 441543 | 438774.73 | 1314.33 | 440917 | 438665.67 | 1117.45 | 441191 | 438825.5 | 1259.97 |
| | | 2op | 438528 | 437958.2 | 323.58 | 439035 | 437908 | 432.21 | 438297 | 437455.4 | 218.67 | 437398 | 437398 | 0 |

Table A.1489: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441097 | 438985.7 | 1086.28 | 440595 | 438590.1 | 1274.51 | 440863 | 438490.27 | 1225.79 | 440676 | 438381.8 | 1197.4 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440779 | 438685.47 | 1240.31 | 441734 | 438654.8 | 1232 | 440772 | 438543.47 | 1177.38 | 440469 | 438434.07 | 989.61 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440729 | 438986.47 | 1084.19 | 441130 | 438775.23 | 1305.78 | 441451 | 438822.17 | 1403.64 | 440889 | 438600.53 | 1244.5 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441958 | 439020.67 | 1078.66 | 441393 | 439279.3 | 1106.29 | 441119 | 438669.53 | 1252.27 | 440396 | 438418.2 | 1077.26 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.1490: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441351 | 438828.1 | 1031.43 | 440984 | 438462.73 | 1328.98 | 440118 | 437911.5 | 1366.12 | 440021 | 438344.5 | 1234.66 |
| | | 2op | 438989 | 438003.1 | 485.69 | 438417 | 437454.47 | 219.59 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441252 | 438692.67 | 1253.05 | 441680 | 438706.9 | 1291.15 | 441063 | 438393.83 | 1376.42 | 440051 | 437912.63 | 1163.38 |
| | | 2op | 439074 | 438079.83 | 436.14 | 438971 | 437554.67 | 387.13 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 442088 | 438672.2 | 1317.82 | 440565 | 438489.8 | 1276.82 | 440377 | 438133.6 | 1144.97 | 440247 | 437981.77 | 1429.8 |
| | | 2op | 438597 | 437791.17 | 400.48 | 439467 | 437722.03 | 523.27 | 438357 | 437429.97 | 175.09 | 437398 | 437398 | 0 |
| | 50 | rnd | 441849 | 438878.13 | 1136.61 | 441314 | 438575 | 1309.44 | 441200 | 438685.43 | 1103.84 | 439938 | 437871.27 | 1325.81 |
| | | 2op | 438758 | 437926.5 | 328.82 | 438527 | 437633.43 | 343.87 | 437825 | 437412.23 | 77.96 | 437398 | 437398 | 0 |

Table A.1491: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441453 | 439012.43 | 1283.58 | 441181 | 439192.07 | 1288.63 | 441532 | 438532.9 | 1635.93 | 441010 | 438329.03 | 1551.12 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441049 | 438757.53 | 1158.59 | 441049 | 438776.97 | 1087.1 | 440169 | 438402.27 | 1285.38 | 440042 | 438236.13 | 1041.71 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440953 | 439207.93 | 930.92 | 440953 | 439207.93 | 930.92 | 441367 | 438379.4 | 1543.8 | 440312 | 438623.57 | 1300.69 |
| | | 2op | 439393 | 437552.43 | 482.47 | 439393 | 437551.2 | 479.58 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441453 | 438942.07 | 1268.76 | 441453 | 438935.97 | 1271.51 | 441712 | 439081.93 | 1128.11 | 440590 | 438385.07 | 1244.08 |
| | | 2op | 439642 | 437609 | 645.91 | 439642 | 437609 | 645.91 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.1492: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440597 | 438487.07 | 1306.17 | 440494 | 438747.6 | 953.44 | 441978 | 438503.93 | 1117.13 | 440304 | 437982.37 | 1291.64 |
| | | 2op | 438768 | 437976.2 | 344.48 | 438481 | 437766.43 | 354.97 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441123 | 438910.97 | 1230.14 | 441008 | 438559.3 | 1623.49 | 441365 | 438503.73 | 1436.87 | 441129 | 438344.37 | 1304.22 |
| | | 2op | 438834 | 438131.67 | 375.11 | 438533 | 437941.87 | 354.06 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441005 | 438841.33 | 1171.53 | 440943 | 438908.03 | 1195.27 | 440925 | 438564.8 | 1339.94 | 440166 | 438301.8 | 929.55 |
| | | 2op | 439298 | 438002.8 | 377.98 | 438664 | 437914.47 | 300.55 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440755 | 438859.37 | 1139.77 | 441177 | 438756.97 | 1336.87 | 441429 | 438652.9 | 1323.64 | 440472 | 438328.1 | 1180.34 |
| | | 2op | 438806 | 438054.67 | 297.85 | 439018 | 437999.33 | 362.96 | 438193 | 437440 | 165.61 | 437398 | 437398 | 0 |

Table A.1493: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115741 | 114802.93 | 434.43 | 115993 | 114811.83 | 506.51 | 115744 | 114827.03 | 664.09 | 115808 | 114876.57 | 555.67 |
| | | 2op | 115851 | 115525.23 | 61.53 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115994 | 115026.07 | 562.12 | 115873 | 115188.57 | 458.97 | 116177 | 114914.37 | 609.54 | 115754 | 114670.17 | 543.26 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115833 | 114958.93 | 501.25 | 115851 | 114896.1 | 414.29 | 115725 | 114907.03 | 580.6 | 115753 | 114843.43 | 563.73 |
| | | 2op | 115782 | 115531.37 | 65.73 | 115782 | 115522.93 | 48.93 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115952 | 114948.67 | 541.85 | 116124 | 114938.4 | 570.57 | 115735 | 114860.03 | 496.8 | 115490 | 114664.33 | 445.38 |
| | | 2op | 115514 | 115513.97 | 0.18 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |

Table A.1494: *j*02459_7: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115917 | 114918.3 | 481.62 | 115553 | 114715.73 | 445.84 | 116248 | 114811.33 | 564.26 | 115420 | 114584.37 | 517.36 |
| | | 2op | 116365 | 115564.8 | 225.76 | 115830 | 115493.97 | 152.17 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115603 | 114859.8 | 431.09 | 115839 | 114811.4 | 444.03 | 115768 | 114885.97 | 514.85 | 115601 | 114849.4 | 560.44 |
| | | 2op | 115767 | 115481.73 | 185.11 | 116071 | 115560.57 | 198.34 | 115547 | 115501.8 | 72.39 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116000 | 114790.33 | 655.39 | 115898 | 115072.8 | 497.57 | 115619 | 114677.83 | 470.52 | 115930 | 114819.53 | 502.83 |
| | | 2op | 115713 | 115468.37 | 136.69 | 115928 | 115600 | 172.99 | 115633 | 115418.7 | 144.62 | 115514 | 115514 | 0 |
| | 50 | rnd | 115724 | 114903.17 | 436.63 | 115750 | 115067.27 | 484.54 | 115773 | 114882.5 | 495.34 | 115717 | 114705.07 | 560.4 |
| | | 2op | 115840 | 115531.83 | 153.85 | 116428 | 115778.17 | 230.98 | 115858 | 115510.37 | 147.86 | 115514 | 115514 | 0 |

Table A.1495: *j*02459_7: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115817 | 115065.97 | 514.33 | 115626 | 114797.73 | 527.07 | 115976 | 114843.4 | 494.71 | 115737 | 114668.2 | 426.4 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115839 | 115173.83 | 459.92 | 115614 | 114912.83 | 433.06 | 115983 | 114694.33 | 569.27 | 115778 | 114784.53 | 549.5 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116009 | 115007.27 | 459.63 | 115725 | 114904.6 | 558.44 | 115956 | 115033.4 | 587.18 | 115713 | 114743.93 | 547.53 |
| | | 2op | 115550 | 115515.2 | 6.57 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116139 | 114968.4 | 547.84 | 116308 | 115073.63 | 551.94 | 116026 | 115037.17 | 433.96 | 115847 | 114729.2 | 467.54 |
| | | 2op | 115864 | 115525.67 | 63.9 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |

Table A.1496: *j*02459_7: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115811 | 114937.5 | 510.76 | 115836 | 114970.7 | 511.24 | 115774 | 114999.83 | 392.1 | 115283 | 114585.63 | 557.15 |
| | | 2op | 115727 | 115530.77 | 143.44 | 115690 | 115493.7 | 110.76 | 115514 | 115510.53 | 18.99 | 115514 | 115514 | 0 |
| | 50 | rnd | 115753 | 114848.13 | 462.19 | 115620 | 114942.07 | 499.28 | 115742 | 114609.97 | 492.58 | 115724 | 114705.97 | 525.73 |
| | | 2op | 116072 | 115514.23 | 215.04 | 116064 | 115575.1 | 239.85 | 115670 | 115509.27 | 79.91 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115955 | 114931.07 | 601.45 | 115910 | 115013.43 | 499.42 | 115649 | 114781.63 | 513.83 | 116175 | 114743.03 | 640.99 |
| | | 2op | 115933 | 115508.57 | 189.46 | 116426 | 115738.27 | 271.43 | 115656 | 115495.93 | 106.55 | 115514 | 115514 | 0 |
| | 50 | rnd | 115968 | 114973.07 | 527.38 | 115737 | 115012.03 | 411.55 | 116040 | 114905.33 | 558.37 | 115851 | 114823.7 | 513.33 |
| | | 2op | 116078 | 115479.4 | 202.52 | 116454 | 115818.03 | 166.47 | 116023 | 115505.5 | 161.05 | 115514 | 115514 | 0 |

Table A.1497: *j02459_7*: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115844 | 114901.07 | 501.28 | 116085 | 115069.4 | 528.89 | 115682 | 114727.33 | 433.13 | 115682 | 114816.4 | 533.12 |
| | | 2op | 116239 | 115558.83 | 194.23 | 116026 | 115538.33 | 124.07 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115434 | 114801.77 | 393.24 | 115661 | 114875.3 | 481.56 | 115645 | 114961.23 | 392.1 | 115617 | 114781.03 | 453.88 |
| | | 2op | 115848 | 115506.4 | 110.82 | 115649 | 115494.87 | 90.49 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116044 | 115152.37 | 437.65 | 116044 | 115091.07 | 399.79 | 115990 | 115012.53 | 501.07 | 115913 | 114669.37 | 709.08 |
| | | 2op | 116134 | 115485.87 | 251.16 | 116134 | 115479.47 | 256.84 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116111 | 115202.03 | 362.18 | 116111 | 115299.53 | 456.66 | 116207 | 115136.37 | 599.75 | 116174 | 114855.43 | 727.06 |
| | | 2op | 116442 | 115807.07 | 319.16 | 116442 | 115809.77 | 316.2 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |

Table A.1498: *j02459_7*: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115915 | 114972.43 | 353.07 | 116164 | 114955.8 | 550.39 | 115381 | 114658.13 | 463.67 | 115460 | 114632.77 | 620.94 |
| | | 2op | 116352 | 115534.27 | 225.4 | 115749 | 115476.53 | 130.94 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115807 | 114912.8 | 427.6 | 116007 | 114704.57 | 594.17 | 115831 | 114763.43 | 480.57 | 115837 | 114792.47 | 608.15 |
| | | 2op | 115751 | 115519.03 | 185.47 | 116004 | 115518.43 | 193.99 | 115514 | 115510.93 | 11.72 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116096 | 114981.43 | 498.03 | 116063 | 115033.5 | 531.99 | 115421 | 114758.13 | 460.77 | 115856 | 114623.7 | 539.41 |
| | | 2op | 115828 | 115516.07 | 177.86 | 116406 | 115533.2 | 235.96 | 116077 | 115472.97 | 181.82 | 115514 | 115514 | 0 |
| | 50 | rnd | 115832 | 114861.87 | 624.03 | 115758 | 114986.43 | 584.54 | 115592 | 114672.47 | 523.24 | 115604 | 114842.9 | 548.75 |
| | | 2op | 116091 | 115565.77 | 219.41 | 115771 | 115476.97 | 152.15 | 115645 | 115489.93 | 82.64 | 115514 | 115514 | 0 |

Table A.1499: *j02459_7*: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38534 | 38280.97 | 159 | 38522 | 38256.27 | 153.44 | 38593 | 38210 | 160.23 | 38526 | 38147.33 | 234.82 |
| | | 2op | 38408 | 38236.07 | 45.93 | 38389 | 38229.5 | 30.12 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 38578 | 38297.57 | 167.63 | 38618 | 38260.77 | 230.09 | 38548 | 38232.3 | 196.14 | 38534 | 38166.03 | 215.66 |
| | | 2op | 38415 | 38237.8 | 44.39 | 38414 | 38232.2 | 35.82 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38496 | 38198.1 | 214.13 | 38617 | 38255.03 | 181.54 | 38591 | 38270 | 204.43 | 38586 | 38250.1 | 226.13 |
| | | 2op | 38432 | 38278.6 | 85.69 | 38437 | 38338.2 | 84.25 | 38417 | 38230.43 | 35.24 | 38224 | 38224 | 0 |
| | 50 | rnd | 38567 | 38279.5 | 196.77 | 38623 | 38306.1 | 173.98 | 38613 | 38303.7 | 191.69 | 38638 | 38231.23 | 194.55 |
| | | 2op | 38440 | 38315.8 | 90.67 | 38437 | 38343.63 | 84.3 | 38407 | 38235.13 | 42.58 | 38224 | 38224 | 0 |

Table A.1500: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38534 | 38263.27 | 164.69 | 38584 | 38301.7 | 176.75 | 38581 | 38262.77 | 239.46 | 38531 | 38211.8 | 225.03 |
| | | 2op | 38414 | 38360 | 69.32 | 38437 | 38412.53 | 10.41 | 38557 | 38305.23 | 109.24 | 38224 | 38224 | 0 |
| | 50 | rnd | 38559 | 38250.97 | 185.62 | 38577 | 38309.07 | 210.88 | 38580 | 38205.03 | 241.48 | 38588 | 38197.73 | 176.85 |
| | | 2op | 38414 | 38390.2 | 45.46 | 38442 | 38427.03 | 14.23 | 38524 | 38403.97 | 34.31 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38566 | 38288.63 | 188.88 | 38594 | 38363.03 | 155.36 | 38614 | 38301.77 | 160.05 | 38580 | 38151.07 | 275.96 |
| | | 2op | 38434 | 38389.43 | 51.21 | 38442 | 38429.83 | 12.68 | 38418 | 38404.1 | 10.34 | 38409 | 38259.93 | 73.25 |
| | 50 | rnd | 38681 | 38276.1 | 210.68 | 38661 | 38394.9 | 190.05 | 38677 | 38314.5 | 181.94 | 38542 | 38230.4 | 201.89 |
| | | 2op | 38426 | 38387.37 | 50.29 | 38442 | 38437.5 | 8.9 | 38529 | 38416.47 | 24.29 | 38519 | 38324.87 | 92.83 |

Table A.1501: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38584 | 38249.13 | 199.44 | 38570 | 38262.9 | 191.95 | 38664 | 38205.2 | 221.54 | 38537 | 38174.77 | 228.22 |
| | | 2op | 38224 | 38224 | 0 | 38224 | 38224 | 0 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 38432 | 38164.63 | 185.73 | 38580 | 38264.8 | 208.7 | 38527 | 38260.43 | 181.29 | 38518 | 38177.9 | 242.61 |
| | | 2op | 38224 | 38224 | 0 | 38445 | 38231.37 | 40.35 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38612 | 38243.87 | 209.14 | 38567 | 38272.1 | 196.72 | 38462 | 38174.57 | 204.65 | 38546 | 38122.67 | 249.77 |
| | | 2op | 38424 | 38314 | 85.05 | 38436 | 38333.8 | 83.58 | 38419 | 38230.5 | 35.6 | 38224 | 38224 | 0 |
| | 50 | rnd | 38567 | 38262.43 | 153.91 | 38546 | 38263.7 | 211.35 | 38590 | 38209.23 | 181.78 | 38492 | 38210.7 | 199.32 |
| | | 2op | 38445 | 38287.1 | 88.31 | 38504 | 38360.03 | 74.08 | 38417 | 38244.07 | 54.19 | 38224 | 38224 | 0 |

Table A.1502: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38663 | 38316.23 | 192.58 | 38661 | 38364.23 | 172.46 | 38567 | 38128.57 | 284.16 | 38686 | 38216.17 | 224.51 |
| | | 2op | 38434 | 38377.47 | 65.23 | 38442 | 38416.4 | 14.12 | 38441 | 38271.2 | 80.57 | 38224 | 38224 | 0 |
| | 50 | rnd | 38509 | 38212.4 | 204.96 | 38674 | 38363.43 | 193.51 | 38563 | 38250.23 | 221.46 | 38619 | 38200.03 | 248.5 |
| | | 2op | 38413 | 38375.33 | 62.31 | 38442 | 38421.4 | 13.87 | 38524 | 38403.97 | 31.39 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38631 | 38287.13 | 221.77 | 38613 | 38346.9 | 186.92 | 38567 | 38273.4 | 156.8 | 38486 | 38199.9 | 182.12 |
| | | 2op | 38441 | 38395.97 | 47.5 | 38442 | 38425.33 | 13.24 | 38432 | 38408.77 | 12.59 | 38411 | 38253.03 | 66.24 |
| | 50 | rnd | 38662 | 38229.23 | 234.61 | 38608 | 38341.03 | 163.49 | 38625 | 38298.17 | 169.77 | 38633 | 38182 | 226.91 |
| | | 2op | 38414 | 38384.17 | 55.19 | 38442 | 38433.6 | 11.09 | 38437 | 38416.43 | 13.78 | 38530 | 38312.9 | 101.16 |

Table A.1503: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38642 | 38329.5 | 179.93 | 38575 | 38328.43 | 160.16 | 38663 | 38206.67 | 240.09 | 38655 | 38185.2 | 221.33 |
| | | 2op | 38442 | 38374.73 | 72.75 | 38438 | 38364.67 | 75.61 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 38629 | 38307.9 | 161.68 | 38612 | 38340.97 | 178.63 | 38626 | 38201.47 | 211.23 | 38626 | 38210.33 | 195.38 |
| | | 2op | 38437 | 38362.43 | 81.93 | 38437 | 38351.5 | 86.1 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38573 | 38321.5 | 156.83 | 38636 | 38312.2 | 170.84 | 38652 | 38247.67 | 180.55 | 38573 | 38214.4 | 188.94 |
| | | 2op | 38442 | 38423.87 | 13.18 | 38442 | 38441.67 | 1.27 | 38451 | 38331.27 | 90.72 | 38224 | 38224 | 0 |
| | 50 | rnd | 38572 | 38330.3 | 174.44 | 38651 | 38330.07 | 184.03 | 38515 | 38207.03 | 211.39 | 38491 | 38106.53 | 239.65 |
| | | 2op | 38442 | 38434.67 | 10.73 | 38442 | 38438.33 | 6.35 | 38418 | 38312.43 | 90.26 | 38224 | 38224 | 0 |

Table A.1504: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38679 | 38298.1 | 181.69 | 38585 | 38268.73 | 209.46 | 38634 | 38133.4 | 235.3 | 38612 | 38185.97 | 238.01 |
| | | 2op | 38414 | 38406.23 | 6.38 | 38418 | 38405.03 | 7.99 | 38436 | 38296.5 | 90.8 | 38224 | 38224 | 0 |
| | 50 | rnd | 38695 | 38352.03 | 179.8 | 38604 | 38274.83 | 210.02 | 38535 | 38190.33 | 195.05 | 38571 | 38214.37 | 238.86 |
| | | 2op | 38429 | 38409.8 | 4 | 38422 | 38408.3 | 3.46 | 38427 | 38333.67 | 85.76 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38574 | 38298.17 | 176.22 | 38579 | 38307.77 | 176.87 | 38660 | 38235.93 | 245.39 | 38553 | 38152.83 | 229.71 |
| | | 2op | 38437 | 38413.83 | 10.78 | 38439 | 38415.73 | 11.34 | 38432 | 38397.73 | 20.21 | 38224 | 38224 | 0 |
| | 50 | rnd | 38528 | 38289.53 | 188.74 | 38608 | 38371.3 | 137.79 | 38566 | 38204.7 | 222.86 | 38687 | 38171.97 | 260.43 |
| | | 2op | 38437 | 38411.17 | 5.99 | 38437 | 38409.2 | 6.55 | 38427 | 38388.03 | 46.44 | 38432 | 38247.33 | 61.02 |

Table A.1505: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47921 | 47591.57 | 225.83 | 47846 | 47537.33 | 229.16 | 47961 | 47547.23 | 337.94 | 47899 | 47546.2 | 261.82 |
| | | 2op | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 48034 | 47613.93 | 270.9 | 47894 | 47522.63 | 265.52 | 47917 | 47464 | 316.18 | 47862 | 47600.7 | 190.43 |
| | | 2op | 47731 | 47380.13 | 100.29 | 47369 | 47349.67 | 3.65 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47870 | 47563.2 | 227.21 | 47843 | 47546.53 | 290.98 | 47905 | 47584.07 | 210.88 | 48023 | 47503.47 | 271.02 |
| | | 2op | 47830 | 47504.63 | 186.92 | 47830 | 47508.97 | 173.68 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47948 | 47606.5 | 186.03 | 47897 | 47605.77 | 202.97 | 47998 | 47554.73 | 238.16 | 47849 | 47528.27 | 252.6 |
| | | 2op | 47755 | 47399.97 | 133.76 | 47814 | 47555.93 | 171.34 | 47545 | 47355.53 | 35.78 | 47349 | 47349 | 0 |

Table A.1506: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47886 | 47627.43 | 205.51 | 47947 | 47557.77 | 243.23 | 47899 | 47566 | 282.66 | 47846 | 47431.87 | 287.17 |
| | | 2op | 47758 | 47515.73 | 153.01 | 47758 | 47739.73 | 51.74 | 47426 | 47352.83 | 15.46 | 47349 | 47349 | 0 |
| | 50 | rnd | 48052 | 47560.77 | 276.45 | 47976 | 47572.4 | 299.52 | 47851 | 47536.87 | 224.02 | 47939 | 47515.83 | 257.85 |
| | | 2op | 47758 | 47494.97 | 161.7 | 47758 | 47756.7 | 3.22 | 47755 | 47415.53 | 130.39 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47934 | 47517.57 | 303.16 | 47977 | 47670.13 | 205.43 | 47947 | 47550.57 | 309.81 | 47939 | 47512.67 | 305.14 |
| | | 2op | 47758 | 47522.5 | 158.02 | 47758 | 47757.33 | 1.21 | 47758 | 47604.5 | 149.91 | 47349 | 47349 | 0 |
| | 50 | rnd | 47863 | 47464.67 | 270.3 | 47943 | 47570.87 | 267.12 | 47953 | 47602 | 227.14 | 47833 | 47483.07 | 236.01 |
| | | 2op | 47758 | 47463.83 | 123.94 | 47758 | 47756.8 | 1.49 | 47758 | 47729.23 | 59.05 | 47440 | 47352.03 | 16.61 |

Table A.1507: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48021 | 47635.27 | 187.35 | 47909 | 47630.5 | 225.44 | 47862 | 47579.8 | 254.74 | 47943 | 47560.4 | 313.84 |
| | | 2op | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47934 | 47542.97 | 253.67 | 47961 | 47605.63 | 234.32 | 48002 | 47575.93 | 260.72 | 48027 | 47545.97 | 262.63 |
| | | 2op | 47413 | 47351.13 | 11.68 | 47386 | 47350.23 | 6.76 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47933 | 47547.53 | 242.43 | 47868 | 47557.57 | 205.39 | 47923 | 47611.33 | 235.31 | 47866 | 47553.37 | 174.66 |
| | | 2op | 47755 | 47427.67 | 132.01 | 47758 | 47430.6 | 143.6 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 48043 | 47647.93 | 240.21 | 47897 | 47509.7 | 286.15 | 47915 | 47558.5 | 225.76 | 47972 | 47509.57 | 274.39 |
| | | 2op | 47758 | 47438.3 | 127.3 | 47758 | 47507.5 | 149.95 | 47458 | 47352.63 | 19.9 | 47349 | 47349 | 0 |

Table A.1508: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47923 | 47578.07 | 239.81 | 48029 | 47602.3 | 268.31 | 47864 | 47480.8 | 251.4 | 47925 | 47482.5 | 256.88 |
| | | 2op | 47758 | 47550.23 | 152.64 | 47758 | 47741 | 53.47 | 47423 | 47352.63 | 14.74 | 47349 | 47349 | 0 |
| | 50 | rnd | 47790 | 47496.3 | 277.22 | 47923 | 47575.67 | 232.38 | 47914 | 47482.93 | 320.74 | 47916 | 47568.33 | 236.33 |
| | | 2op | 47758 | 47504.07 | 161.08 | 47758 | 47755.63 | 4.63 | 47758 | 47399.9 | 120.97 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 48051 | 47610.93 | 261.69 | 47978 | 47633.23 | 230.39 | 47927 | 47620.67 | 204.17 | 47839 | 47510.6 | 228.83 |
| | | 2op | 47758 | 47469.07 | 136.86 | 47758 | 47757.33 | 1.24 | 47758 | 47543.1 | 157.53 | 47349 | 47349 | 0 |
| | 50 | rnd | 47871 | 47509.77 | 236.36 | 47864 | 47530.77 | 271.82 | 48002 | 47616.13 | 279.94 | 47916 | 47537.03 | 239.69 |
| | | 2op | 47758 | 47530.83 | 156.88 | 47758 | 47757.2 | 1.35 | 47758 | 47718.63 | 84.21 | 47738 | 47373.37 | 92.94 |

Table A.1509: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47638.27 | 192.62 | 47961 | 47617.9 | 206.11 | 47967 | 47606.47 | 197.48 | 48027 | 47525.53 | 293.73 |
| | | 2op | 47814 | 47617 | 164.61 | 47814 | 47593.33 | 171.18 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 48034 | 47682.23 | 205 | 48032 | 47603.27 | 242.44 | 47933 | 47567.07 | 217.95 | 47836 | 47558.2 | 261.46 |
| | | 2op | 47758 | 47573.23 | 177.05 | 47758 | 47569.47 | 180.05 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47918 | 47538.93 | 278.17 | 48052 | 47716.33 | 182.47 | 47952 | 47521.4 | 377.02 | 48043 | 47548.93 | 314.69 |
| | | 2op | 47758 | 47733.87 | 53.79 | 47758 | 47756.53 | 4.08 | 47758 | 47410.97 | 137.07 | 47349 | 47349 | 0 |
| | 50 | rnd | 47879 | 47559.4 | 306.93 | 47978 | 47580.37 | 220.8 | 47958 | 47609.47 | 235.76 | 47862 | 47546.23 | 215.16 |
| | | 2op | 47758 | 47747.9 | 35.03 | 47758 | 47734.07 | 81.7 | 47758 | 47504.27 | 173.9 | 47349 | 47349 | 0 |

Table A.1510: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48035 | 47547.93 | 311.08 | 47943 | 47539.03 | 255.86 | 47933 | 47578.23 | 226.56 | 47910 | 47539.4 | 262.32 |
| | | 2op | 47758 | 47567.7 | 160.8 | 47758 | 47584.93 | 162.24 | 47758 | 47377.13 | 102.16 | 47349 | 47349 | 0 |
| | 50 | rnd | 47973 | 47625.97 | 226.58 | 47961 | 47631.1 | 212.12 | 47944 | 47459.33 | 335.77 | 47943 | 47457.27 | 280.78 |
| | | 2op | 47758 | 47676.67 | 133.8 | 47758 | 47687.3 | 125.44 | 47747 | 47362.83 | 72.59 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47936 | 47628.17 | 261.02 | 47875 | 47555.33 | 258.19 | 47917 | 47591.83 | 274.22 | 47848 | 47578.77 | 181.18 |
| | | 2op | 47758 | 47706.87 | 97.01 | 47758 | 47749.07 | 35.01 | 47758 | 47550.53 | 191.05 | 47349 | 47349 | 0 |
| | 50 | rnd | 48051 | 47608.87 | 208.55 | 47873 | 47546.67 | 239.28 | 47973 | 47543.47 | 302.45 | 47898 | 47502.57 | 241.79 |
| | | 2op | 47758 | 47670.43 | 126.09 | 47758 | 47744.2 | 32.02 | 47758 | 47439.67 | 141.7 | 47349 | 47349 | 0 |

Table A.1511: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54876 | 54399.93 | 310.77 | 54998 | 54335.17 | 287.61 | 54876 | 54344.57 | 374.8 | 54921 | 54336.9 | 344.49 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54947 | 54347.27 | 305.64 | 55024 | 54416.37 | 330.3 | 54985 | 54380 | 243.85 | 55100 | 54313.33 | 364.19 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54898 | 54289.53 | 426.12 | 54909 | 54390.37 | 355.63 | 54752 | 54290.43 | 372.14 | 54955 | 54322.97 | 270.66 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54903 | 54363.73 | 328.22 | 55078 | 54518.43 | 273.91 | 54960 | 54393.73 | 372.39 | 54951 | 54349.9 | 337.73 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |

Table A.1512: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54793 | 54255.7 | 274.23 | 55042 | 54458.6 | 395.95 | 54729 | 54363.07 | 271.95 | 54880 | 54300.37 | 341.91 |
| | | 2op | 54753 | 54729.6 | 19.87 | 54959 | 54739.27 | 44.91 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54895 | 54373.77 | 368.71 | 55001 | 54440.73 | 359.68 | 54884 | 54340.43 | 416.66 | 54827 | 54397.83 | 274.96 |
| | | 2op | 54753 | 54733.93 | 17.78 | 54756 | 54747.37 | 4.18 | 54745 | 54706.47 | 7.31 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 55010 | 54382.13 | 344.04 | 55013 | 54537.1 | 294.41 | 55003 | 54347.7 | 293.71 | 54895 | 54294.97 | 319.45 |
| | | 2op | 54754 | 54731.7 | 19.26 | 54771 | 54751.07 | 5.84 | 54745 | 54720.73 | 15.8 | 54708 | 54705.1 | 0.55 |
| | 50 | rnd | 54961 | 54497.07 | 260.07 | 54899 | 54555.8 | 266.98 | 54752 | 54335.63 | 338.83 | 54716 | 54295.77 | 281.05 |
| | | 2op | 54754 | 54740.5 | 13.14 | 54754 | 54752.2 | 4.22 | 54959 | 54741.97 | 43.96 | 54705 | 54705 | 0 |

Table A.1513: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55112 | 54443.47 | 335.24 | 55014 | 54381.13 | 405.03 | 55084 | 54432.3 | 355.28 | 55018 | 54299.83 | 353.09 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54837 | 54331.9 | 369.22 | 54866 | 54304.77 | 334.66 | 54902 | 54405.9 | 333.46 | 54912 | 54335.63 | 378.13 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54998 | 54441.43 | 254.82 | 54773 | 54338.43 | 314.35 | 54927 | 54311.13 | 315.53 | 54801 | 54293 | 354.18 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54951 | 54447.53 | 297.2 | 54931 | 54492.07 | 339.7 | 55046 | 54433.57 | 295.44 | 54924 | 54427.27 | 352.54 |
| | | 2op | 54745 | 54707.53 | 9.66 | 54710 | 54705.17 | 0.91 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |

Table A.1514: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54901 | 54365.67 | 317.27 | 54895 | 54502.7 | 269.04 | 54827 | 54341.97 | 352.12 | 54872 | 54356.33 | 359.93 |
| | | 2op | 54754 | 54731.6 | 18.2 | 54747 | 54731.47 | 15.1 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54883 | 54355.6 | 380.11 | 55037 | 54541.27 | 317.01 | 54757 | 54198.13 | 377.92 | 54788 | 54203.73 | 333.19 |
| | | 2op | 54754 | 54734.13 | 18.79 | 54756 | 54746.57 | 4.27 | 54745 | 54706.5 | 7.33 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54855 | 54384.57 | 274.6 | 55017 | 54527.27 | 300.87 | 54879 | 54313 | 278.13 | 54853 | 54379.4 | 243.98 |
| | | 2op | 54754 | 54732.47 | 18.76 | 54756 | 54749.67 | 4.5 | 54747 | 54723.7 | 20.13 | 54705 | 54705 | 0 |
| | 50 | rnd | 54974 | 54434.9 | 334.06 | 54959 | 54582.47 | 260.25 | 54940 | 54435.17 | 315.44 | 54805 | 54323.33 | 325.92 |
| | | 2op | 54754 | 54735.8 | 17.05 | 54771 | 54753.67 | 4.27 | 54959 | 54739.7 | 45.01 | 54705 | 54705 | 0 |

Table A.1515: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55009 | 54480.27 | 356.24 | 54731 | 54396.33 | 271.68 | 54921 | 54370.57 | 321.8 | 54842 | 54340.5 | 374.99 |
| | | 2op | 54754 | 54712.03 | 15.11 | 54754 | 54711.17 | 14.97 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 55135 | 54455.4 | 327.32 | 54882 | 54321.97 | 320.66 | 54866 | 54278.97 | 393.39 | 54899 | 54383.23 | 348.37 |
| | | 2op | 54754 | 54709.87 | 13.01 | 54754 | 54709.77 | 12.96 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54974 | 54506.53 | 365.18 | 55014 | 54525.53 | 264.02 | 55037 | 54461.1 | 329.24 | 54942 | 54183.1 | 423.38 |
| | | 2op | 54754 | 54741.33 | 14.81 | 54769 | 54748.8 | 6.08 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 55010 | 54663.4 | 236.87 | 54956 | 54478.4 | 391.43 | 54834 | 54338.83 | 322.54 | 54913 | 54309.4 | 397.13 |
| | | 2op | 54754 | 54748.17 | 5.57 | 54769 | 54745.37 | 11.98 | 54733 | 54705.93 | 5.11 | 54705 | 54705 | 0 |

Table A.1516: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54884 | 54353.97 | 433.4 | 54898 | 54466.4 | 309.58 | 54939 | 54354.97 | 361.88 | 54834 | 54348.53 | 281.78 |
| | | 2op | 54754 | 54740.73 | 14.42 | 54959 | 54747.6 | 42.45 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54945 | 54509.03 | 233.33 | 54982 | 54547.2 | 321.53 | 54834 | 54283.27 | 304.43 | 54945 | 54355.3 | 334.98 |
| | | 2op | 54754 | 54743.93 | 7.55 | 54754 | 54740.2 | 12.92 | 54720 | 54705.73 | 2.98 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54811 | 54419.87 | 303.17 | 54923 | 54356.83 | 314.14 | 54788 | 54384.83 | 301.9 | 55031 | 54326.07 | 372.7 |
| | | 2op | 54756 | 54747.9 | 4.49 | 54756 | 54746.67 | 3.93 | 54747 | 54716.57 | 16.61 | 54705 | 54705 | 0 |
| | 50 | rnd | 54964 | 54471.57 | 285.52 | 54917 | 54432.93 | 357.15 | 54891 | 54360.07 | 468.38 | 54856 | 54221.83 | 394.47 |
| | | 2op | 54754 | 54746.8 | 3.66 | 54754 | 54741.23 | 11.69 | 54754 | 54712.77 | 15.92 | 54705 | 54705 | 0 |

Table A.1517: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11222.73 | 123.41 | 11478 | 11257.83 | 120.84 | 11372 | 11176.2 | 156.36 | 11478 | 11207.7 | 116.54 |
| | | 2op | 11109 | 11020.4 | 35.83 | 11373 | 11252.67 | 83.7 | 11109 | 11013.33 | 26.68 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11248.07 | 168.05 | 11478 | 11280.33 | 103.22 | 11478 | 11280.4 | 132.28 | 11411 | 11178.5 | 152.75 |
| | | 2op | 11305 | 11049.03 | 80.26 | 11373 | 11279.67 | 54.05 | 11373 | 11086.27 | 90.95 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 11478 | 11180.83 | 165.55 | 11478 | 11243.27 | 151.02 | 11478 | 11264.23 | 136.59 | 11478 | 11188.63 | 177.55 |
| | | 2op | 11109 | 11019.4 | 25.14 | 11285 | 11127.27 | 49.22 | 11305 | 11210.33 | 79.11 | 11109 | 11055.47 | 49.87 |
| | 50 | rnd | 11478 | 11214.27 | 142.7 | 11478 | 11322.93 | 111.25 | 11478 | 11308.63 | 133.94 | 11478 | 11213.67 | 152.96 |
| | | 2op | 11109 | 11069.73 | 45.01 | 11373 | 11237.9 | 80.91 | 11373 | 11289.37 | 48.7 | 11109 | 11032.87 | 42.13 |

Table A.1518: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11372 | 11145.3 | 179.89 | 11478 | 11258.5 | 108.38 | 11478 | 11277.17 | 186.75 | 11478 | 11204.5 | 174.02 |
| | | 2op | 11109 | 11026.47 | 36.2 | 11305 | 11132.4 | 53.3 | 11109 | 11109 | 0 | 11017 | 11003.93 | 3.55 |
| | 50 | rnd | 11411 | 11152.3 | 146.28 | 11478 | 11215.63 | 147.86 | 11478 | 11222.63 | 171.06 | 11470 | 11237.73 | 138.43 |
| | | 2op | 11109 | 11027.67 | 35.09 | 11285 | 11155.57 | 68.38 | 11285 | 11128.83 | 52.84 | 11109 | 11056.53 | 47.45 |
| 51 | 20 | rnd | 11409 | 11113.3 | 156.94 | 11478 | 11279.77 | 145.24 | 11478 | 11241.2 | 165.51 | 11478 | 11241.37 | 138.44 |
| | | 2op | 11109 | 11020.8 | 28.24 | 11109 | 11109 | 0 | 11256 | 11143.1 | 58.96 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11090.63 | 179.6 | 11478 | 11275.43 | 147.81 | 11478 | 11201.03 | 158.02 | 11478 | 11269.1 | 141.28 |
| | | 2op | 11109 | 11020.6 | 30.71 | 11109 | 11109 | 0 | 11305 | 11158.03 | 71.47 | 11109 | 11109 | 0 |

Table A.1519: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11221.23 | 170.73 | 11478 | 11308.23 | 118.25 | 11478 | 11213.3 | 140.08 | 11478 | 11175.8 | 158.56 |
| | | 2op | 11285 | 11026.67 | 63.08 | 11394 | 11266.3 | 66.38 | 11151 | 11023.47 | 43.5 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11214.63 | 134.41 | 11478 | 11284.13 | 145.49 | 11413 | 11242.9 | 103.69 | 11478 | 11214.7 | 131.66 |
| | | 2op | 11213 | 11022.93 | 48.02 | 11394 | 11290.83 | 52.4 | 11305 | 11088.5 | 90.75 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 11478 | 11197.6 | 136.39 | 11478 | 11210.77 | 132.8 | 11411 | 11245.8 | 88.74 | 11478 | 11186.1 | 178.79 |
| | | 2op | 11109 | 11038.6 | 40.66 | 11305 | 11141.6 | 68.5 | 11305 | 11201.43 | 89.68 | 11109 | 11071.27 | 48.26 |
| | 50 | rnd | 11478 | 11213.63 | 175.43 | 11478 | 11304.1 | 129.56 | 11478 | 11336.07 | 88.68 | 11478 | 11274.47 | 156.18 |
| | | 2op | 11305 | 11059.2 | 66.6 | 11373 | 11255.73 | 82.13 | 11373 | 11288.87 | 48.29 | 11259 | 11032.93 | 57.66 |

Table A.1520: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11168.9 | 164.07 | 11478 | 11265.77 | 101.67 | 11478 | 11234.27 | 141.14 | 11478 | 11161.57 | 169.7 |
| | | 2op | 11109 | 11017.53 | 25.78 | 11285 | 11137.67 | 59.3 | 11305 | 11115.53 | 35.78 | 11017 | 11003.47 | 2.56 |
| | 50 | rnd | 11321 | 11087.2 | 199.64 | 11478 | 11256.93 | 140.16 | 11413 | 11202.03 | 158.19 | 11458 | 11258.47 | 114.91 |
| | | 2op | 11109 | 11020.6 | 29.23 | 11305 | 11165.27 | 79.36 | 11256 | 11113.9 | 26.84 | 11109 | 11029.93 | 38 |
| 51 | 20 | rnd | 11394 | 11123.87 | 192.93 | 11413 | 11246.87 | 134.18 | 11478 | 11304.23 | 114.76 | 11478 | 11248.2 | 136.14 |
| | | 2op | 11101 | 11021.47 | 27.02 | 11109 | 11109 | 0 | 11305 | 11132.17 | 60.42 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11222.9 | 107.09 | 11478 | 11214.17 | 143.17 | 11478 | 11286.23 | 142.12 | 11478 | 11294.57 | 130.42 |
| | | 2op | 11109 | 11022.73 | 33.75 | 11109 | 11109 | 0 | 11256 | 11149.7 | 64.33 | 11109 | 11109 | 0 |

Table A.1521: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11237.8 | 147.52 | 11478 | 11301.9 | 128.67 | 11478 | 11195.9 | 177.56 | 11394 | 11182.2 | 159.84 |
| | | 2op | 11109 | 11069.87 | 48.95 | 11410 | 11300.47 | 46.38 | 11109 | 11011.47 | 26.85 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11203.57 | 144.72 | 11478 | 11287.3 | 114.74 | 11478 | 11202.57 | 132.96 | 11478 | 11169.17 | 167.18 |
| | | 2op | 11256 | 11084.63 | 55.77 | 11394 | 11270.97 | 72.84 | 11109 | 11015.47 | 32.07 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 11478 | 11234.97 | 137.18 | 11478 | 11296.6 | 126.19 | 11478 | 11253.27 | 122.62 | 11478 | 11207.67 | 151.2 |
| | | 2op | 11109 | 11084.47 | 41.38 | 11305 | 11130.17 | 57 | 11109 | 11073.3 | 43.99 | 11003 | 11003 | 0 |
| | 50 | rnd | 11413 | 11239.83 | 124.89 | 11478 | 11290.9 | 124.33 | 11478 | 11190.47 | 162.83 | 11413 | 11174.83 | 169.19 |
| | | 2op | 11305 | 11110.8 | 44.34 | 11305 | 11207.17 | 87.13 | 11305 | 11053.67 | 64.34 | 11017 | 11004.4 | 4.27 |

Table A.1522: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11170 | 184.61 | 11410 | 11196.8 | 179.71 | 11413 | 11197.4 | 165.63 | 11394 | 11133.73 | 171.11 |
| | | 2op | 11109 | 11044.4 | 42.57 | 11109 | 11108.53 | 1.87 | 11101 | 11009.53 | 18.28 | 11003 | 11003 | 0 |
| | 50 | rnd | 11394 | 11204.3 | 126.68 | 11478 | 11220.2 | 165.74 | 11478 | 11226.27 | 110.63 | 11394 | 11149.1 | 160.24 |
| | | 2op | 11109 | 11061.27 | 45.83 | 11305 | 11120.43 | 43.98 | 11109 | 11029.73 | 39.38 | 11095 | 11006.07 | 16.8 |
| 51 | 20 | rnd | 11411 | 11163.2 | 165.52 | 11478 | 11241.67 | 115.52 | 11478 | 11208.67 | 190.62 | 11411 | 11123.87 | 185.13 |
| | | 2op | 11109 | 11084.2 | 41.22 | 11151 | 11110.33 | 7.69 | 11109 | 11067.97 | 43.97 | 11017 | 11004.4 | 4.27 |
| | 50 | rnd | 11411 | 11189.57 | 157.16 | 11478 | 11243.77 | 155.03 | 11478 | 11261.2 | 98.63 | 11478 | 11168.3 | 168.44 |
| | | 2op | 11109 | 11082.73 | 41.24 | 11109 | 11105.87 | 16.79 | 11109 | 11101.67 | 23.93 | 11109 | 11008.4 | 19.6 |

Table A.1523: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13853 | 151.61 | 14161 | 13962.7 | 114.5 | 14006 | 13832.37 | 124.55 | 14133 | 13847.53 | 163 |
| | | 2op | 14001 | 13848.07 | 119.81 | 14157 | 14012.57 | 43.59 | 13995 | 13744.63 | 73.03 | 13721 | 13721 | 0 |
| | 50 | rnd | 14157 | 13845.37 | 194.83 | 14137 | 13933.1 | 125.12 | 14159 | 13878.4 | 166.25 | 14133 | 13767.93 | 206.85 |
| | | 2op | 14133 | 13874.5 | 124.56 | 14157 | 14040.5 | 56.63 | 14001 | 13810.57 | 104.26 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14133 | 13856.23 | 183.91 | 14137 | 13904.3 | 124.91 | 14161 | 13932.63 | 133.84 | 14076 | 13852 | 154.2 |
| | | 2op | 14038 | 13860.13 | 90.2 | 14157 | 14013.37 | 71.67 | 14038 | 13989.97 | 35.41 | 13867 | 13725.87 | 26.66 |
| | 50 | rnd | 14071 | 13830.8 | 190.72 | 14161 | 13966.53 | 138.57 | 14161 | 13971.03 | 131.11 | 14161 | 13807.93 | 156.7 |
| | | 2op | 14018 | 13897.6 | 86.29 | 14157 | 14015.37 | 49.93 | 14157 | 14011.33 | 46.88 | 13827 | 13724.53 | 19.35 |

Table A.1524: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13830 | 176.85 | 14157 | 13937.1 | 172.48 | 14146 | 13878.13 | 172.31 | 14157 | 13795.27 | 190.15 |
| | | 2op | 13938 | 13770.63 | 61.03 | 14064 | 13974.9 | 36.12 | 14038 | 13941.13 | 66.4 | 13721 | 13721 | 0 |
| | 50 | rnd | 14131 | 13852.9 | 171.38 | 14137 | 13933.8 | 136.12 | 14161 | 13971 | 122.13 | 14095 | 13863.4 | 172.49 |
| | | 2op | 13938 | 13791.8 | 64.6 | 14157 | 14010.8 | 62.11 | 14038 | 13968.3 | 29.03 | 13922 | 13737.77 | 46.44 |
| 51 | 20 | rnd | 14161 | 13867.83 | 139.81 | 14161 | 13844.2 | 194.13 | 14161 | 13933.7 | 146.65 | 14154 | 13909.73 | 139.82 |
| | | 2op | 13938 | 13803.1 | 78.63 | 14038 | 13982.67 | 27.1 | 14059 | 13972.1 | 23.82 | 13995 | 13802.5 | 92.92 |
| | 50 | rnd | 14159 | 13865.53 | 169.23 | 14161 | 13906.3 | 150.41 | 14161 | 13975.93 | 139.84 | 14157 | 13879.9 | 158.21 |
| | | 2op | 13827 | 13752.8 | 49.41 | 14038 | 13961.03 | 26.09 | 14157 | 14001.03 | 49.78 | 13968 | 13828.07 | 84.19 |

Table A.1525: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13823 | 182.9 | 14139 | 13946.27 | 143.82 | 14139 | 13835.2 | 179.47 | 14105 | 13745.6 | 187.53 |
| | | 2op | 14038 | 13875.47 | 120.44 | 14157 | 14019.87 | 61.81 | 13995 | 13738.33 | 66.07 | 13721 | 13721 | 0 |
| | 50 | rnd | 14128 | 13863.97 | 132.48 | 14157 | 13962.57 | 149.04 | 14133 | 13865.37 | 172.55 | 14137 | 13836.5 | 201.54 |
| | | 2op | 14038 | 13887.67 | 119.78 | 14157 | 14018.3 | 37.17 | 14038 | 13799.63 | 115.28 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14137 | 13860 | 153.8 | 14137 | 13896.37 | 120.43 | 14161 | 13903.1 | 154.82 | 14139 | 13893.5 | 181.77 |
| | | 2op | 14038 | 13852.8 | 100.79 | 14157 | 14000 | 36.16 | 14064 | 13994.53 | 23.28 | 13932 | 13734.73 | 52.28 |
| | 50 | rnd | 14139 | 13892.77 | 166.98 | 14161 | 13983.57 | 103.47 | 14161 | 14008.03 | 132.43 | 14137 | 13768.83 | 186.91 |
| | | 2op | 14038 | 13898.97 | 96.28 | 14157 | 14026.97 | 53.4 | 14157 | 14031.93 | 57.92 | 14038 | 13734.57 | 59.62 |

Table A.1526: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14135 | 13866.77 | 166.27 | 14161 | 13979.03 | 140.05 | 14161 | 13902.23 | 159.47 | 14094 | 13798.4 | 134.33 |
| | | 2op | 13938 | 13774.33 | 67.58 | 14157 | 13976.13 | 51.13 | 13995 | 13903.97 | 81.8 | 13721 | 13721 | 0 |
| | 50 | rnd | 14133 | 13840.27 | 172.43 | 14161 | 13934.3 | 149.62 | 14157 | 13945.7 | 148.83 | 14066 | 13851.3 | 131.08 |
| | | 2op | 13938 | 13780.67 | 66.37 | 14157 | 13997.03 | 62.7 | 13995 | 13966.13 | 25.88 | 13827 | 13724.53 | 19.35 |
| 51 | 20 | rnd | 14125 | 13833.47 | 190.36 | 14161 | 13915.67 | 175.66 | 14157 | 13913.03 | 159.61 | 14137 | 13880.33 | 157.28 |
| | | 2op | 13932 | 13773.97 | 60.58 | 14157 | 13996.17 | 52.13 | 14157 | 13976.97 | 42.64 | 13968 | 13801.97 | 79.08 |
| | 50 | rnd | 14101 | 13868.1 | 143.19 | 14161 | 13883.77 | 163.71 | 14161 | 13954.73 | 133.02 | 14155 | 13941.5 | 144.91 |
| | | 2op | 13827 | 13774 | 53.91 | 14064 | 13961.97 | 49.62 | 14157 | 13987.63 | 51.55 | 14038 | 13806.47 | 86.05 |

Table A.1527: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13878.23 | 140.38 | 14161 | 13986.13 | 103.72 | 14127 | 13789.23 | 163.9 | 14139 | 13842.1 | 171.19 |
| | | 2op | 14038 | 13929.83 | 74.62 | 14157 | 14043.73 | 61.68 | 13995 | 13737.17 | 62.08 | 13721 | 13721 | 0 |
| | 50 | rnd | 14161 | 13861.27 | 194.28 | 14157 | 13974.57 | 135.32 | 14039 | 13770.73 | 147.49 | 14064 | 13800.23 | 157.74 |
| | | 2op | 14038 | 13971.57 | 76.91 | 14157 | 14037.93 | 65.15 | 14004 | 13755.53 | 89.85 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14137 | 13877.7 | 134.96 | 14161 | 13916.7 | 126.17 | 14139 | 13878.27 | 169.08 | 14127 | 13814.5 | 177.43 |
| | | 2op | 14038 | 13934.17 | 71.49 | 14038 | 14002.13 | 28.04 | 14004 | 13820.97 | 100.28 | 13721 | 13721 | 0 |
| | 50 | rnd | 14137 | 13880.67 | 118.01 | 14133 | 13939.6 | 135.29 | 14161 | 13886.03 | 155.78 | 14161 | 13817.9 | 155.18 |
| | | 2op | 14038 | 13973.77 | 44.61 | 14157 | 14007.2 | 60.17 | 13962 | 13791.17 | 94.58 | 13721 | 13721 | 0 |

Table A.1528: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14155 | 13902.47 | 166.6 | 14151 | 13921 | 172.19 | 14124 | 13860.57 | 162.74 | 14099 | 13778.4 | 189.13 |
| | | 2op | 13938 | 13825.77 | 66.53 | 13995 | 13889.03 | 63.72 | 13827 | 13731.07 | 30.81 | 13721 | 13721 | 0 |
| | 50 | rnd | 14137 | 13936.87 | 186.17 | 14161 | 13924.57 | 173.24 | 14127 | 13823.6 | 184.36 | 14123 | 13835.73 | 146.61 |
| | | 2op | 13932 | 13822.9 | 40.8 | 14038 | 13946.33 | 52.5 | 13827 | 13731.6 | 32.34 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14161 | 13918.73 | 168.8 | 14161 | 13893.1 | 143.09 | 14125 | 13882.33 | 173.3 | 14090 | 13879.63 | 145.01 |
| | | 2op | 13938 | 13833.33 | 53.2 | 13995 | 13909.83 | 61.69 | 14038 | 13788.87 | 88.68 | 13721 | 13721 | 0 |
| | 50 | rnd | 14137 | 13943.67 | 131.83 | 14062 | 13891.33 | 115.29 | 14139 | 13921.13 | 138.22 | 14133 | 13787.83 | 169.92 |
| | | 2op | 13968 | 13843.87 | 40.88 | 14038 | 13880.6 | 61.87 | 13995 | 13795.83 | 75.48 | 13721 | 13721 | 0 |

Table A.1529: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18093 | 17873.33 | 164.32 | 18251 | 17983.3 | 143.67 | 18301 | 17899.13 | 210.81 | 18261 | 17880.73 | 193.21 |
| | | 2op | 18017 | 18003.2 | 11.46 | 18017 | 18001.67 | 11.03 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 18175 | 17848.43 | 203.69 | 18181 | 17992.17 | 163.8 | 18172 | 17882.23 | 221.19 | 18301 | 17895.5 | 196.63 |
| | | 2op | 18017 | 18003.97 | 11.59 | 18017 | 18015.2 | 5.94 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18184 | 17890.47 | 159.38 | 18171 | 17982.27 | 124.18 | 18301 | 17904.03 | 188 | 18176 | 17881.67 | 208.26 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18000.8 | 10.58 | 17994 | 17994 | 0 |
| | 50 | rnd | 18114 | 17853.53 | 186.04 | 18132 | 17933.37 | 149.41 | 18156 | 17930.27 | 134.92 | 18172 | 17865.93 | 184.48 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18017 | 0 | 18017 | 18012.4 | 9.36 | 17994 | 17994 | 0 |

Table A.1530: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18143 | 17891.1 | 144.94 | 18165 | 17930.83 | 152.55 | 18172 | 17871.33 | 173.84 | 18172 | 17775.6 | 173.04 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18014.67 | 7.01 | 17994 | 17994 | 0 |
| | 50 | rnd | 18156 | 17876.2 | 127.77 | 18301 | 18017.57 | 149.48 | 18301 | 17879.47 | 227.43 | 18184 | 17846.7 | 173.47 |
| | | 2op | 18017 | 18006.27 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17994.77 | 4.2 |
| 51 | 20 | rnd | 18184 | 17880.5 | 180.57 | 18301 | 17874.67 | 172.58 | 18301 | 17923.1 | 159.57 | 18171 | 17880.1 | 176.15 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |
| | 50 | rnd | 18184 | 17916.2 | 181.99 | 18176 | 17868.23 | 174.15 | 18195 | 17952.47 | 158.99 | 18172 | 17913.83 | 158.95 |
| | | 2op | 18017 | 18004.73 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |

Table A.1531: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17865.9 | 232.58 | 18171 | 17905.1 | 148.79 | 18159 | 17883.8 | 179.23 | 18171 | 17863.13 | 185.53 |
| | | 2op | 18017 | 17997.07 | 7.95 | 18017 | 18003.2 | 11.46 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 18109 | 17902.43 | 131.55 | 18301 | 17964.57 | 155.84 | 18172 | 17871.23 | 166.96 | 18172 | 17908.8 | 188.91 |
| | | 2op | 18017 | 18001.67 | 11.03 | 18017 | 18016.23 | 4.2 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18275 | 17898.6 | 178.23 | 18131 | 17990.53 | 119.31 | 18275 | 17960.97 | 161.82 | 18084 | 17794.7 | 177.38 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18001.03 | 10.6 | 17994 | 17994 | 0 |
| | 50 | rnd | 18301 | 17965.73 | 158.76 | 18301 | 17992.9 | 133.21 | 18301 | 17944.53 | 157.63 | 18134 | 17899.43 | 121.66 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18016.23 | 4.2 | 17994 | 17994 | 0 |

Table A.1532: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17870.23 | 179.1 | 18171 | 17954.87 | 171.04 | 18292 | 17890.8 | 160.48 | 18184 | 17817.83 | 235.51 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18017 | 0 | 18017 | 18009.33 | 11.03 | 17994 | 17994 | 0 |
| | 50 | rnd | 18172 | 17849.03 | 190.33 | 18292 | 17970.67 | 144.56 | 18172 | 17948.63 | 156.31 | 18142 | 17875.8 | 169.35 |
| | | 2op | 18017 | 18003.97 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18175 | 17882.77 | 154.38 | 18186 | 17902.33 | 160.16 | 18301 | 17973.8 | 193.95 | 18109 | 17848.87 | 179.01 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17999.37 | 9.89 |
| | 50 | rnd | 18142 | 17866.1 | 160.53 | 18301 | 17879.23 | 224.87 | 18165 | 17952.83 | 141.16 | 18301 | 17872.6 | 215.55 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18002.43 | 11.27 |

Table A.1533: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17909.7 | 198.16 | 18212 | 18011.03 | 133.02 | 18152 | 17877.5 | 144.8 | 18301 | 17900.93 | 151.42 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 18143 | 17890.87 | 135.7 | 18301 | 18031.27 | 125.21 | 18156 | 17878 | 176.97 | 18152 | 17889.67 | 166.8 |
| | | 2op | 18017 | 18015.47 | 5.84 | 18017 | 18016.23 | 4.2 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18181 | 17931.77 | 213.77 | 18165 | 17946.77 | 162.21 | 18120 | 17887.93 | 170.52 | 18260 | 17856.6 | 205.15 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18008.57 | 11.27 | 17994 | 17994 | 0 |
| | 50 | rnd | 18176 | 18028.3 | 98.47 | 18152 | 17952.1 | 128.69 | 18176 | 17971.93 | 125.15 | 18216 | 17903.23 | 126.59 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18001.67 | 11.03 | 17994 | 17994 | 0 |

Table A.1534: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18156 | 17884.4 | 193.66 | 18141 | 17924.73 | 149.47 | 18301 | 17871.83 | 230.84 | 18275 | 17901.4 | 192.21 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17997.07 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18184 | 17914.6 | 128.72 | 18284 | 17954.73 | 148.64 | 18171 | 17899.53 | 196.61 | 18044 | 17780.6 | 185.68 |
| | | 2op | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18175 | 17942.77 | 167.6 | 18175 | 17928.17 | 181.66 | 18260 | 17938.5 | 161.45 | 18119 | 17832.6 | 156.74 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.63 | 9.89 | 17994 | 17994 | 0 |
| | 50 | rnd | 18142 | 17909.17 | 161.79 | 18142 | 17898 | 153.08 | 18184 | 17871.33 | 207.58 | 18172 | 17875.8 | 179.02 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.63 | 9.89 | 17994 | 17994 | 0 |

Table A.1535: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21184 | 20870.73 | 189.85 | 21176 | 20911.5 | 172.7 | 21153 | 20863.37 | 246.93 | 21150 | 20869.97 | 195.18 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20855.17 | 78.95 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21170 | 20822.9 | 242.14 | 21176 | 20956.53 | 150.34 | 21234 | 20856.27 | 212.85 | 21196 | 20867.57 | 230.28 |
| | | 2op | 21008 | 20839.43 | 40.14 | 21210 | 20957.97 | 129.75 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21172 | 20834.27 | 214.52 | 21196 | 20939.33 | 178.42 | 21182 | 20945.43 | 157.44 | 21192 | 20810.37 | 249.79 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20937.63 | 112.43 | 21052 | 20836.43 | 40.71 | 20829 | 20829 | 0 |
| | 50 | rnd | 21245 | 20847.97 | 274.58 | 21196 | 20949.53 | 176.91 | 21206 | 20929.97 | 151.66 | 21172 | 20870.3 | 216.24 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20962.13 | 101.76 | 21193 | 20849.13 | 68.16 | 20829 | 20829 | 0 |

Table A.1536: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21209 | 20888.1 | 179.68 | 21172 | 20897.17 | 207.62 | 21148 | 20829.8 | 186.25 | 21212 | 20884.13 | 189.15 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21212 | 20876.07 | 196.2 | 21212 | 20906.63 | 192.95 | 21177 | 20889.9 | 220.22 | 21206 | 20835.7 | 218.39 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21162 | 20897.43 | 173.81 | 21173 | 20970.13 | 166.45 | 21173 | 20899.63 | 208.68 | 21181 | 20903.07 | 170.12 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21209 | 20915 | 193.04 | 21202 | 20847.2 | 237.11 | 21181 | 20937.17 | 149.92 | 21212 | 20882.07 | 204.72 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.1537: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20878.57 | 206.89 | 21135 | 20915.07 | 169.13 | 21166 | 20807.47 | 217.94 | 21233 | 20848.9 | 212.81 |
| | | 2op | 20997 | 20837.9 | 35.06 | 21139 | 20844.67 | 59.56 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21235 | 20885.93 | 221.68 | 21212 | 20991.7 | 135.85 | 21113 | 20727.2 | 231.02 | 21157 | 20846 | 178.94 |
| | | 2op | 21077 | 20844.87 | 60.44 | 21154 | 20874.3 | 85.23 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21190 | 20846.8 | 217.98 | 21161 | 20922.97 | 162.64 | 21197 | 20831.13 | 258.86 | 21212 | 20854.97 | 187.9 |
| | | 2op | 20889 | 20831 | 10.95 | 21059 | 20916.67 | 88.52 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21180 | 20900.33 | 182.73 | 21196 | 20980.5 | 175.96 | 21208 | 20980.4 | 123.23 | 21168 | 20848.43 | 169.05 |
| | | 2op | 21042 | 20841.37 | 47.61 | 21093 | 20986.17 | 89.99 | 21187 | 20848.03 | 74.89 | 20829 | 20829 | 0 |

Table A.1538: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21209 | 20831.17 | 180.36 | 21212 | 20945.43 | 163.9 | 21212 | 20898.1 | 239.37 | 21132 | 20857.67 | 213.98 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21198 | 20898.77 | 176.38 | 21218 | 20955.9 | 146.95 | 21184 | 20846.63 | 212.85 | 21162 | 20832.6 | 183.47 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21162 | 20922.23 | 149.35 | 21190 | 20925.4 | 187.87 | 21186 | 20842.6 | 192.74 | 21160 | 20887.3 | 167.9 |
| | | 2op | 20829 | 20829 | 0 | 20991 | 20834.4 | 29.58 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21182 | 20884.4 | 203.74 | 21165 | 20886.1 | 189.25 | 21161 | 20942.23 | 147.17 | 21195 | 20900.37 | 203.04 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.1539: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21215 | 20888.97 | 189.36 | 21271 | 20985.23 | 134.33 | 21169 | 20869.83 | 205.33 | 21246 | 20852.7 | 204.59 |
| | | 2op | 20829 | 20829 | 0 | 21057 | 20890.03 | 74.71 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21271 | 20946.37 | 167.11 | 21233 | 21007.77 | 133.47 | 21190 | 20808.07 | 181.92 | 21160 | 20817.83 | 187.75 |
| | | 2op | 21008 | 20838.77 | 35.08 | 21193 | 20893 | 101.83 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21203 | 20908.67 | 184.8 | 21203 | 20955.23 | 172.99 | 21132 | 20894.57 | 211.38 | 21224 | 20819 | 223.81 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20916.67 | 105.28 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21196 | 20926.7 | 163.55 | 21212 | 20930.77 | 183.59 | 21212 | 20880.53 | 230.29 | 21178 | 20849.07 | 189.47 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21193 | 20951.4 | 116.23 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |

Table A.1540: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21214 | 20938.83 | 177.52 | 21165 | 20863.8 | 215.43 | 21160 | 20794.47 | 230.52 | 21130 | 20761.17 | 192.23 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21218 | 20878.97 | 236.8 | 21156 | 20884.77 | 172.97 | 21196 | 20820.87 | 215.52 | 21087 | 20795.5 | 177.88 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21203 | 20872.33 | 204.7 | 21210 | 20931.93 | 189.5 | 21271 | 20903.2 | 219.16 | 21114 | 20830.47 | 199.72 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21203 | 20876.27 | 177.05 | 21182 | 20957.23 | 154.41 | 21154 | 20816.23 | 210.81 | 21186 | 20840.9 | 213.77 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.1541: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.23 | 2.11 | 596 | 594.03 | 1.61 | 596 | 593.17 | 1.66 | 596 | 590.23 | 2.81 |
| | | 2op | 596 | 592.07 | 2.8 | 596 | 594.77 | 1.01 | 596 | 594.63 | 0.96 | 595 | 590.37 | 2.31 |
| | 50 | rnd | 596 | 592.3 | 2.84 | 596 | 594.77 | 1.17 | 596 | 594.83 | 0.99 | 595 | 589.97 | 3.33 |
| | | 2op | 595 | 592.67 | 2.32 | 596 | 594.73 | 0.78 | 596 | 595.03 | 0.61 | 595 | 590.57 | 2.19 |
| 51 | 20 | rnd | 595 | 591.7 | 2.18 | 596 | 593.97 | 1.52 | 596 | 594.47 | 1.31 | 596 | 593.27 | 2.08 |
| | | 2op | 596 | 593.4 | 1.96 | 596 | 595.07 | 0.45 | 596 | 595.33 | 0.48 | 595 | 594.87 | 0.43 |
| | 50 | rnd | 596 | 592.8 | 2.14 | 596 | 594.83 | 1.02 | 596 | 595 | 0.74 | 596 | 593.77 | 1.81 |
| | | 2op | 596 | 593.33 | 2.26 | 596 | 595.2 | 0.66 | 596 | 595.33 | 0.66 | 596 | 594.7 | 0.6 |

Table A.1542: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 590.07 | 3.61 | 596 | 592.63 | 2.54 | 596 | 593.2 | 2.37 | 596 | 591.4 | 2.95 |
| | | 2op | 594 | 590.6 | 2.33 | 595 | 594.93 | 0.25 | 595 | 594.33 | 0.55 | 594 | 593.8 | 0.81 |
| | 50 | rnd | 596 | 590.87 | 3.9 | 596 | 591.87 | 2.37 | 596 | 593.37 | 2.06 | 595 | 591.73 | 2.99 |
| | | 2op | 594 | 590.67 | 2.19 | 595 | 595 | 0 | 595 | 594.97 | 0.18 | 595 | 594.1 | 0.31 |
| 51 | 20 | rnd | 596 | 591.33 | 2.86 | 596 | 592.1 | 2.7 | 596 | 592.47 | 2.83 | 596 | 591.7 | 2.38 |
| | | 2op | 594 | 591.03 | 2.3 | 595 | 594.63 | 0.96 | 595 | 594.87 | 0.35 | 595 | 594.2 | 0.48 |
| | 50 | rnd | 596 | 591.57 | 2.92 | 596 | 591.2 | 3.17 | 596 | 592.8 | 2.59 | 596 | 591.77 | 2.25 |
| | | 2op | 594 | 591.13 | 2.34 | 595 | 594.73 | 0.45 | 595 | 595 | 0 | 595 | 594.37 | 0.56 |

Table A.1543: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 591.27 | 2.99 | 596 | 594.03 | 1.45 | 596 | 593.27 | 1.93 | 595 | 590.6 | 2.84 |
| | | 2op | 596 | 591.17 | 2.48 | 596 | 594.63 | 0.89 | 596 | 594.17 | 1.12 | 594 | 589.17 | 0.91 |
| | 50 | rnd | 595 | 591.67 | 2.76 | 596 | 594.53 | 0.97 | 596 | 594.43 | 1.14 | 595 | 591.1 | 2.86 |
| | | 2op | 596 | 592.83 | 2.51 | 596 | 595.17 | 0.91 | 596 | 594.73 | 0.91 | 595 | 589.93 | 2.13 |
| 51 | 20 | rnd | 595 | 591.43 | 3 | 596 | 593.97 | 1.35 | 596 | 594.9 | 1.3 | 595 | 593 | 1.8 |
| | | 2op | 595 | 592.97 | 2.27 | 596 | 595.03 | 0.49 | 596 | 595.33 | 0.48 | 596 | 595.1 | 0.31 |
| | 50 | rnd | 596 | 592.67 | 1.79 | 596 | 595.07 | 0.78 | 596 | 594.97 | 1.07 | 596 | 593.43 | 1.87 |
| | | 2op | 596 | 593.77 | 1.76 | 596 | 595.33 | 0.48 | 596 | 595.33 | 0.55 | 596 | 594.73 | 0.64 |

Table A.1544: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.07 | 3.18 | 596 | 592.9 | 2.59 | 595 | 591.9 | 2.72 | 596 | 591.43 | 2.74 |
| | | 2op | 594 | 591.13 | 2.18 | 595 | 594.9 | 0.4 | 595 | 594.27 | 0.45 | 594 | 593.5 | 1.14 |
| | 50 | rnd | 596 | 590.9 | 3.35 | 596 | 592.7 | 2.38 | 595 | 592.1 | 2.51 | 596 | 591.03 | 2.83 |
| | | 2op | 594 | 591.23 | 2.4 | 596 | 595.03 | 0.18 | 595 | 594.9 | 0.31 | 595 | 594 | 0.26 |
| 51 | 20 | rnd | 595 | 590.8 | 3.38 | 596 | 591.43 | 3.04 | 596 | 593.23 | 2.39 | 595 | 592.13 | 2.32 |
| | | 2op | 594 | 590.97 | 2.31 | 595 | 594.73 | 0.45 | 595 | 594.9 | 0.31 | 595 | 594.27 | 0.45 |
| | 50 | rnd | 596 | 591.27 | 3.23 | 596 | 591.47 | 2.89 | 596 | 591.7 | 2.55 | 596 | 591.77 | 3.3 |
| | | 2op | 594 | 591.17 | 2.41 | 595 | 594.43 | 0.5 | 595 | 595 | 0 | 595 | 594.17 | 0.46 |

Table A.1545: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.87 | 2.26 | 596 | 594.63 | 1.16 | 595 | 591.23 | 2.86 | 595 | 589.03 | 3.42 |
| | | 2op | 596 | 594.47 | 0.78 | 596 | 595.43 | 0.5 | 594 | 589.17 | 0.91 | 589 | 589 | 0 |
| | 50 | rnd | 595 | 592.43 | 1.79 | 596 | 594.23 | 1.48 | 595 | 590.57 | 2.93 | 595 | 588.7 | 3.65 |
| | | 2op | 596 | 594.07 | 1.55 | 596 | 595.07 | 0.45 | 594 | 589.43 | 1.25 | 589 | 589 | 0 |
| 51 | 20 | rnd | 596 | 593.13 | 1.85 | 596 | 594.57 | 1.14 | 596 | 593 | 1.86 | 596 | 591.8 | 2.09 |
| | | 2op | 595 | 594.2 | 0.41 | 596 | 595.1 | 0.31 | 595 | 594.7 | 0.47 | 595 | 591.63 | 2.39 |
| | 50 | rnd | 596 | 593 | 1.44 | 596 | 594.3 | 1.24 | 596 | 592.4 | 2.14 | 595 | 589.17 | 3.65 |
| | | 2op | 596 | 594.87 | 0.51 | 596 | 595.27 | 0.52 | 595 | 593.93 | 1.05 | 592 | 589.1 | 0.55 |

Table A.1546: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.87 | 3.04 | 596 | 592.33 | 2.23 | 596 | 590.8 | 3.57 | 595 | 589.97 | 4.09 |
| | | 2op | 594 | 593.07 | 1.8 | 595 | 594.1 | 0.31 | 594 | 590.17 | 1.93 | 589 | 589 | 0 |
| | 50 | rnd | 595 | 592.27 | 1.93 | 596 | 591.6 | 3.24 | 596 | 591.27 | 2.78 | 595 | 589.3 | 3.73 |
| | | 2op | 594 | 593.1 | 1.6 | 595 | 594.13 | 0.35 | 594 | 593.57 | 1.01 | 592 | 589.17 | 0.65 |
| 51 | 20 | rnd | 596 | 590.63 | 2.93 | 595 | 590.53 | 2.61 | 596 | 591.77 | 2.34 | 595 | 589.83 | 2.79 |
| | | 2op | 595 | 593.6 | 1.16 | 594 | 594 | 0 | 595 | 594.03 | 0.18 | 594 | 589.33 | 1.27 |
| | 50 | rnd | 596 | 591.77 | 2.47 | 596 | 591.5 | 2.87 | 596 | 591.9 | 2.86 | 595 | 588.83 | 3.9 |
| | | 2op | 595 | 593.53 | 1.36 | 594 | 594 | 0 | 595 | 594.13 | 0.35 | 594 | 589.57 | 1.43 |

Table A.1547: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 772.23 | 2.54 | 777 | 775.23 | 1.28 | 777 | 774.2 | 2.41 | 776 | 770.93 | 5.41 |
| | | 2op | 775 | 768.17 | 3.59 | 777 | 774.33 | 2.14 | 777 | 773.23 | 1.99 | 770 | 765.23 | 0.97 |
| | 50 | rnd | 777 | 772.83 | 3.33 | 777 | 775.6 | 1.19 | 777 | 775.47 | 1.33 | 777 | 771 | 3.26 |
| | | 2op | 775 | 770.27 | 3.54 | 777 | 775.27 | 1.48 | 777 | 775.47 | 1.66 | 770 | 766.5 | 1.93 |
| 51 | 20 | rnd | 777 | 772.5 | 3.39 | 777 | 773.8 | 2.28 | 777 | 774.47 | 1.2 | 777 | 773.17 | 2.41 |
| | | 2op | 775 | 768.27 | 2.53 | 777 | 773 | 1.84 | 777 | 773.53 | 1.36 | 775 | 771.97 | 1.67 |
| | 50 | rnd | 777 | 773.57 | 2.62 | 777 | 775.03 | 1.35 | 777 | 775.53 | 1.36 | 777 | 774.47 | 1.55 |
| | | 2op | 775 | 769.97 | 2.2 | 777 | 775 | 1.55 | 777 | 775.6 | 1.52 | 776 | 772.13 | 1.63 |

Table A.1548: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 766.43 | 7.06 | 777 | 774 | 2.32 | 777 | 773 | 2.24 | 777 | 769.7 | 8.18 |
| | | 2op | 770 | 766.77 | 2.13 | 777 | 769.87 | 1.5 | 770 | 769.4 | 0.5 | 774 | 769.63 | 0.96 |
| | 50 | rnd | 775 | 767.13 | 4.93 | 776 | 771.83 | 2.74 | 777 | 773.37 | 2.5 | 777 | 770.7 | 5.74 |
| | | 2op | 770 | 765.63 | 1.4 | 770 | 769.57 | 0.5 | 772 | 769.77 | 0.77 | 770 | 769.37 | 0.49 |
| 51 | 20 | rnd | 775 | 767.53 | 6.51 | 777 | 770.6 | 5.73 | 777 | 773.3 | 1.93 | 777 | 770.23 | 7.79 |
| | | 2op | 770 | 767.47 | 2.34 | 770 | 769.6 | 0.5 | 771 | 769.47 | 0.63 | 772 | 769.67 | 0.8 |
| | 50 | rnd | 775 | 768.4 | 5.68 | 777 | 771 | 3.61 | 777 | 770.9 | 4.97 | 777 | 772.2 | 3.74 |
| | | 2op | 770 | 766.27 | 1.95 | 770 | 769.47 | 0.51 | 770 | 769.57 | 0.5 | 770 | 769.47 | 0.51 |

Table A.1549: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.8 | 2.77 | 777 | 774.8 | 1.58 | 777 | 774.43 | 1.45 | 777 | 768.87 | 5.58 |
| | | 2op | 775 | 768.93 | 3.39 | 777 | 774.63 | 1.94 | 777 | 772.77 | 1.81 | 770 | 765.43 | 1.3 |
| | 50 | rnd | 777 | 772.8 | 2.76 | 777 | 775.17 | 1.23 | 777 | 775.03 | 1.3 | 775 | 770.9 | 3.06 |
| | | 2op | 776 | 770.17 | 3.25 | 777 | 775.5 | 1.33 | 777 | 775.43 | 1.17 | 770 | 765.8 | 1.61 |
| 51 | 20 | rnd | 777 | 772.17 | 2.98 | 777 | 774.33 | 1.65 | 777 | 775 | 1.08 | 777 | 773.57 | 2.47 |
| | | 2op | 775 | 768.5 | 2.33 | 777 | 773.47 | 1.53 | 777 | 773.67 | 1.79 | 776 | 772.43 | 1.38 |
| | 50 | rnd | 777 | 773.83 | 1.68 | 777 | 775.07 | 1.2 | 777 | 776.07 | 0.87 | 777 | 774 | 2.32 |
| | | 2op | 776 | 770.4 | 2.85 | 777 | 774.43 | 1.65 | 777 | 775.33 | 1.77 | 777 | 773.27 | 2.16 |

Table A.1550: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 766 | 7.94 | 777 | 772.53 | 3.21 | 777 | 772.83 | 2.34 | 777 | 770.93 | 6.86 |
| | | 2op | 770 | 766.3 | 2.14 | 770 | 769.57 | 0.97 | 774 | 769.53 | 0.97 | 770 | 769.4 | 0.81 |
| | 50 | rnd | 775 | 767.6 | 8.16 | 777 | 769.63 | 8.22 | 777 | 772.63 | 3.02 | 777 | 770.2 | 6.13 |
| | | 2op | 770 | 765.87 | 1.7 | 770 | 769.47 | 0.51 | 772 | 769.77 | 0.77 | 770 | 769.43 | 0.5 |
| 51 | 20 | rnd | 775 | 766.07 | 9.3 | 777 | 767.63 | 10.08 | 777 | 771.73 | 5.55 | 777 | 772.47 | 3.19 |
| | | 2op | 770 | 766.43 | 1.98 | 770 | 769.6 | 0.5 | 774 | 769.7 | 1.06 | 770 | 769.6 | 0.5 |
| | 50 | rnd | 775 | 767.93 | 5.9 | 777 | 769 | 7.65 | 777 | 771.73 | 3.64 | 777 | 773.1 | 3.5 |
| | | 2op | 770 | 766.3 | 1.99 | 770 | 769.4 | 0.5 | 770 | 769.33 | 0.48 | 770 | 769.5 | 0.51 |

Table A.1551: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 770.93 | 3.25 | 777 | 775.03 | 1.25 | 777 | 770.97 | 3.77 | 775 | 766.7 | 9.4 |
| | | 2op | 775 | 769.43 | 2.22 | 777 | 773.63 | 1.65 | 770 | 765.33 | 1.27 | 765 | 765 | 0 |
| | 50 | rnd | 777 | 772.67 | 2.51 | 777 | 775.43 | 1.07 | 777 | 770.97 | 4.19 | 776 | 767.27 | 6.55 |
| | | 2op | 777 | 771.3 | 2.76 | 777 | 774.6 | 1.67 | 775 | 765.9 | 2.25 | 765 | 765 | 0 |
| 51 | 20 | rnd | 777 | 772.23 | 2.36 | 777 | 773.8 | 2.35 | 777 | 773.3 | 2.29 | 777 | 771.27 | 3.18 |
| | | 2op | 772 | 769.57 | 1.17 | 776 | 772.5 | 1.07 | 774 | 771.33 | 1.37 | 770 | 766.5 | 1.91 |
| | 50 | rnd | 777 | 774.03 | 1.9 | 777 | 774.43 | 1.61 | 777 | 773.83 | 2.44 | 776 | 769.17 | 4.81 |
| | | 2op | 777 | 770.93 | 2 | 777 | 772.8 | 1.47 | 774 | 771.57 | 1.79 | 765 | 765 | 0 |

Table A.1552: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 768.43 | 7.28 | 776 | 770.97 | 3.37 | 777 | 770.97 | 3.45 | 777 | 769.13 | 5.63 |
| | | 2op | 770 | 768.07 | 1.98 | 770 | 769.57 | 0.5 | 770 | 766.23 | 1.76 | 765 | 765 | 0 |
| | 50 | rnd | 775 | 768.1 | 6.5 | 777 | 770.6 | 6.72 | 777 | 770.97 | 3.78 | 777 | 770.23 | 3.96 |
| | | 2op | 770 | 768.67 | 1.75 | 770 | 769.53 | 0.51 | 770 | 769.6 | 0.5 | 765 | 765 | 0 |
| 51 | 20 | rnd | 775 | 769.43 | 5.92 | 777 | 769.37 | 7.17 | 777 | 772.17 | 3.31 | 776 | 770.97 | 3.62 |
| | | 2op | 770 | 769.1 | 1.18 | 770 | 769.73 | 0.45 | 770 | 769.4 | 0.5 | 769 | 765.47 | 1.11 |
| | 50 | rnd | 775 | 767.7 | 8.23 | 777 | 771.03 | 2.8 | 777 | 771.07 | 3.49 | 777 | 770.03 | 4.85 |
| | | 2op | 770 | 769.33 | 0.48 | 770 | 769.47 | 0.68 | 770 | 769.57 | 0.5 | 770 | 765.2 | 0.92 |

Table A.1553: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.17 | 3.51 | 921 | 917.3 | 2.52 | 921 | 916.33 | 2.78 | 919 | 913.27 | 3.84 |
| | | 2op | 919 | 912.8 | 4.44 | 921 | 918.93 | 1.66 | 921 | 917.8 | 1.95 | 918 | 909.57 | 3.83 |
| | 50 | rnd | 921 | 915.73 | 2.66 | 921 | 918.23 | 1.79 | 921 | 918.67 | 1.81 | 921 | 913.07 | 3.94 |
| | | 2op | 921 | 914.37 | 3.99 | 921 | 919 | 1.6 | 921 | 919.1 | 1.95 | 919 | 912.93 | 3.85 |
| 51 | 20 | rnd | 919 | 914.23 | 3.1 | 921 | 916.7 | 2.48 | 921 | 918.1 | 2.2 | 921 | 916.4 | 2.94 |
| | | 2op | 916 | 913.93 | 2.65 | 921 | 917.23 | 1.45 | 921 | 918.1 | 1.6 | 918 | 916.07 | 0.69 |
| | 50 | rnd | 919 | 914.83 | 2.53 | 921 | 917.43 | 1.79 | 921 | 917.77 | 1.81 | 921 | 915.37 | 3.41 |
| | | 2op | 917 | 915.2 | 2.25 | 921 | 919.53 | 1.7 | 921 | 919.57 | 1.63 | 921 | 916.63 | 1.56 |

Table A.1554: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 914.97 | 2.74 | 921 | 914.37 | 2.93 | 921 | 915.97 | 3.09 | 921 | 915.83 | 2.68 |
| | | 2op | 916 | 911.83 | 3.82 | 918 | 915.93 | 0.83 | 916 | 916 | 0 | 916 | 915.9 | 0.55 |
| | 50 | rnd | 919 | 913.27 | 5.04 | 921 | 915.2 | 2.81 | 921 | 915.67 | 2.71 | 921 | 914.97 | 3.21 |
| | | 2op | 916 | 912.47 | 4.31 | 916 | 915.97 | 0.18 | 921 | 916.23 | 0.97 | 916 | 915.97 | 0.18 |
| 51 | 20 | rnd | 919 | 913.6 | 5.34 | 921 | 916.2 | 2.82 | 921 | 915.4 | 3.17 | 921 | 915.07 | 3.13 |
| | | 2op | 916 | 912.03 | 4.27 | 916 | 916 | 0 | 918 | 916.07 | 0.37 | 916 | 916 | 0 |
| | 50 | rnd | 921 | 914.33 | 3.18 | 919 | 914.73 | 2.73 | 921 | 914 | 3.12 | 921 | 915.93 | 2.72 |
| | | 2op | 916 | 912.67 | 3.88 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.1555: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.33 | 3.74 | 921 | 917.57 | 1.77 | 921 | 916.97 | 2.51 | 919 | 913.27 | 3.19 |
| | | 2op | 919 | 913 | 3.76 | 921 | 918.3 | 2.12 | 921 | 917.07 | 1.66 | 921 | 908.87 | 4.45 |
| | 50 | rnd | 921 | 914.37 | 2.77 | 921 | 917.4 | 1.79 | 921 | 918.47 | 1.89 | 919 | 914.97 | 3.21 |
| | | 2op | 921 | 915.07 | 3.9 | 921 | 918.93 | 1.68 | 921 | 919.27 | 1.7 | 918 | 910.97 | 4.51 |
| 51 | 20 | rnd | 919 | 914.73 | 2.21 | 921 | 916.57 | 2.25 | 921 | 917.1 | 2.41 | 921 | 916.67 | 3.12 |
| | | 2op | 918 | 914.7 | 2.83 | 921 | 917.03 | 1.65 | 921 | 918.37 | 1.77 | 921 | 916.67 | 1.18 |
| | 50 | rnd | 921 | 915.47 | 3.03 | 921 | 917.43 | 1.87 | 921 | 918.5 | 1.17 | 921 | 916.13 | 2.57 |
| | | 2op | 919 | 915.17 | 1.86 | 921 | 918.93 | 1.74 | 921 | 919.03 | 1.54 | 921 | 916.43 | 1.14 |

Table A.1556: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.8 | 3.37 | 921 | 915.63 | 3.44 | 921 | 916.47 | 2.45 | 919 | 914.63 | 2.72 |
| | | 2op | 916 | 911.77 | 4.09 | 916 | 916 | 0 | 918 | 916.13 | 0.51 | 916 | 916 | 0 |
| | 50 | rnd | 919 | 912.77 | 5.65 | 919 | 914.13 | 3.17 | 921 | 915.4 | 2.77 | 919 | 915.33 | 3.14 |
| | | 2op | 916 | 911.97 | 4.32 | 916 | 915.97 | 0.18 | 921 | 916.6 | 1.38 | 916 | 915.83 | 0.91 |
| 51 | 20 | rnd | 918 | 913.33 | 4.1 | 921 | 914.43 | 4.1 | 919 | 914.77 | 2.37 | 921 | 915.77 | 3.41 |
| | | 2op | 916 | 912.13 | 3.96 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |
| | 50 | rnd | 918 | 911.93 | 3.16 | 919 | 914.73 | 2.83 | 919 | 915.37 | 2.67 | 921 | 915.4 | 3.69 |
| | | 2op | 916 | 911.2 | 3.87 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.1557: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.07 | 2.99 | 921 | 917.77 | 2.13 | 917 | 911.7 | 2.53 | 918 | 910.83 | 4.74 |
| | | 2op | 918 | 915.47 | 1.68 | 921 | 917.77 | 1.63 | 918 | 907.77 | 3.18 | 906 | 906 | 0 |
| | 50 | rnd | 921 | 916.3 | 2.39 | 921 | 918.8 | 1.45 | 919 | 913.77 | 3.41 | 918 | 912.43 | 3.65 |
| | | 2op | 919 | 915.57 | 1.61 | 921 | 917.83 | 1.62 | 917 | 908.13 | 3.55 | 906 | 906 | 0 |
| 51 | 20 | rnd | 921 | 915.97 | 2.4 | 921 | 917.73 | 2.7 | 921 | 916.83 | 2.29 | 921 | 914.63 | 2.99 |
| | | 2op | 916 | 915.83 | 0.91 | 918 | 916.23 | 0.5 | 918 | 916.2 | 0.55 | 919 | 915.4 | 2.51 |
| | 50 | rnd | 921 | 916.93 | 3.32 | 921 | 917.37 | 2.51 | 921 | 915.93 | 3 | 921 | 913.67 | 3.29 |
| | | 2op | 916 | 915.97 | 0.18 | 921 | 916.6 | 1.25 | 921 | 916.1 | 1.4 | 919 | 907.67 | 3.98 |

Table A.1558: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.57 | 3.16 | 921 | 915.37 | 3.1 | 921 | 914.77 | 3.08 | 921 | 913.03 | 3.93 |
| | | 2op | 916 | 915.67 | 1.27 | 916 | 916 | 0 | 919 | 916.3 | 1.6 | 914 | 906.27 | 1.46 |
| | 50 | rnd | 921 | 914.17 | 3.73 | 921 | 914.6 | 2.9 | 921 | 915.53 | 2.86 | 919 | 913.43 | 3.84 |
| | | 2op | 916 | 915.83 | 0.91 | 916 | 916 | 0 | 916 | 916 | 0 | 912 | 906.83 | 1.8 |
| 51 | 20 | rnd | 919 | 914.2 | 3.37 | 921 | 915.43 | 3.54 | 919 | 915.3 | 3.15 | 919 | 912.9 | 4.54 |
| | | 2op | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 | 919 | 911.6 | 4.37 |
| | 50 | rnd | 919 | 914.87 | 3.37 | 921 | 915.67 | 3.79 | 919 | 914.43 | 3.11 | 919 | 913.73 | 3.05 |
| | | 2op | 916 | 915.87 | 0.73 | 916 | 916 | 0 | 916 | 916 | 0 | 918 | 909.97 | 3.09 |

Table A.1559: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1577 | 1559.3 | 12.6 | 1572 | 1559.67 | 7.57 | 1572 | 1557.87 | 10.34 | 1573 | 1556.77 | 11.97 |
| | | 2op | 1553 | 1553 | 0 | 1553 | 1553 | 0 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1558.97 | 9.22 | 1574 | 1560.2 | 6.89 | 1575 | 1560.03 | 8.06 | 1568 | 1553.8 | 12.88 |
| | | 2op | 1568 | 1553.87 | 3.34 | 1570 | 1553.57 | 3.1 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1571 | 1559.3 | 10.66 | 1572 | 1559.37 | 8.34 | 1573 | 1559.9 | 10.59 | 1570 | 1553.83 | 11.19 |
| | | 2op | 1562 | 1554.1 | 2.5 | 1563 | 1554.47 | 2.89 | 1572 | 1555.1 | 4.25 | 1553 | 1553 | 0 |
| | 50 | rnd | 1568 | 1557.13 | 8.17 | 1578 | 1562.07 | 7.49 | 1577 | 1558.9 | 6.95 | 1573 | 1555.77 | 9.33 |
| | | 2op | 1566 | 1555.2 | 4.07 | 1562 | 1554 | 2.36 | 1569 | 1555.57 | 4.28 | 1553 | 1553 | 0 |

Table A.1560: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1556.83 | 9.82 | 1577 | 1555.53 | 12.07 | 1572 | 1555.63 | 11.47 | 1577 | 1553.13 | 14.23 |
| | | 2op | 1567 | 1554.7 | 2.77 | 1569 | 1560.6 | 5.42 | 1557 | 1553.17 | 0.75 | 1553 | 1553 | 0 |
| | 50 | rnd | 1573 | 1559.73 | 7 | 1576 | 1561.83 | 6.27 | 1571 | 1553.43 | 10.88 | 1573 | 1552.77 | 14.18 |
| | | 2op | 1556 | 1553.63 | 1 | 1572 | 1567.77 | 3.05 | 1567 | 1556.87 | 3.82 | 1555 | 1553.07 | 0.37 |
| 51 | 20 | rnd | 1578 | 1556.23 | 9.74 | 1577 | 1557.47 | 10.6 | 1578 | 1560.7 | 9.29 | 1575 | 1557.97 | 9.54 |
| | | 2op | 1558 | 1553.83 | 1.46 | 1572 | 1565.27 | 4.9 | 1572 | 1560.03 | 5.52 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1555.3 | 11.99 | 1577 | 1560 | 9.55 | 1577 | 1562.07 | 8.93 | 1571 | 1556.27 | 10 |
| | | 2op | 1558 | 1554.43 | 1.61 | 1573 | 1564.43 | 5.46 | 1572 | 1565.43 | 4.12 | 1557 | 1553.27 | 0.87 |

Table A.1561: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1557.03 | 9.7 | 1573 | 1558.37 | 7.81 | 1573 | 1555.9 | 9.26 | 1580 | 1557.3 | 10.89 |
| | | 2op | 1570 | 1553.57 | 3.1 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1558.53 | 9.04 | 1576 | 1559.27 | 8.28 | 1574 | 1558.1 | 10.57 | 1574 | 1553.93 | 10.01 |
| | | 2op | 1570 | 1554.1 | 3.63 | 1553 | 1553 | 0 | 1558 | 1553.17 | 0.91 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1559.37 | 8.69 | 1580 | 1558.7 | 8.95 | 1574 | 1559.2 | 9.04 | 1573 | 1555.37 | 10.5 |
| | | 2op | 1563 | 1555.23 | 3.63 | 1563 | 1554.13 | 2.7 | 1571 | 1555.6 | 5 | 1553 | 1553 | 0 |
| | 50 | rnd | 1576 | 1560.6 | 9.17 | 1579 | 1561.1 | 8.29 | 1579 | 1559.83 | 7.96 | 1573 | 1555.77 | 10.71 |
| | | 2op | 1569 | 1554.23 | 3.91 | 1564 | 1554.2 | 2.85 | 1572 | 1554.33 | 4.03 | 1553 | 1553 | 0 |

Table A.1562: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1556.3 | 10.58 | 1577 | 1558.1 | 10.23 | 1576 | 1556.27 | 10.82 | 1574 | 1552.93 | 13.69 |
| | | 2op | 1558 | 1553.93 | 1.51 | 1570 | 1560.5 | 4.9 | 1562 | 1553.8 | 1.95 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1558.83 | 7.77 | 1574 | 1559.93 | 8.32 | 1573 | 1558.5 | 7.58 | 1571 | 1553.97 | 12.12 |
| | | 2op | 1558 | 1553.87 | 1.63 | 1572 | 1566.63 | 4.16 | 1563 | 1554.97 | 2.4 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1559.2 | 11.48 | 1574 | 1556.5 | 12.33 | 1574 | 1556.63 | 10.85 | 1570 | 1551.87 | 13.76 |
| | | 2op | 1563 | 1554.13 | 2.15 | 1573 | 1565.47 | 4.78 | 1567 | 1559.97 | 4.21 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1558.1 | 8.29 | 1572 | 1559.7 | 9.65 | 1572 | 1556.77 | 9.48 | 1578 | 1557.47 | 12.2 |
| | | 2op | 1556 | 1554.03 | 1.25 | 1572 | 1566.3 | 3.91 | 1572 | 1565.73 | 4.07 | 1563 | 1553.6 | 2.04 |

Table A.1563: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1580 | 1558.8 | 9.14 | 1574 | 1556.37 | 10.81 | 1573 | 1553.13 | 14.47 | 1570 | 1554.07 | 11.52 |
| | | 2op | 1568 | 1555.37 | 4.69 | 1565 | 1555.53 | 4.43 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1559.2 | 8.27 | 1572 | 1559.23 | 7.8 | 1578 | 1556.23 | 8.91 | 1570 | 1558.23 | 10.79 |
| | | 2op | 1564 | 1554.2 | 2.55 | 1562 | 1553.43 | 1.72 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1579 | 1560.33 | 8.3 | 1576 | 1562.03 | 6.84 | 1575 | 1558.53 | 9.48 | 1574 | 1554.6 | 10.49 |
| | | 2op | 1564 | 1557.5 | 3.12 | 1571 | 1566.93 | 3.24 | 1559 | 1553.57 | 1.57 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1559.67 | 7 | 1573 | 1559.8 | 7.36 | 1576 | 1556.27 | 8.9 | 1577 | 1559.17 | 9.12 |
| | | 2op | 1569 | 1559.53 | 5.11 | 1569 | 1559.43 | 5.22 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |

Table A.1564: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1559.47 | 7.09 | 1576 | 1556.77 | 11.29 | 1568 | 1552.5 | 16.38 | 1571 | 1551.67 | 14.01 |
| | | 2op | 1558 | 1554.13 | 1.43 | 1558 | 1554.17 | 1.23 | 1563 | 1553.33 | 1.83 | 1553 | 1553 | 0 |
| | 50 | rnd | 1570 | 1556.57 | 8.29 | 1578 | 1559.1 | 9.69 | 1572 | 1558.4 | 10.1 | 1577 | 1555.4 | 11.85 |
| | | 2op | 1558 | 1555.1 | 1.67 | 1558 | 1554.6 | 1.33 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1574 | 1557.73 | 12.21 | 1573 | 1558.27 | 9.87 | 1570 | 1555.53 | 10.93 | 1568 | 1552.77 | 10.66 |
| | | 2op | 1563 | 1554.8 | 2.09 | 1564 | 1555.9 | 2.47 | 1555 | 1553.13 | 0.51 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1560.93 | 7.43 | 1570 | 1558.07 | 7.5 | 1571 | 1556.13 | 12.13 | 1573 | 1555.33 | 12.57 |
| | | 2op | 1566 | 1556.13 | 2.94 | 1564 | 1555.8 | 2.38 | 1557 | 1553.2 | 0.81 | 1553 | 1553 | 0 |

Table A.1565: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1553.3 | 10.49 | 1569 | 1555.2 | 7.87 | 1566 | 1550.1 | 12.51 | 1565 | 1548.37 | 11.71 |
| | | 2op | 1563 | 1536 | 10.72 | 1564 | 1536.23 | 10.46 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1571 | 1552.7 | 9.54 | 1570 | 1555.2 | 7.2 | 1564 | 1553.77 | 8.77 | 1564 | 1551.73 | 9.46 |
| | | 2op | 1558 | 1534.23 | 8.46 | 1563 | 1539.47 | 12.56 | 1561 | 1533.37 | 7.37 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1567 | 1554.13 | 11.01 | 1571 | 1555.53 | 9.11 | 1570 | 1556.63 | 7.76 | 1570 | 1550.67 | 10.04 |
| | | 2op | 1561 | 1540 | 11.77 | 1565 | 1546.2 | 12.18 | 1567 | 1547.47 | 13.19 | 1531 | 1531 | 0 |
| | 50 | rnd | 1570 | 1551.83 | 7.56 | 1567 | 1555.37 | 7.68 | 1568 | 1558.6 | 5.95 | 1567 | 1550.57 | 11.79 |
| | | 2op | 1566 | 1541.63 | 13.81 | 1565 | 1549 | 12.7 | 1569 | 1552.17 | 11.59 | 1550 | 1531.63 | 3.47 |

Table A.1566: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1543.47 | 15.14 | 1570 | 1554.1 | 8.95 | 1566 | 1549.13 | 11.51 | 1568 | 1547.63 | 9.26 |
| | | 2op | 1531 | 1531 | 0 | 1567 | 1537.47 | 11.37 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1563 | 1543.53 | 11.56 | 1569 | 1554.43 | 11.17 | 1569 | 1555.63 | 10.5 | 1564 | 1549.7 | 10.34 |
| | | 2op | 1531 | 1531 | 0 | 1565 | 1547.8 | 10.5 | 1542 | 1531.4 | 2.01 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1544.23 | 11.55 | 1569 | 1552.77 | 9.4 | 1569 | 1556.53 | 8.17 | 1569 | 1552.5 | 10.59 |
| | | 2op | 1531 | 1531 | 0 | 1565 | 1545.23 | 10.73 | 1565 | 1535.1 | 8.96 | 1531 | 1531 | 0 |
| | 50 | rnd | 1564 | 1545.73 | 13.58 | 1566 | 1549.33 | 9.48 | 1567 | 1553.3 | 8.77 | 1568 | 1551.83 | 12.57 |
| | | 2op | 1531 | 1531 | 0 | 1566 | 1536.73 | 9.97 | 1567 | 1540.2 | 11.22 | 1531 | 1531 | 0 |

Table A.1567: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1551.43 | 10.42 | 1569 | 1556.23 | 9.1 | 1569 | 1549.57 | 11.03 | 1566 | 1545.67 | 11.58 |
| | | 2op | 1557 | 1534.33 | 8.67 | 1562 | 1536.93 | 11.18 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1566 | 1554.57 | 9.51 | 1570 | 1554 | 7.47 | 1568 | 1552.83 | 8.93 | 1567 | 1546.6 | 13.18 |
| | | 2op | 1560 | 1533.47 | 7.6 | 1562 | 1536.03 | 10.22 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1553.8 | 7.22 | 1568 | 1551.27 | 9.35 | 1569 | 1553.47 | 8.45 | 1564 | 1552.73 | 7.95 |
| | | 2op | 1564 | 1537.47 | 11.11 | 1566 | 1544.83 | 12.58 | 1566 | 1541.87 | 14.07 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1553.83 | 8.53 | 1568 | 1555.33 | 9.2 | 1568 | 1557.43 | 6.96 | 1566 | 1554.23 | 12.49 |
| | | 2op | 1563 | 1541.03 | 13.63 | 1569 | 1548.4 | 14.22 | 1568 | 1552.33 | 11.6 | 1531 | 1531 | 0 |

Table A.1568: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1544.93 | 9.53 | 1567 | 1553.57 | 9.09 | 1565 | 1549 | 12.28 | 1567 | 1550.73 | 10.18 |
| | | 2op | 1531 | 1531 | 0 | 1565 | 1537.5 | 10.73 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1561 | 1545.53 | 10.89 | 1568 | 1556.47 | 7.25 | 1569 | 1552.27 | 10.38 | 1569 | 1551.57 | 10.49 |
| | | 2op | 1531 | 1531 | 0 | 1567 | 1550.63 | 12.13 | 1545 | 1531.47 | 2.56 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1569 | 1541.17 | 12.88 | 1565 | 1552 | 10.33 | 1566 | 1554.1 | 8.53 | 1567 | 1549.7 | 10.71 |
| | | 2op | 1531 | 1531 | 0 | 1562 | 1544.57 | 10.18 | 1556 | 1534.37 | 7.39 | 1531 | 1531 | 0 |
| | 50 | rnd | 1566 | 1548.97 | 11.47 | 1567 | 1550.43 | 9.8 | 1569 | 1552.97 | 9.25 | 1562 | 1548.03 | 9.35 |
| | | 2op | 1531 | 1531 | 0 | 1557 | 1539.93 | 10.52 | 1566 | 1541.67 | 12.26 | 1531 | 1531 | 0 |

Table A.1569: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1553.07 | 10.75 | 1568 | 1557.97 | 4.76 | 1564 | 1547.63 | 10.01 | 1570 | 1550.9 | 10.4 |
| | | 2op | 1569 | 1538.8 | 12.69 | 1573 | 1551.7 | 11.92 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1570 | 1551.93 | 7.45 | 1570 | 1556.8 | 8.08 | 1566 | 1548 | 13.9 | 1560 | 1545.33 | 11.21 |
| | | 2op | 1570 | 1540.4 | 13.34 | 1569 | 1544.33 | 15.13 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1572 | 1556.77 | 9.28 | 1570 | 1558.8 | 7.72 | 1564 | 1551.1 | 9.32 | 1567 | 1550.73 | 9.67 |
| | | 2op | 1564 | 1554.4 | 8.37 | 1565 | 1557.47 | 2.65 | 1561 | 1533.83 | 8.66 | 1531 | 1531 | 0 |
| | 50 | rnd | 1568 | 1555.97 | 8.29 | 1568 | 1556.13 | 7.4 | 1569 | 1554.4 | 10.91 | 1571 | 1551.27 | 11.24 |
| | | 2op | 1566 | 1554.67 | 10.35 | 1565 | 1555.93 | 7.62 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.1570: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1546.23 | 9.75 | 1567 | 1551.67 | 9.47 | 1569 | 1548.63 | 9.89 | 1566 | 1546.2 | 13.04 |
| | | 2op | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1549.1 | 9.9 | 1569 | 1550.9 | 12.57 | 1563 | 1548.1 | 10.98 | 1569 | 1546.7 | 11.46 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1550.5 | 11.6 | 1566 | 1552.43 | 8.54 | 1569 | 1551.07 | 11.33 | 1570 | 1551.2 | 12.33 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1548.93 | 11.79 | 1565 | 1549.53 | 7.9 | 1568 | 1549.17 | 12.38 | 1565 | 1544.83 | 12.66 |
| | | 2op | 1531 | 1531 | 0 | 1534 | 1531.1 | 0.55 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.1571: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1548.8 | 9.33 | 1564 | 1553.57 | 6.07 | 1568 | 1547.3 | 9.19 | 1562 | 1547.33 | 8.82 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1549.9 | 8.28 | 1565 | 1550.5 | 6.92 | 1566 | 1550.3 | 8.38 | 1561 | 1548.5 | 8.73 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1550.57 | 8.11 | 1566 | 1551.03 | 9.62 | 1565 | 1551.6 | 7.78 | 1562 | 1549.47 | 9.47 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1549.37 | 8.32 | 1562 | 1550.3 | 6.79 | 1563 | 1552.23 | 7.33 | 1564 | 1548.3 | 9.23 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1550 | 1548.13 | 0.51 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 |

Table A.1572: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1558 | 1547.93 | 8.43 | 1566 | 1552 | 6.83 | 1567 | 1548.97 | 7.13 | 1565 | 1548.67 | 7.16 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1562 | 1548.7 | 9.49 | 1567 | 1550.4 | 7.2 | 1566 | 1551.4 | 9.39 | 1561 | 1551.47 | 6.48 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1547 | 8.06 | 1565 | 1550.63 | 10.04 | 1567 | 1550.3 | 9.89 | 1559 | 1548.3 | 7.02 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1548.8 | 9.06 | 1564 | 1551.13 | 6.23 | 1568 | 1550.3 | 7.87 | 1566 | 1549.73 | 8.66 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1549 | 1548.03 | 0.18 | 1548 | 1548 | 0 |

Table A.1573: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1549.67 | 10.98 | 1564 | 1549.23 | 9.9 | 1563 | 1549.9 | 9.51 | 1563 | 1547.27 | 8.66 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1546.3 | 9.63 | 1563 | 1550.93 | 7.16 | 1560 | 1548.83 | 8.52 | 1563 | 1546.9 | 10.66 |
| | | 2op | 1548 | 1548 | 0 | 1556 | 1548.27 | 1.46 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1549.07 | 10.79 | 1565 | 1551.8 | 7.31 | 1565 | 1547.07 | 8.44 | 1564 | 1548.43 | 8.79 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1549 | 1548.03 | 0.18 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1550.17 | 7.33 | 1568 | 1551.2 | 9.09 | 1565 | 1552.1 | 10.35 | 1561 | 1549.77 | 7.32 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1574: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1546.37 | 9.43 | 1566 | 1549.97 | 8.68 | 1567 | 1547.9 | 11.1 | 1567 | 1551 | 8.52 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1558 | 1547.17 | 7.62 | 1565 | 1549.93 | 7.82 | 1565 | 1548.33 | 11.01 | 1564 | 1550.43 | 9.27 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1566 | 1547.53 | 8.41 | 1566 | 1548.97 | 9.68 | 1568 | 1550.37 | 8.7 | 1565 | 1543.87 | 13.05 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1547.97 | 8.28 | 1566 | 1552.03 | 6.07 | 1564 | 1549.53 | 8.07 | 1563 | 1550.17 | 7.39 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 |

Table A.1575: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1553.17 | 8.36 | 1565 | 1551.23 | 9.69 | 1568 | 1547.73 | 10.51 | 1565 | 1548.47 | 10.21 |
| | | 2op | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1548.2 | 7.42 | 1564 | 1552.67 | 6.17 | 1566 | 1547.43 | 10.62 | 1562 | 1547.4 | 9.25 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1565 | 1551.53 | 7.87 | 1564 | 1554.9 | 7.15 | 1565 | 1548.17 | 10.43 | 1564 | 1547.47 | 11.39 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1555 | 1549.97 | 2.04 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1549.5 | 7.82 | 1570 | 1552.9 | 8.29 | 1565 | 1548.33 | 8.47 | 1562 | 1547.57 | 9.65 |
| | | 2op | 1550 | 1548.13 | 0.51 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1576: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1548.07 | 7.96 | 1560 | 1548.03 | 8.68 | 1560 | 1543.8 | 10.96 | 1566 | 1548.53 | 8.9 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1564 | 1548 | 7.82 | 1563 | 1550.63 | 8.47 | 1565 | 1549.87 | 9.9 | 1564 | 1546.97 | 10.68 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1561 | 1547.9 | 6.34 | 1567 | 1549.2 | 10.81 | 1566 | 1548.47 | 8.17 | 1565 | 1548.07 | 10.01 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1564 | 1549.37 | 7.45 | 1563 | 1546.23 | 9.67 | 1566 | 1548.97 | 8.72 | 1568 | 1546.17 | 10.18 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1577: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2775 | 2745.43 | 12.37 | 2771 | 2746.93 | 12.52 | 2771 | 2742.87 | 15.5 | 2757 | 2740.63 | 10.76 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2759 | 2741.7 | 10.47 | 2758 | 2742.2 | 12.08 | 2764 | 2741.27 | 12.31 | 2765 | 2742.07 | 13.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2768 | 2741.37 | 12.51 | 2762 | 2745.47 | 9.22 | 2767 | 2740.8 | 14.58 | 2764 | 2736.3 | 14.14 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2771 | 2747.43 | 11.83 | 2764 | 2745.03 | 12.43 | 2763 | 2741.27 | 9.71 | 2763 | 2743.03 | 9.73 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1578: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2762 | 2740.1 | 11.47 | 2780 | 2743.27 | 15.36 | 2758 | 2736.83 | 12.41 | 2767 | 2735.77 | 15.51 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.9 | 12.86 | 2771 | 2741.37 | 12.52 | 2771 | 2746.7 | 13.43 | 2763 | 2733.1 | 12.9 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2741.63 | 15.54 | 2771 | 2745.47 | 13.27 | 2764 | 2738.07 | 15.62 | 2773 | 2738.73 | 17.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2762 | 2735.87 | 17.63 | 2769 | 2744.83 | 15.57 | 2767 | 2740.6 | 11.32 | 2772 | 2741.27 | 15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1579: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2769 | 2744.13 | 18.01 | 2770 | 2743.97 | 13.74 | 2766 | 2741.4 | 13.77 | 2766 | 2746.3 | 10.41 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2746.87 | 12.22 | 2768 | 2741.8 | 12.79 | 2765 | 2742.2 | 13.94 | 2763 | 2743.27 | 12.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2764 | 2739.07 | 13.93 | 2774 | 2743.77 | 14.69 | 2763 | 2742.63 | 9.87 | 2767 | 2740.3 | 14.69 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2742.37 | 11.93 | 2770 | 2745.67 | 10.48 | 2760 | 2741.83 | 9.08 | 2762 | 2740.23 | 16.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1580: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2773 | 2740.8 | 17.45 | 2764 | 2741 | 14.67 | 2761 | 2741.47 | 11.95 | 2766 | 2741.37 | 19.15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2743 | 11.76 | 2767 | 2741 | 15.57 | 2761 | 2742.83 | 11.19 | 2768 | 2740.03 | 15.66 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2770 | 2739.23 | 14.03 | 2762 | 2740.9 | 14.84 | 2759 | 2737.03 | 15.24 | 2770 | 2739.6 | 18.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2775 | 2739.67 | 12.77 | 2772 | 2740.87 | 19.03 | 2767 | 2742.3 | 13.43 | 2759 | 2741.6 | 12.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1581: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2766 | 2745.63 | 12.84 | 2771 | 2742.47 | 13.99 | 2760 | 2740.33 | 12.4 | 2765 | 2738.1 | 14.19 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.43 | 12.74 | 2766 | 2742.23 | 14.44 | 2761 | 2743.03 | 10.45 | 2763 | 2736.83 | 13.97 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2769 | 2746.37 | 14.21 | 2766 | 2746.4 | 9.54 | 2766 | 2744.27 | 12.45 | 2768 | 2743.83 | 15.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2769 | 2748.07 | 12.73 | 2763 | 2743.77 | 11.5 | 2764 | 2744.3 | 12.49 | 2761 | 2739.5 | 12.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1582: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2741.1 | 14.08 | 2767 | 2743.5 | 14.28 | 2767 | 2744.6 | 14.09 | 2770 | 2741.4 | 13.37 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2740.37 | 12.47 | 2766 | 2743.97 | 11.75 | 2772 | 2742.53 | 15.67 | 2763 | 2743.23 | 11.83 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2739.53 | 16.16 | 2757 | 2737.77 | 13.67 | 2768 | 2738.93 | 17.31 | 2773 | 2740.37 | 14.28 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2761 | 2738.43 | 18.42 | 2759 | 2740 | 11.5 | 2769 | 2740.9 | 15.63 | 2773 | 2742.83 | 13.22 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1583: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2810.7 | 14.63 | 2843 | 2814.37 | 14.41 | 2837 | 2814.13 | 15.34 | 2839 | 2813.9 | 12.79 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2815.63 | 11.82 | 2838 | 2817.2 | 9.24 | 2840 | 2812.57 | 12.91 | 2835 | 2811.07 | 12.23 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2831 | 2813.33 | 12.46 | 2835 | 2818.8 | 12.93 | 2835 | 2810.7 | 18.77 | 2844 | 2811.87 | 12.11 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2813.9 | 10.56 | 2838 | 2813 | 14.67 | 2832 | 2814.43 | 10.66 | 2842 | 2815.47 | 13.99 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1584: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2834 | 2810.57 | 13.81 | 2838 | 2814.67 | 12.66 | 2845 | 2809.4 | 16.84 | 2835 | 2808.7 | 12.44 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2814.03 | 16.05 | 2830 | 2812.37 | 13.31 | 2834 | 2808.13 | 16.34 | 2837 | 2805.97 | 14.87 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2834 | 2810.23 | 14.95 | 2842 | 2815.77 | 9.68 | 2844 | 2814.2 | 12.73 | 2837 | 2809.1 | 16.26 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2804.6 | 1.83 | 2804 | 2804 | 0 |
| | 50 | rnd | 2827 | 2809.17 | 11.02 | 2837 | 2814.3 | 15.57 | 2834 | 2813.37 | 13.5 | 2829 | 2806.13 | 12.85 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2805.6 | 2.7 | 2804 | 2804 | 0 |

Table A.1585: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2836 | 2814.27 | 12.29 | 2837 | 2810.27 | 15.73 | 2838 | 2814.8 | 14.12 | 2837 | 2814.8 | 10.91 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2815.5 | 12.86 | 2840 | 2817.27 | 10.52 | 2840 | 2814.5 | 14.17 | 2843 | 2812.33 | 11.7 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2837 | 2814.83 | 13.12 | 2848 | 2819.23 | 13.25 | 2836 | 2812.47 | 13.27 | 2833 | 2810.93 | 14.23 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2812 | 15.11 | 2838 | 2815.6 | 14.18 | 2842 | 2815.5 | 12.56 | 2838 | 2812.47 | 17.08 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1586: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2827 | 2813.33 | 10.91 | 2830 | 2811.3 | 15.6 | 2838 | 2810.37 | 16.58 | 2838 | 2809.8 | 16.1 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2828 | 2814.13 | 8.96 | 2829 | 2813.37 | 9 | 2846 | 2812.43 | 16.91 | 2845 | 2813.27 | 13.93 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2805.8 | 2.8 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2833 | 2808.33 | 14.12 | 2834 | 2813.17 | 13.82 | 2838 | 2810.5 | 13.7 | 2838 | 2814.4 | 10.51 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806 | 2.88 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2809.33 | 12.25 | 2835 | 2811.87 | 16.38 | 2838 | 2815.2 | 14.43 | 2836 | 2813.47 | 11.78 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2805.4 | 2.58 | 2804 | 2804 | 0 |

Table A.1587: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2815.5 | 13.96 | 2835 | 2810.17 | 13.51 | 2837 | 2811.47 | 13.81 | 2825 | 2805.8 | 13.12 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2841 | 2814.5 | 14.51 | 2842 | 2815.57 | 14.3 | 2835 | 2805.03 | 15.11 | 2835 | 2814.8 | 11.06 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2835 | 2815.23 | 11.38 | 2838 | 2816.5 | 15.7 | 2835 | 2811.67 | 13.78 | 2842 | 2814.87 | 15.36 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2817.2 | 13.78 | 2838 | 2817.8 | 12.26 | 2834 | 2813.77 | 12.71 | 2845 | 2811.83 | 16.74 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1588: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2837 | 2811.57 | 16.63 | 2836 | 2808.57 | 15.58 | 2833 | 2813.1 | 12.89 | 2833 | 2809.67 | 15.24 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2810.17 | 15.4 | 2839 | 2813.03 | 13.71 | 2840 | 2811.47 | 11.83 | 2837 | 2811.77 | 12.66 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2836 | 2811.8 | 12.79 | 2842 | 2810.63 | 12.68 | 2839 | 2810.17 | 17.16 | 2835 | 2810.37 | 13.57 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.6 | 1.83 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2836 | 2812.87 | 10.23 | 2838 | 2810 | 11.38 | 2836 | 2814.97 | 10.34 | 2847 | 2811.97 | 15.89 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1589: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2682.97 | 12.42 | 2718 | 2688.87 | 15.28 | 2705 | 2686.83 | 11.3 | 2709 | 2684.5 | 13.12 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2685.5 | 12.61 | 2708 | 2685.87 | 13.31 | 2704 | 2681.97 | 13.66 | 2710 | 2683.67 | 13.6 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2712 | 2683.77 | 13.71 | 2700 | 2686.17 | 9.48 | 2705 | 2685.6 | 14.7 | 2709 | 2683.37 | 10.8 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2690.43 | 13.68 | 2713 | 2688.63 | 11.68 | 2707 | 2684.73 | 14.17 | 2699 | 2680.3 | 15.67 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.1590: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2709 | 2682.67 | 13.24 | 2710 | 2684.03 | 15.27 | 2714 | 2686.57 | 14.43 | 2702 | 2680.13 | 14.46 |
| | | 2op | 2700 | 2690.13 | 4.28 | 2698 | 2689.9 | 3.98 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2683.7 | 13.32 | 2710 | 2685 | 17.41 | 2716 | 2683.37 | 11.39 | 2708 | 2687.77 | 11.23 |
| | | 2op | 2706 | 2690.87 | 5.26 | 2702 | 2695.63 | 3.05 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2683.4 | 12.19 | 2711 | 2686.27 | 15.66 | 2715 | 2687.73 | 14.13 | 2706 | 2684.3 | 10.92 |
| | | 2op | 2701 | 2691.5 | 4.47 | 2700 | 2694.77 | 3.72 | 2699 | 2689.97 | 4.41 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2678.83 | 14.52 | 2717 | 2684.03 | 18.94 | 2710 | 2685.57 | 11.71 | 2710 | 2682.93 | 13.94 |
| | | 2op | 2698 | 2692.1 | 4 | 2702 | 2695.67 | 1.75 | 2698 | 2693.93 | 2.69 | 2687 | 2687 | 0 |

Table A.1591: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2713 | 2686.87 | 13.88 | 2706 | 2689.07 | 11.16 | 2707 | 2688.2 | 9.3 | 2703 | 2685.03 | 13.53 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2685.6 | 11.51 | 2712 | 2693.47 | 11 | 2703 | 2686.97 | 12.54 | 2709 | 2682.37 | 13.88 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2709 | 2688 | 11.42 | 2708 | 2684.97 | 11.7 | 2709 | 2683.2 | 15.57 | 2717 | 2685.5 | 16.35 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2683.97 | 11.42 | 2712 | 2688.8 | 13.32 | 2705 | 2682.83 | 11.9 | 2703 | 2684.17 | 16.39 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.1592: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2702 | 2679.07 | 11.73 | 2713 | 2685.23 | 15.38 | 2710 | 2684.07 | 12.28 | 2706 | 2684.17 | 14.9 |
| | | 2op | 2699 | 2690.37 | 4.11 | 2699 | 2690.17 | 4.41 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2684.47 | 11.17 | 2703 | 2683.63 | 10.34 | 2718 | 2683.87 | 12.34 | 2709 | 2682.33 | 14.12 |
| | | 2op | 2698 | 2690.83 | 4.26 | 2706 | 2695.4 | 3.83 | 2698 | 2687.37 | 2.01 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2704 | 2679.6 | 12.54 | 2708 | 2686.37 | 13.78 | 2704 | 2682.53 | 12.66 | 2698 | 2678.97 | 14.18 |
| | | 2op | 2700 | 2691 | 4.5 | 2700 | 2694.67 | 3.2 | 2704 | 2690.27 | 5.03 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2679.7 | 14.12 | 2708 | 2686.77 | 13.97 | 2707 | 2687.6 | 12.16 | 2707 | 2687.33 | 12.29 |
| | | 2op | 2698 | 2691.87 | 4.1 | 2700 | 2695.97 | 1.5 | 2700 | 2693.67 | 4.29 | 2687 | 2687 | 0 |

Table A.1593: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2707 | 2689.37 | 10.71 | 2714 | 2689.07 | 12.02 | 2710 | 2684.97 | 14.67 | 2701 | 2682.2 | 15.84 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2688.4 | 13.69 | 2708 | 2684.6 | 15.89 | 2703 | 2684.63 | 13.24 | 2711 | 2685.67 | 11.35 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2685.93 | 12.66 | 2702 | 2688.5 | 8.85 | 2711 | 2686.83 | 15.97 | 2709 | 2683.83 | 12.16 |
| | | 2op | 2699 | 2690.53 | 4.55 | 2708 | 2693.27 | 6.15 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| | 50 | rnd | 2709 | 2683.93 | 14.92 | 2702 | 2681.03 | 13.44 | 2710 | 2686.57 | 11.45 | 2713 | 2686.7 | 14.63 |
| | | 2op | 2696 | 2687.57 | 2.16 | 2696 | 2687.57 | 2.16 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.1594: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2705 | 2678.93 | 10.71 | 2708 | 2684.4 | 13.04 | 2707 | 2687.03 | 11.52 | 2711 | 2689.1 | 16.7 |
| | | 2op | 2700 | 2691.97 | 4.33 | 2700 | 2690.83 | 4.8 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2683.37 | 11.03 | 2706 | 2684.33 | 13.34 | 2706 | 2686.33 | 13.65 | 2711 | 2686.7 | 13 |
| | | 2op | 2700 | 2694.37 | 2.66 | 2698 | 2691.57 | 4.43 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2702 | 2679.33 | 13.77 | 2703 | 2678.2 | 15.57 | 2705 | 2688.47 | 8.96 | 2713 | 2684.53 | 12.4 |
| | | 2op | 2700 | 2693.63 | 3.92 | 2698 | 2694.4 | 2.65 | 2697 | 2687.53 | 2.1 | 2687 | 2687 | 0 |
| | 50 | rnd | 2699 | 2684.83 | 11 | 2708 | 2686.27 | 13.67 | 2715 | 2687.6 | 12.83 | 2716 | 2685.53 | 14.8 |
| | | 2op | 2696 | 2695.13 | 0.35 | 2699 | 2693.57 | 3.51 | 2695 | 2688 | 2.61 | 2687 | 2687 | 0 |

Table A.1595: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17882 | 17786.2 | 42.05 | 17841 | 17796.1 | 32.29 | 17871 | 17789.2 | 39.13 | 17863 | 17792.4 | 41.13 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17871 | 17807.37 | 32.64 | 17878 | 17798.63 | 36.52 | 17877 | 17803.53 | 41.03 | 17855 | 17782.07 | 37.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17857 | 17791.1 | 41.11 | 17876 | 17812.03 | 35.42 | 17834 | 17786.23 | 41.81 | 17848 | 17785.43 | 39.5 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17866 | 17801.43 | 38.79 | 17869 | 17792.57 | 39.73 | 17878 | 17799.2 | 47.72 | 17889 | 17802.93 | 49.79 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1596: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17870 | 17791.77 | 36.7 | 17886 | 17803 | 34.56 | 17887 | 17788.53 | 47.04 | 17845 | 17779.9 | 44.85 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17906 | 17800.47 | 45 | 17856 | 17799.73 | 35.11 | 17899 | 17799.47 | 35.64 | 17878 | 17785.33 | 46.37 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17899 | 17803.03 | 38.2 | 17871 | 17798.8 | 34.96 | 17866 | 17793.8 | 42.53 | 17860 | 17796.47 | 36.81 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17859 | 17792.43 | 35.31 | 17847 | 17781.93 | 38.19 | 17921 | 17808.7 | 37.78 | 17876 | 17791 | 48.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1597: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17844 | 17790.5 | 29.01 | 17910 | 17801.73 | 44 | 17880 | 17794.73 | 46.31 | 17887 | 17806.9 | 31.33 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17886 | 17803.37 | 36.65 | 17879 | 17804.57 | 36.42 | 17882 | 17815.67 | 30.07 | 17843 | 17789.63 | 32.32 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17925 | 17796.87 | 41.37 | 17868 | 17797 | 43.42 | 17887 | 17792.33 | 47.55 | 17868 | 17796.07 | 36.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17853 | 17796.07 | 33.06 | 17861 | 17801.5 | 33.06 | 17898 | 17808.4 | 30.79 | 17833 | 17792.77 | 34.09 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1598: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17880 | 17792.03 | 40.22 | 17880 | 17804.97 | 33.95 | 17886 | 17787.7 | 45.68 | 17882 | 17796.63 | 40.29 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17861 | 17798.5 | 33.77 | 17850 | 17798.53 | 31.82 | 17884 | 17790.37 | 44.28 | 17877 | 17796.9 | 45.64 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17897 | 17797.2 | 39.64 | 17861 | 17796.23 | 35.58 | 17866 | 17793.8 | 41.1 | 17863 | 17800.83 | 36.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17921 | 17803.6 | 41.36 | 17876 | 17793.77 | 44.69 | 17866 | 17783 | 44.78 | 17893 | 17808.33 | 41.73 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1599: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17879 | 17798.03 | 37.31 | 17899 | 17790.47 | 53.04 | 17880 | 17790.57 | 40.15 | 17866 | 17795.7 | 37.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17865 | 17800.23 | 28 | 17859 | 17809.8 | 30.08 | 17901 | 17814.67 | 40.25 | 17888 | 17806.53 | 43.87 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17865 | 17804.77 | 32.95 | 17862 | 17802.3 | 27.88 | 17849 | 17797 | 36.03 | 17906 | 17810.43 | 39.77 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17836 | 17782.27 | 32.19 | 17874 | 17789.47 | 36.63 | 17853 | 17790.17 | 31.19 | 17867 | 17801.9 | 37.22 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1600: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17853 | 17797.6 | 40.81 | 17877 | 17789.93 | 35.25 | 17843 | 17788.17 | 32.32 | 17862 | 17793.07 | 43.34 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17868 | 17797.73 | 45.04 | 17883 | 17806.77 | 36.28 | 17866 | 17800.07 | 29.95 | 17881 | 17793.03 | 46.05 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17841 | 17789.63 | 38.56 | 17834 | 17782.23 | 31.52 | 17904 | 17785.93 | 43.57 | 17883 | 17795.3 | 43.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17899 | 17798.57 | 44.94 | 17851 | 17800.33 | 31.84 | 17861 | 17803.53 | 32.55 | 17872 | 17798.73 | 37.59 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1601: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22138 | 22071.3 | 45.43 | 22170 | 22064.8 | 43.43 | 22183 | 22056.63 | 48.21 | 22133 | 22060.53 | 36.71 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22167 | 22082.03 | 39.55 | 22143 | 22070.47 | 43.39 | 22161 | 22075.33 | 47.57 | 22170 | 22080.4 | 39.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22164 | 22082 | 51.82 | 22146 | 22066.33 | 34.85 | 22170 | 22065.7 | 44.12 | 22193 | 22066.6 | 54.18 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22069.23 | 43.42 | 22143 | 22057.6 | 48.01 | 22139 | 22065.53 | 46.61 | 22202 | 22084.37 | 46.51 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1602: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22166 | 22068.7 | 38.72 | 22124 | 22045.63 | 51.44 | 22139 | 22066.67 | 39.99 | 22154 | 22049.23 | 46.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22064.57 | 52.77 | 22180 | 22076.07 | 47.99 | 22141 | 22059.43 | 50.97 | 22129 | 22064.27 | 35.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22138 | 22068.4 | 38.27 | 22178 | 22072.13 | 52.6 | 22133 | 22064.53 | 40.4 | 22123 | 22064.33 | 41.55 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22175 | 22065.27 | 54.99 | 22162 | 22065.77 | 38.94 | 22146 | 22061.5 | 42.27 | 22171 | 22066.8 | 48.14 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1603: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22140 | 22059.03 | 36.75 | 22184 | 22082.97 | 46.58 | 22146 | 22057.5 | 46.54 | 22145 | 22065.43 | 42.4 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22141 | 22068.53 | 46.9 | 22145 | 22060.7 | 37.7 | 22155 | 22067.73 | 51.82 | 22161 | 22070.83 | 43.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22144 | 22071.83 | 43.05 | 22157 | 22073.23 | 43.72 | 22183 | 22055.93 | 44.98 | 22144 | 22067.37 | 43.53 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22120 | 22066.67 | 35.27 | 22136 | 22065.27 | 45.87 | 22143 | 22047 | 58.62 | 22155 | 22060.2 | 46.45 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1604: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22163 | 22078.77 | 47.16 | 22160 | 22080.27 | 45.12 | 22130 | 22050 | 42.62 | 22133 | 22053.47 | 42.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22162 | 22057.17 | 46.23 | 22134 | 22058.33 | 42.67 | 22148 | 22055.83 | 45.7 | 22135 | 22063.97 | 41.79 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22192 | 22068.07 | 47.16 | 22155 | 22073.33 | 51.26 | 22146 | 22065.43 | 42.14 | 22154 | 22061.8 | 50.3 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22148 | 22064.6 | 43.2 | 22160 | 22058.07 | 45.14 | 22168 | 22067.17 | 35.91 | 22168 | 22071.2 | 43.66 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1605: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22178 | 22084.53 | 48.81 | 22150 | 22075.37 | 52.84 | 22203 | 22078.03 | 50.14 | 22133 | 22049.13 | 43.7 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22163 | 22065.93 | 48.08 | 22153 | 22060.87 | 52.35 | 22130 | 22048.6 | 45.97 | 22128 | 22056.87 | 47.98 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22199 | 22068.6 | 47.82 | 22199 | 22068.6 | 47.82 | 22143 | 22067.33 | 44.74 | 22200 | 22068.97 | 60.78 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22155 | 22076.93 | 44.65 | 22155 | 22078.97 | 42.31 | 22154 | 22072.8 | 43.81 | 22166 | 22062.43 | 45.63 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1606: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22164 | 22058.17 | 51.69 | 22155 | 22063.5 | 43.82 | 22137 | 22065.53 | 38.39 | 22220 | 22069 | 53.22 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22136 | 22061.77 | 35.82 | 22128 | 22063.03 | 44.63 | 22176 | 22077.53 | 40.82 | 22157 | 22060.33 | 47.29 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22142 | 22076.33 | 44.3 | 22158 | 22068.6 | 49.43 | 22182 | 22087.17 | 43.58 | 22146 | 22066.73 | 47.13 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22128 | 22043.6 | 53.96 | 22169 | 22065.13 | 39.38 | 22176 | 22065.6 | 46.62 | 22148 | 22060.73 | 48.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1607: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24737 | 24662.73 | 44.97 | 24747 | 24639.5 | 56.87 | 24752 | 24672.57 | 49.29 | 24776 | 24660.43 | 50.57 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24759 | 24667.47 | 51.05 | 24771 | 24656.47 | 51.22 | 24728 | 24664.8 | 39.58 | 24747 | 24655.83 | 41.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24673.73 | 50.69 | 24791 | 24669.97 | 50.42 | 24744 | 24664.77 | 52.91 | 24746 | 24655.37 | 44.26 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24777 | 24664.43 | 53.11 | 24746 | 24674.87 | 36.95 | 24795 | 24653.17 | 57.01 | 24746 | 24653.8 | 46.42 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1608: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24735 | 24674.03 | 43.38 | 24731 | 24659.37 | 49.11 | 24762 | 24667.8 | 51.36 | 24741 | 24671.9 | 43.3 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24651.7 | 60.03 | 24775 | 24656.33 | 39.57 | 24732 | 24663.2 | 40.92 | 24764 | 24683.3 | 43.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24808 | 24662.53 | 65.95 | 24731 | 24665.37 | 34.7 | 24790 | 24681.97 | 49.91 | 24747 | 24658.4 | 48.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24742 | 24655.17 | 49.91 | 24767 | 24664.9 | 48.45 | 24754 | 24658.63 | 51.39 | 24746 | 24671.27 | 47.59 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1609: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24770 | 24680.73 | 38.89 | 24744 | 24665.7 | 55.27 | 24752 | 24660.63 | 59.78 | 24772 | 24673.63 | 46.01 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24752 | 24663.53 | 50.09 | 24727 | 24665.1 | 38.52 | 24771 | 24647.43 | 62.5 | 24778 | 24664.53 | 54.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24763 | 24674.6 | 47.46 | 24770 | 24665.4 | 53.88 | 24800 | 24659.97 | 49.22 | 24746 | 24662 | 54.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24775 | 24683.23 | 49.99 | 24730 | 24671.83 | 38.58 | 24767 | 24679.8 | 42.61 | 24760 | 24675.63 | 53.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1610: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24753 | 24667.9 | 54.58 | 24771 | 24682.13 | 50.59 | 24762 | 24668.57 | 53.11 | 24784 | 24665.27 | 51.19 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24729 | 24661.23 | 40.52 | 24744 | 24670.93 | 41.89 | 24788 | 24661.23 | 48.81 | 24754 | 24669.67 | 41.53 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24747 | 24667.6 | 49.15 | 24788 | 24678.7 | 46.57 | 24781 | 24663.57 | 53.57 | 24734 | 24666.8 | 46.16 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24745 | 24664.7 | 49.48 | 24811 | 24683.17 | 62.38 | 24812 | 24659 | 53.61 | 24736 | 24649.9 | 41.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1611: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24757 | 24675.83 | 47.13 | 24732 | 24657.53 | 41.06 | 24720 | 24640.67 | 46.92 | 24754 | 24657.37 | 43.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24739 | 24651.23 | 53.09 | 24732 | 24652.4 | 45.58 | 24759 | 24657.27 | 56.2 | 24751 | 24675.67 | 32.95 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24672.13 | 54.39 | 24782 | 24672.13 | 54.39 | 24766 | 24673.33 | 52.29 | 24797 | 24667.97 | 61.86 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24674.3 | 41.95 | 24754 | 24674.3 | 41.95 | 24757 | 24650.8 | 53.14 | 24734 | 24661.07 | 34.91 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1612: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24809 | 24674.27 | 43.08 | 24787 | 24666.63 | 43.53 | 24750 | 24659.13 | 57.33 | 24796 | 24681.93 | 53.35 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24727 | 24646.43 | 41.62 | 24742 | 24662.17 | 45.47 | 24771 | 24656.37 | 59.25 | 24750 | 24666.93 | 45.65 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24778 | 24664.87 | 53.45 | 24755 | 24674.7 | 51.6 | 24775 | 24657.97 | 49.92 | 24729 | 24642.2 | 48.06 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24749 | 24661.1 | 46 | 24778 | 24668.43 | 44.53 | 24791 | 24672.3 | 52.43 | 24757 | 24665.63 | 49.5 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1613: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47970 | 47857.6 | 61.56 | 47974 | 47860.57 | 83.4 | 47985 | 47841.37 | 83.33 | 48016 | 47857.93 | 80.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48057 | 47894.67 | 84.9 | 47986 | 47856.03 | 77.18 | 48017 | 47836 | 76.2 | 48025 | 47848.67 | 70.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48067 | 47877.27 | 70.49 | 48067 | 47868.37 | 89.96 | 47960 | 47867.07 | 67.08 | 48024 | 47849.87 | 72.61 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47865.43 | 71.56 | 48096 | 47840.37 | 97.09 | 48030 | 47855.27 | 79.85 | 48029 | 47847.23 | 90.2 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1614: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48003 | 47857.47 | 99.4 | 47998 | 47840.37 | 91 | 47965 | 47832.73 | 69.6 | 47964 | 47815.27 | 76.6 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47997 | 47846.03 | 83.05 | 47970 | 47854.77 | 63.47 | 47983 | 47837.47 | 66.1 | 47994 | 47866.53 | 59.53 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 47959 | 47815.17 | 67.55 | 47973 | 47863.53 | 67.3 | 48090 | 47831.73 | 108.29 | 47999 | 47810 | 102.62 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48012 | 47852.37 | 88.23 | 48002 | 47834.47 | 75.25 | 47957 | 47856.5 | 71.38 | 47979 | 47846.3 | 79.58 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1615: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48033 | 47858.03 | 76.76 | 48077 | 47848.13 | 100.18 | 47967 | 47832.2 | 79.98 | 47971 | 47849.3 | 83.01 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48000 | 47861.3 | 84.69 | 48025 | 47861.37 | 72.3 | 48032 | 47823.83 | 101.51 | 48043 | 47863.1 | 87.03 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48051 | 47907.73 | 77.27 | 47993 | 47864.2 | 76.6 | 47960 | 47831.37 | 75.98 | 48098 | 47871.6 | 92.92 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48021 | 47851.93 | 80.68 | 47990 | 47861.6 | 68.72 | 47940 | 47824.3 | 60.56 | 47979 | 47849.33 | 73.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1616: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47993 | 47850.57 | 75.47 | 48010 | 47877.1 | 74.91 | 48003 | 47828.13 | 114.68 | 48041 | 47867.13 | 74.19 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47982 | 47856.47 | 81.14 | 48081 | 47850.5 | 73.37 | 48033 | 47860.53 | 87.26 | 47993 | 47858.43 | 86.78 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48059 | 47876 | 88.89 | 47978 | 47843.5 | 76.05 | 47970 | 47867 | 63.03 | 47996 | 47857.13 | 84.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48016 | 47851.97 | 74.44 | 47948 | 47848.83 | 67.03 | 48029 | 47825.8 | 63.68 | 48027 | 47845.27 | 96.44 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1617: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48002 | 47844.03 | 68.81 | 48002 | 47844.03 | 68.81 | 47998 | 47865.57 | 70.59 | 48008 | 47838.6 | 81.28 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47964 | 47864.73 | 63.01 | 47964 | 47864.73 | 63.01 | 47983 | 47848.3 | 68.07 | 47998 | 47858.77 | 61.59 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48035 | 47861 | 70.01 | 48035 | 47861 | 70.01 | 47962 | 47856.27 | 61.44 | 47942 | 47832.03 | 60.48 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47841.27 | 77.04 | 48042 | 47841.27 | 77.04 | 47976 | 47809.13 | 85.75 | 47991 | 47810.1 | 89.97 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1618: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48067 | 47865.93 | 79.66 | 47977 | 47860.63 | 76.74 | 47978 | 47866.5 | 67.57 | 47976 | 47854.8 | 59.08 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47965 | 47854.07 | 64.58 | 47957 | 47855.57 | 70.13 | 48090 | 47887.67 | 82.34 | 47966 | 47838.6 | 63.15 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48092 | 47864.67 | 79.98 | 48092 | 47864.67 | 79.98 | 48112 | 47844.97 | 110.85 | 47945 | 47840.17 | 60.56 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47995 | 47860.03 | 93.25 | 47990 | 47844.83 | 80.31 | 48015 | 47871.93 | 64.9 | 48039 | 47866.63 | 91.73 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1619: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56133 | 55944.5 | 86.47 | 56108 | 55940.9 | 94.81 | 56055 | 55922.33 | 79.46 | 56131 | 55911.13 | 113.25 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56124 | 55930.8 | 81.75 | 56130 | 55927.27 | 102.67 | 56098 | 55902.5 | 89.02 | 56205 | 55937.6 | 104.6 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56100 | 55935.07 | 82.69 | 56086 | 55939.1 | 83.46 | 56147 | 55900.13 | 85.57 | 56088 | 55925.9 | 71.94 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56151 | 55970.2 | 79.4 | 56144 | 55959.33 | 88.91 | 56105 | 55913.97 | 85.75 | 56045 | 55929.27 | 67.48 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1620: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56093 | 55893.87 | 103.21 | 56148 | 55945 | 80.61 | 56182 | 55942.17 | 98.7 | 56047 | 55916.13 | 85 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56152 | 55916 | 105.66 | 56131 | 55959.53 | 72.93 | 56110 | 55936.77 | 76.84 | 56051 | 55898.37 | 77.95 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56065 | 55928.83 | 83.98 | 56104 | 55955.53 | 72.05 | 56120 | 55945.33 | 80.11 | 56077 | 55903.77 | 83.29 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56030 | 55909.7 | 59.99 | 56057 | 55941.67 | 87.74 | 56083 | 55909.87 | 72.49 | 56168 | 55943.4 | 116.23 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1621: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56168 | 55962.37 | 104.1 | 56088 | 55941.73 | 88.05 | 56080 | 55927.8 | 74.91 | 56125 | 55936.5 | 96.18 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56172 | 55960.07 | 92.73 | 56066 | 55931.37 | 76.16 | 56083 | 55955.5 | 81.91 | 56029 | 55916 | 87.14 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56099 | 55953.03 | 78.58 | 56098 | 55965 | 83.41 | 56168 | 55952.97 | 96.98 | 56068 | 55935.03 | 84.74 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56099 | 55933.73 | 76.18 | 56177 | 55936 | 89.32 | 56073 | 55933.33 | 80.87 | 56092 | 55925.3 | 73.22 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1622: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56139 | 55909.33 | 104.41 | 56107 | 55949.2 | 80.46 | 56020 | 55898.47 | 69.87 | 56155 | 55955.43 | 91.27 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56114 | 55947.03 | 86.19 | 56147 | 55923.97 | 84.33 | 56086 | 55908.3 | 84.58 | 55996 | 55914.43 | 64.7 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56108 | 55933.53 | 89.43 | 56092 | 55926.57 | 82.01 | 56091 | 55914.23 | 75.41 | 56109 | 55929.4 | 102.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56120 | 55946.63 | 82.67 | 56170 | 55908.63 | 89.4 | 56083 | 55945.7 | 60.2 | 56137 | 55959.2 | 78.54 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1623: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56123 | 55919.67 | 87.96 | 56123 | 55919.67 | 87.96 | 56129 | 55913.2 | 84.72 | 56070 | 55951.27 | 71.9 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56195 | 55923.87 | 111.28 | 56195 | 55923.87 | 111.28 | 56103 | 55914.03 | 84.23 | 56053 | 55928.33 | 69.87 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56193 | 55940.7 | 96.72 | 56193 | 55940.7 | 96.72 | 56091 | 55940.33 | 90.3 | 56061 | 55941.63 | 69.33 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56062 | 55915.77 | 74.41 | 56062 | 55915.77 | 74.41 | 56074 | 55928.83 | 69.66 | 56115 | 55956.57 | 79.61 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1624: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56143 | 55942.57 | 98.83 | 56139 | 55931.73 | 78.41 | 56100 | 55948.57 | 85.87 | 56075 | 55925.97 | 87.59 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56069 | 55937.1 | 100.55 | 56076 | 55938.93 | 75.2 | 56077 | 55947.6 | 69.34 | 56159 | 55938.77 | 86.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56059 | 55947.2 | 70.21 | 56059 | 55947.2 | 70.21 | 56060 | 55940.7 | 70.49 | 56136 | 55945.4 | 84.8 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56146 | 55944 | 88.23 | 56146 | 55942.13 | 75.78 | 56175 | 55940 | 97.49 | 56091 | 55929.03 | 98.32 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1625: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

**Results With Post Optimization and No Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46915 | 46585.07 | 210.3 | 46338 | 45650.7 | 385.58 | 42550 | 41535.4 | 557.67 | 42291 | 41102.27 | 584.48 |
| | | 2op | 46977 | 46628.4 | 218.75 | 46476 | 45865.8 | 404.08 | 43165 | 41973.17 | 562.01 | 42423 | 41258.03 | 547.35 |
| | 50 | rnd | 47025 | 46495.67 | 282.28 | 46596 | 46190.93 | 264.12 | 44129 | 42749.97 | 762.66 | 41961 | 40988.73 | 400.56 |
| | | 2op | 46998 | 46625.57 | 212.29 | 46825 | 46265.23 | 278.27 | 44313 | 43230.93 | 688.61 | 41843 | 41003.47 | 505.47 |
| 51 | 20 | rnd | 47058 | 46810.7 | 133.72 | 46978 | 46719 | 139.14 | 46037 | 45194.53 | 576.05 | 44119 | 42983.6 | 397.47 |
| | | 2op | 47141 | 46829.53 | 150.94 | 47034 | 46740.63 | 180.43 | 46049 | 45266.3 | 417.78 | 43772 | 43052.4 | 377.92 |
| | 50 | rnd | 47104 | 46720.77 | 187.86 | 46984 | 46648.83 | 205.73 | 46650 | 46095.27 | 355.64 | 43530 | 42655.17 | 423.5 |
| | | 2op | 47031 | 46819.6 | 152.64 | 47115 | 46754.7 | 157.9 | 46576 | 46075.2 | 351.45 | 43591 | 42692.97 | 412.73 |

Table A.1626: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47334 | 47229.17 | 63.82 | 47268 | 47114.37 | 80.23 | 47090 | 46901 | 139.88 | 46227 | 45675.77 | 336.15 |
| | | 2op | 47407 | 47298.3 | 47.9 | 47345 | 47228.87 | 72.02 | 47194 | 46992.77 | 136.71 | 46200 | 45771.13 | 264.43 |
| | 50 | rnd | 47382 | 47250.27 | 76.38 | 47388 | 47257.1 | 76.18 | 47228 | 47051.8 | 105.21 | 46717 | 46334.13 | 226.74 |
| | | 2op | 47432 | 47320.13 | 47.19 | 47385 | 47302.4 | 45.34 | 47314 | 47179.33 | 79.66 | 46847 | 46398.97 | 242.38 |
| 51 | 20 | rnd | 47361 | 47227.37 | 81.55 | 47450 | 47317.53 | 50.11 | 47248 | 47111.7 | 101.63 | 47028 | 46742.7 | 189.19 |
| | | 2op | 47381 | 47316.17 | 42.38 | 47394 | 47324.9 | 45.54 | 47295 | 47174.27 | 78.55 | 47135 | 46819.47 | 171.74 |
| | 50 | rnd | 47356 | 47250.73 | 65.17 | 47457 | 47352.8 | 51.61 | 47330 | 47175.13 | 88.93 | 47172 | 46972.7 | 121.61 |
| | | 2op | 47375 | 47324.57 | 30.76 | 47434 | 47364.9 | 38.96 | 47324 | 47238.27 | 62.07 | 47268 | 47016.27 | 148.44 |

Table A.1627: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46915 | 46540.03 | 208.72 | 46388 | 45747.73 | 443.43 | 42428 | 41737.87 | 536.87 | 42257 | 41036.1 | 639.18 |
| | | 2op | 47043 | 46572.73 | 195.95 | 46304 | 45788.27 | 393.33 | 42934 | 41788.97 | 514.35 | 42265 | 41060.43 | 512.4 |
| | 50 | rnd | 47031 | 46524.47 | 209.79 | 46711 | 46196.8 | 271.09 | 43859 | 42838.77 | 551.68 | 41815 | 40893.77 | 444.58 |
| | | 2op | 47079 | 46645.07 | 210.66 | 46745 | 46243.33 | 299.39 | 44201 | 43318.77 | 684.75 | 41748 | 40970.6 | 380.54 |
| 51 | 20 | rnd | 47014 | 46783.47 | 134.95 | 46934 | 46664.6 | 182.63 | 46206 | 45349.07 | 487.92 | 43847 | 42975.07 | 396.87 |
| | | 2op | 47188 | 46853.8 | 128.18 | 47118 | 46803.1 | 131.57 | 46146 | 45236.2 | 575.18 | 43485 | 42987.2 | 293.48 |
| | 50 | rnd | 47076 | 46719.2 | 195.53 | 47037 | 46734.07 | 183.98 | 46434 | 45929.5 | 374.66 | 43639 | 42548.57 | 488.56 |
| | | 2op | 47165 | 46787.63 | 187.45 | 47006 | 46751.13 | 164.46 | 46710 | 46076.8 | 385.4 | 43818 | 42689.87 | 446.68 |

Table A.1628: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47336 | 47222.2 | 71.43 | 47337 | 47154.17 | 90.68 | 47112 | 46858.23 | 181.61 | 46292 | 45620.87 | 375.41 |
| | | 2op | 47389 | 47317.63 | 39.89 | 47322 | 47216.33 | 73.47 | 47215 | 46971.4 | 144.08 | 46122 | 45649.27 | 269.79 |
| | 50 | rnd | 47448 | 47227.67 | 67.75 | 47383 | 47239.37 | 90.77 | 47238 | 46991.9 | 136.27 | 46712 | 46262.5 | 249.2 |
| | | 2op | 47393 | 47330.07 | 37.17 | 47354 | 47291.33 | 46.96 | 47274 | 47124.5 | 102.57 | 46803 | 46308.97 | 289.3 |
| 51 | 20 | rnd | 47350 | 47253.8 | 72.26 | 47381 | 47313.43 | 41.93 | 47275 | 47091.1 | 102.38 | 47111 | 46755.83 | 189.14 |
| | | 2op | 47399 | 47318.8 | 44.95 | 47433 | 47329.67 | 46.35 | 47317 | 47168.73 | 76.82 | 47184 | 46779.07 | 208.58 |
| | 50 | rnd | 47391 | 47263.23 | 63.7 | 47418 | 47351.17 | 53.87 | 47351 | 47202.07 | 76.16 | 47179 | 46972.73 | 128.72 |
| | | 2op | 47410 | 47329.3 | 39.65 | 47420 | 47366.7 | 38.78 | 47327 | 47224.6 | 70.2 | 47282 | 46984.47 | 155.39 |

Table A.1629: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47227 | 46947.53 | 156.4 | 47207 | 46928.53 | 144.33 | 45161 | 42348.2 | 857.34 | 41934 | 41016.53 | 343.16 |
| | | 2op | 47264 | 47027.17 | 142.89 | 47216 | 47010.87 | 157.78 | 43860 | 42506.47 | 758.22 | 41915 | 41290.43 | 368.14 |
| | 50 | rnd | 47222 | 46982.73 | 134.96 | 47176 | 46965.8 | 137.14 | 44191 | 43191.2 | 715.88 | 41832 | 41048.67 | 411.05 |
| | | 2op | 47314 | 47063.73 | 134.48 | 47305 | 47056.37 | 137.32 | 44572 | 43241.1 | 881.78 | 41384 | 40933.6 | 306.16 |
| 51 | 20 | rnd | 47350 | 47226 | 69.22 | 47383 | 47225.5 | 72.39 | 46782 | 46121.03 | 565.45 | 43786 | 42848.43 | 410.32 |
| | | 2op | 47356 | 47303.67 | 34.25 | 47356 | 47303.67 | 34.74 | 46919 | 46397.83 | 382.15 | 43387 | 42867.23 | 330.08 |
| | 50 | rnd | 47380 | 47263 | 67.31 | 47380 | 47262.77 | 58.52 | 47092 | 46543.63 | 262.77 | 43155 | 42314.5 | 398.59 |
| | | 2op | 47395 | 47307 | 56.6 | 47395 | 47293.83 | 61.97 | 46928 | 46500.37 | 466.11 | 42799 | 42318.17 | 297.57 |

Table A.1630: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47325 | 47230.9 | 56.25 | 47286 | 47199.1 | 55.2 | 47167 | 46908.97 | 129.33 | 45948 | 45309.37 | 369.02 |
| | | 2op | 47419 | 47333.63 | 32.57 | 47386 | 47301.13 | 40.1 | 47182 | 46986.43 | 125.13 | 45888 | 45273.03 | 287.18 |
| | 50 | rnd | 47371 | 47268.27 | 52.63 | 47396 | 47264.93 | 64.25 | 47241 | 47044.47 | 128.81 | 46555 | 46118.67 | 361.42 |
| | | 2op | 47423 | 47347.6 | 30.81 | 47400 | 47318.1 | 37.77 | 47266 | 47147.03 | 75.17 | 46379 | 46091.63 | 179.28 |
| 51 | 20 | rnd | 47324 | 47242.87 | 53.38 | 47367 | 47253.67 | 64 | 47268 | 47120.77 | 71.89 | 46886 | 46543.4 | 181.17 |
| | | 2op | 47388 | 47337.97 | 29.23 | 47376 | 47330.93 | 27.55 | 47305 | 47240 | 35.18 | 46903 | 46633.2 | 169.73 |
| | 50 | rnd | 47386 | 47299.27 | 40.3 | 47385 | 47256.83 | 56.01 | 47367 | 47167.77 | 91.13 | 47094 | 46790.07 | 135.63 |
| | | 2op | 47396 | 47356.27 | 18.49 | 47389 | 47323.6 | 33.57 | 47361 | 47249.3 | 58.84 | 47097 | 46889.87 | 111.2 |

Table A.1631: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147576 | 144813.23 | 1440.08 | 144597 | 141611.57 | 1473.44 | 125589 | 116082.07 | 5092.81 | 83651 | 75457.23 | 3739.29 |
| | | 2op | 146564 | 144922.47 | 1002.27 | 145272 | 141421.2 | 1871.7 | 126653 | 116369.07 | 5000.76 | 83507 | 75226.67 | 3313.21 |
| | 50 | rnd | 146291 | 144511.9 | 891.67 | 146528 | 143447.13 | 1334.67 | 136802 | 131197.6 | 3316.8 | 99532 | 84375.73 | 7002.05 |
| | | 2op | 147305 | 144846.8 | 1190.47 | 146171 | 143299.53 | 1384.32 | 135684 | 130593.1 | 3794.83 | 95434 | 83851.47 | 5624.79 |
| 51 | 20 | rnd | 148301 | 146603.07 | 953.52 | 147646 | 145573.3 | 979.14 | 142190 | 138049.13 | 2515.51 | 124235 | 106229.7 | 5988.96 |
| | | 2op | 147966 | 146243.27 | 1222.15 | 147621 | 145782.83 | 1054.9 | 142887 | 138650.67 | 2409.68 | 114972 | 105629.87 | 5313.99 |
| | 50 | rnd | 147862 | 145866.1 | 1098.52 | 148048 | 145713.23 | 991.12 | 147035 | 143063.93 | 1614.61 | 134807 | 122121.33 | 5431.17 |
| | | 2op | 147467 | 145888.3 | 811.62 | 148251 | 146236.83 | 1093.64 | 145674 | 142720.17 | 1858.56 | 129197 | 120352.2 | 5246.74 |

Table A.1632: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151021 | 150588.57 | 457.91 | 150721 | 149726.13 | 523.74 | 148731 | 146366.67 | 1563.86 | 139597 | 131513.23 | 4155.9 |
| | | 2op | 151087 | 150733.53 | 311.89 | 150905 | 149509.97 | 727.56 | 149405 | 147152.83 | 1582.74 | 139509 | 132214.1 | 4973.42 |
| | 50 | rnd | 151159 | 150737.87 | 373.18 | 150837 | 149988.93 | 766.15 | 150084 | 148506.4 | 1300.58 | 146674 | 139806.4 | 3218.21 |
| | | 2op | 151090 | 150858.43 | 248.49 | 150915 | 150298.8 | 516.83 | 150514 | 149169.83 | 853.56 | 146930 | 141179.9 | 2906.41 |
| 51 | 20 | rnd | 151066 | 150598.77 | 406.2 | 150933 | 150361.9 | 515.62 | 150599 | 149096.97 | 932.91 | 148056 | 145271.17 | 1906.62 |
| | | 2op | 151185 | 150833.23 | 309.99 | 150811 | 150110.13 | 501.18 | 150766 | 149321.43 | 763.36 | 149472 | 146137.3 | 1871.93 |
| | 50 | rnd | 151105 | 150862.8 | 306.92 | 151031 | 150521.6 | 385 | 150910 | 149693.6 | 834.97 | 149983 | 147796 | 1337.14 |
| | | 2op | 151235 | 150932.33 | 247.75 | 151077 | 150489.4 | 448.39 | 150812 | 149994.77 | 651.88 | 149849 | 147749.3 | 1419.62 |

Table A.1633: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 146716 | 144311.63 | 1606.5 | 144125 | 141646.57 | 1638.77 | 129328 | 118648.47 | 4079.37 | 82049 | 75074.67 | 3645.62 |
| | | 2op | 147400 | 144588.6 | 1393.14 | 145501 | 141931.37 | 1862.36 | 125340 | 116789.73 | 5695.35 | 83665 | 75692.43 | 3803.08 |
| | 50 | rnd | 147178 | 144374.77 | 1347.43 | 145475 | 143001.27 | 1297.75 | 137600 | 128605.53 | 4942.8 | 94339 | 82488.6 | 6015.81 |
| | | 2op | 146775 | 144613 | 1200.17 | 144589 | 142554.43 | 1177.26 | 134315 | 129266 | 3939.1 | 94380 | 81662.23 | 5648.14 |
| 51 | 20 | rnd | 148785 | 146344.83 | 1281.29 | 148149 | 146145.2 | 795.77 | 144308 | 139000.57 | 2452.48 | 116226 | 106176.47 | 5447.34 |
| | | 2op | 147531 | 146071.8 | 1168.17 | 148378 | 146096.7 | 1254.03 | 141905 | 137966.77 | 2994.37 | 111921 | 105367.97 | 4068.99 |
| | 50 | rnd | 148136 | 146078.9 | 973.48 | 147438 | 145789 | 770.73 | 146329 | 143232.97 | 1428.54 | 129936 | 120718.57 | 5660.11 |
| | | 2op | 148396 | 146240.4 | 1036.39 | 147189 | 145816.53 | 897.69 | 145975 | 143116.1 | 1494.03 | 128304 | 121067.63 | 5458.99 |

Table A.1634: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151077 | 150724.03 | 271.81 | 150519 | 149464.8 | 900.52 | 149665 | 146541.1 | 1857.12 | 140817 | 130458.87 | 4412.81 |
| | | 2op | 151105 | 150641.27 | 331.49 | 150587 | 149378.47 | 1014.79 | 149643 | 147217.13 | 1484.07 | 140388 | 130928.83 | 4906.68 |
| | 50 | rnd | 151149 | 150742 | 269.95 | 150908 | 150007.23 | 577.28 | 150388 | 148572.37 | 1074.8 | 147606 | 139511.53 | 4053.93 |
| | | 2op | 151150 | 150734.3 | 383.59 | 150806 | 150057.73 | 637.02 | 150456 | 148915.5 | 1025.26 | 144287 | 139614 | 3235.78 |
| 51 | 20 | rnd | 151121 | 150723 | 334.61 | 150818 | 150139.53 | 409.65 | 150704 | 149431.63 | 914.04 | 148154 | 145127.03 | 1948.77 |
| | | 2op | 151115 | 150562.9 | 396.45 | 151033 | 150293.87 | 544.49 | 150627 | 149370.13 | 1076.68 | 149101 | 146048.27 | 1676.58 |
| | 50 | rnd | 151149 | 150933.73 | 201.05 | 151093 | 150525.1 | 369.4 | 150844 | 150156.77 | 503.82 | 149610 | 147341.43 | 1419.68 |
| | | 2op | 151190 | 150901.33 | 265.77 | 151111 | 150521.17 | 320.92 | 150794 | 149943.37 | 758.97 | 149685 | 147375.6 | 1280.02 |

Table A.1635: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 148108 | 146269.2 | 973.78 | 148487 | 146224.77 | 1208.63 | 139718 | 132397.2 | 5611.98 | 85579 | 74674.87 | 4571.71 |
| | | 2op | 148354 | 146631.3 | 913.48 | 148359 | 146175.8 | 1024.52 | 140260 | 134396.57 | 4037.41 | 80781 | 74928.07 | 3215.52 |
| | 50 | rnd | 147607 | 145832.4 | 868.11 | 147482 | 145688.43 | 915.3 | 142393 | 133094.73 | 6901.31 | 90671 | 78190.3 | 6176.48 |
| | | 2op | 147783 | 145746.73 | 933.13 | 147795 | 145864.13 | 997.94 | 140090 | 129789.47 | 9400.79 | 88095 | 78612.67 | 5017.52 |
| 51 | 20 | rnd | 149490 | 148587.73 | 688.43 | 149490 | 148425.07 | 751.43 | 148531 | 146669.93 | 1075 | 118130 | 102223.73 | 5767.81 |
| | | 2op | 150151 | 148700.8 | 780.64 | 149921 | 148591.23 | 746.27 | 148469 | 147001.5 | 792.49 | 116045 | 102869.93 | 5852.85 |
| | 50 | rnd | 149419 | 147807.93 | 981.98 | 149402 | 148196.13 | 684.19 | 148710 | 146568.73 | 1207.39 | 127846 | 116290.17 | 6653.08 |
| | | 2op | 149321 | 148098 | 589.77 | 149215 | 148027.07 | 688.77 | 148304 | 146499.7 | 1084.35 | 125418 | 118158.1 | 5467.81 |

Table A.1636: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151108 | 150781.3 | 278.74 | 150953 | 150633 | 252.37 | 149502 | 147883.8 | 956.72 | 132936 | 126970.13 | 4955.83 |
| | | 2op | 151146 | 150886.27 | 184.95 | 151017 | 150426 | 500.05 | 149414 | 147825.47 | 993.95 | 132869 | 127031.13 | 3364.62 |
| | 50 | rnd | 151168 | 150972.23 | 150.81 | 150976 | 150674.07 | 251.65 | 150204 | 148404.23 | 1652.12 | 144328 | 136781 | 4103.39 |
| | | 2op | 151167 | 150996.43 | 160.88 | 151072 | 150670.93 | 351.84 | 150489 | 148990.3 | 990.69 | 142843 | 138038.37 | 2720.79 |
| 51 | 20 | rnd | 151160 | 150851.2 | 268.52 | 150984 | 150748.47 | 182.94 | 150714 | 149982.3 | 488.62 | 145985 | 141225.8 | 2208.3 |
| | | 2op | 151177 | 150947.5 | 141.21 | 151172 | 150830.4 | 182.97 | 150822 | 150017.83 | 499.16 | 146943 | 141643.77 | 2090.94 |
| | 50 | rnd | 151299 | 151035.27 | 119.29 | 151108 | 150794.63 | 227.05 | 151068 | 150178.17 | 481.95 | 148982 | 145386.17 | 1975.24 |
| | | 2op | 151190 | 151035.9 | 89.32 | 151119 | 150851.67 | 160.14 | 150875 | 150206.63 | 349.56 | 148697 | 145856.6 | 2111.72 |

Table A.1637: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162594 | 160590.4 | 852.33 | 160454 | 157138.8 | 1970.06 | 139729 | 129959.57 | 5350.88 | 86992 | 79924.93 | 3825.18 |
| | | 2op | 162194 | 160335.73 | 1139.1 | 160642 | 157485.8 | 1117.63 | 139384 | 129158.7 | 6659.15 | 88806 | 79457.13 | 4356.22 |
| | 50 | rnd | 162799 | 160661.43 | 1042.01 | 161098 | 159375.07 | 1180.74 | 152978 | 146516.4 | 3561.76 | 106330 | 93107.23 | 6573.15 |
| | | 2op | 162666 | 160635.8 | 914.71 | 160827 | 158720.17 | 1106.46 | 153069 | 146053.87 | 3887.95 | 101859 | 92378.03 | 5516.5 |
| 51 | 20 | rnd | 163557 | 161651.17 | 812.78 | 162813 | 161222.33 | 889.15 | 158770 | 154409.03 | 3407.64 | 127394 | 112078 | 7578.52 |
| | | 2op | 163265 | 161774.67 | 887.98 | 162752 | 161198.63 | 691.49 | 158890 | 153405.13 | 3146.52 | 129575 | 116547.87 | 5958.81 |
| | 50 | rnd | 163081 | 161626.3 | 723.76 | 163502 | 161509.43 | 949.52 | 160796 | 158563.17 | 1215.86 | 144511 | 134315.63 | 5950.6 |
| | | 2op | 163849 | 161979 | 949.2 | 162775 | 161337.8 | 859.53 | 161346 | 158116.03 | 1808.64 | 143588 | 135160.77 | 5832.86 |

Table A.1638: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167007 | 166408.43 | 345.7 | 166250 | 164951.9 | 704.16 | 164889 | 162811.37 | 1531.97 | 157288 | 146837.67 | 3853.97 |
| | | 2op | 166307 | 165956.23 | 319.03 | 166215 | 164895.4 | 924.15 | 163736 | 162302.27 | 950.92 | 154468 | 147430.73 | 4807.06 |
| | 50 | rnd | 167209 | 166596.43 | 323.61 | 166757 | 165828.1 | 627.91 | 166384 | 164645.13 | 1024.93 | 162648 | 157298.07 | 2589.56 |
| | | 2op | 166463 | 166217.6 | 317.59 | 166132 | 165378.57 | 708.72 | 165542 | 164262.97 | 828.2 | 160512 | 156895.3 | 2494.38 |
| 51 | 20 | rnd | 166934 | 166397.17 | 384.42 | 166671 | 165865.43 | 572.73 | 165890 | 164728.53 | 846.75 | 163418 | 160926.2 | 1581.93 |
| | | 2op | 166425 | 166084.47 | 263.59 | 166135 | 165379.03 | 544.12 | 165979 | 164614.73 | 828.3 | 164750 | 160863.1 | 1913.86 |
| | 50 | rnd | 167211 | 166612.9 | 306.15 | 166898 | 166209.43 | 493.94 | 166604 | 165625.47 | 778.06 | 165468 | 163414.67 | 1428.2 |
| | | 2op | 166495 | 166243.93 | 227.37 | 166458 | 165745.43 | 419.75 | 165982 | 165148.1 | 722.93 | 164886 | 162921.07 | 1320.73 |

Table A.1639: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162367 | 160476.9 | 837.1 | 160425 | 157176.4 | 1858.6 | 139172 | 128460.53 | 6529.4 | 86434 | 77188.17 | 3310.93 |
| | | 2op | 162405 | 160173.4 | 1023.14 | 159219 | 157199.67 | 1602.05 | 140449 | 129076.83 | 7386.77 | 85484 | 78174.87 | 3762.51 |
| | 50 | rnd | 161913 | 159992.7 | 1123.89 | 160747 | 158832.9 | 1301.58 | 149697 | 145220.33 | 3773.56 | 109904 | 91563.57 | 8119.67 |
| | | 2op | 162278 | 160117.7 | 1025.54 | 160856 | 158999.53 | 1119.42 | 152152 | 145902.7 | 3020.07 | 100927 | 89213.5 | 6155.05 |
| 51 | 20 | rnd | 163404 | 161757.8 | 842.58 | 163686 | 161605.9 | 839.62 | 158018 | 154613.8 | 2629.1 | 125517 | 113567.17 | 5162.15 |
| | | 2op | 162899 | 161760.77 | 832.34 | 162507 | 160915.17 | 1019.39 | 157692 | 153181.8 | 2843.74 | 127602 | 114974.5 | 4804.34 |
| | 50 | rnd | 163875 | 162252.47 | 727.58 | 162689 | 161392.2 | 865.71 | 161311 | 157899.8 | 1650.94 | 143437 | 134886.03 | 5471.71 |
| | | 2op | 163828 | 162007.67 | 915.67 | 163286 | 161319.73 | 806.4 | 160428 | 157844.07 | 1657.07 | 146761 | 134060.17 | 6232.18 |

Table A.1640: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166973 | 166338.37 | 431.37 | 166410 | 165184.1 | 796.38 | 164621 | 162654.57 | 1363.42 | 153956 | 146346.73 | 3902.98 |
| | | 2op | 166462 | 166017.1 | 381.51 | 166002 | 164495.9 | 1078.24 | 164316 | 162452.87 | 1271.8 | 153056 | 146465.43 | 5233.81 |
| | 50 | rnd | 167099 | 166587.87 | 359.04 | 166561 | 165433.53 | 615.9 | 165833 | 164139.17 | 1002.16 | 161657 | 157687.47 | 2087.33 |
| | | 2op | 166644 | 166151.83 | 282.17 | 166083 | 165299.77 | 559.22 | 165560 | 163819.27 | 951.17 | 159675 | 155646.07 | 2786.94 |
| 51 | 20 | rnd | 167105 | 166549.57 | 386.76 | 166881 | 166029.8 | 549.16 | 166099 | 165051.5 | 870.47 | 163914 | 160853.8 | 1795.53 |
| | | 2op | 166514 | 166059.43 | 317.48 | 166132 | 165356.17 | 643.54 | 166036 | 164752.37 | 819.68 | 163882 | 161122.57 | 1840.12 |
| | 50 | rnd | 167195 | 166676.93 | 345.32 | 166987 | 166446.23 | 403.34 | 166683 | 165530.97 | 790.18 | 164807 | 163459.07 | 1015.94 |
| | | 2op | 166561 | 166281.8 | 183.11 | 166376 | 165844.67 | 422.44 | 166092 | 165272 | 491.89 | 165074 | 163071.9 | 1278.62 |

Table A.1641: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163400 | 161739.6 | 885.03 | 162847 | 161591.67 | 803.16 | 157216 | 151303 | 3275.77 | 87426 | 78068.13 | 4830.85 |
| | | 2op | 163303 | 161903.33 | 788.3 | 163633 | 161911.77 | 827.16 | 155830 | 149928.57 | 4956.88 | 83946 | 78341.33 | 3364.05 |
| | 50 | rnd | 162795 | 161326.93 | 855.82 | 162719 | 161209.5 | 895.66 | 157902 | 147804.23 | 7147.85 | 98779 | 86670.87 | 6397.53 |
| | | 2op | 163145 | 161234.9 | 987.15 | 163095 | 161118.67 | 1045.78 | 156801 | 147677.53 | 8330.59 | 100495 | 85405.93 | 7338.09 |
| 51 | 20 | rnd | 164445 | 163642 | 562.93 | 164445 | 163601.63 | 572.36 | 163441 | 161857.43 | 759.53 | 129382 | 115511.67 | 7454.46 |
| | | 2op | 164475 | 163428.83 | 560.7 | 164655 | 163503.57 | 559.71 | 162741 | 161716.87 | 796.99 | 127367 | 115438.57 | 7160.43 |
| | 50 | rnd | 164153 | 163004.2 | 611.02 | 164153 | 162957.73 | 658.85 | 162975 | 161535.87 | 756.48 | 143452 | 133644.33 | 5770.74 |
| | | 2op | 164110 | 163046.93 | 614.56 | 164110 | 163046.1 | 615.15 | 162699 | 161534.8 | 694.27 | 142700 | 132057 | 7090.48 |

Table A.1642: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167076 | 166549.5 | 361.67 | 166951 | 166118.4 | 417.5 | 165388 | 163603.63 | 1226.16 | 153252 | 143731.3 | 3449.95 |
| | | 2op | 166462 | 166077.77 | 282.93 | 166268 | 165748.9 | 357.63 | 164528 | 162905.73 | 779.28 | 152181 | 143063.53 | 4340.3 |
| | 50 | rnd | 167259 | 166740.77 | 296.89 | 166942 | 166430.77 | 295.06 | 165938 | 164349.63 | 1137.66 | 158141 | 154359.13 | 2519.6 |
| | | 2op | 166586 | 166295.53 | 136.53 | 166254 | 165849.4 | 312.19 | 165754 | 164214.17 | 1391.72 | 159892 | 153826.1 | 3153.63 |
| 51 | 20 | rnd | 167164 | 166650.47 | 250.18 | 167053 | 166511.63 | 321.86 | 166333 | 165562.17 | 462.04 | 162031 | 155755.97 | 2910.26 |
| | | 2op | 166454 | 166209.5 | 166.53 | 166374 | 166091.9 | 228.81 | 165944 | 165144.23 | 1261.65 | 160774 | 155143.23 | 2339.77 |
| | 50 | rnd | 167321 | 166834.6 | 239.15 | 166972 | 166594.97 | 220.12 | 166678 | 165836.3 | 489.66 | 165138 | 160862.43 | 2496.85 |
| | | 2op | 166575 | 166378.57 | 121.88 | 166561 | 166161.37 | 171.72 | 166108 | 165494.47 | 336.23 | 163680 | 160097.67 | 2670.82 |

Table A.1643: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 159177 | 158240.53 | 458.91 | 157014 | 155206.17 | 1200.41 | 139555 | 130820.17 | 7048.14 | 85896 | 77689.97 | 3863.13 |
| | | 2op | 159182 | 158349.7 | 546.53 | 157587 | 155625.43 | 1116.87 | 140186 | 130885.8 | 5704.48 | 87418 | 79870.7 | 3572.96 |
| | 50 | rnd | 159032 | 158071.8 | 539.57 | 158076 | 156829.87 | 662.29 | 152744 | 147966.6 | 2943.86 | 113386 | 91939.77 | 9528.79 |
| | | 2op | 159371 | 158341 | 530.39 | 157956 | 156932.43 | 623.88 | 152824 | 147214.43 | 3210.96 | 105883 | 91829.03 | 6332.56 |
| 51 | 20 | rnd | 159488 | 158712.23 | 561.35 | 159531 | 158385.03 | 595.61 | 155781 | 152303.17 | 2511.03 | 126767 | 117602.9 | 5262.83 |
| | | 2op | 159687 | 158827.27 | 423.15 | 159085 | 158242.8 | 581.78 | 155405 | 152627.57 | 1818.3 | 129260 | 116871.37 | 5873.5 |
| | 50 | rnd | 159623 | 158891.43 | 523.97 | 159429 | 158574.83 | 494.8 | 157255 | 155716.33 | 944.13 | 142537 | 134747.53 | 4304.49 |
| | | 2op | 159568 | 158929.7 | 387.11 | 159412 | 158486.17 | 558.88 | 157657 | 155814.8 | 975.9 | 142078 | 133777.13 | 5367.89 |

Table A.1644: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162962 | 162448.23 | 246.1 | 162373 | 161182.7 | 943.38 | 160908 | 159298.83 | 982.06 | 154387 | 148131.8 | 3801.72 |
| | | 2op | 162951 | 162447.97 | 241.16 | 162451 | 161491.43 | 739.91 | 160917 | 159252.1 | 1531.73 | 152611 | 146949.23 | 2772.16 |
| | 50 | rnd | 162926 | 162687.23 | 173.57 | 162650 | 161870.77 | 494.48 | 161904 | 160419.77 | 992.54 | 158383 | 155307.2 | 1685.06 |
| | | 2op | 162908 | 162669.03 | 132.88 | 162477 | 161889.4 | 557.49 | 161893 | 160916.77 | 586.56 | 158554 | 154814.23 | 2205.79 |
| 51 | 20 | rnd | 162789 | 162471.63 | 257.16 | 162552 | 161896.83 | 497.79 | 162495 | 161179.13 | 701.9 | 159884 | 158194.23 | 1161.77 |
| | | 2op | 162837 | 162423.8 | 276.02 | 162559 | 161947.03 | 474.29 | 162131 | 161181.7 | 596.64 | 160354 | 157831.4 | 1649.48 |
| | 50 | rnd | 163053 | 162657.1 | 169.56 | 162669 | 162217.83 | 248.13 | 162358 | 161744.23 | 448.92 | 160996 | 159453.03 | 894.77 |
| | | 2op | 162997 | 162715.27 | 188.05 | 162710 | 162299.17 | 223.1 | 162443 | 161755.5 | 515.29 | 160711 | 159345.67 | 925.08 |

Table A.1645: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158673 | 157926.67 | 355.14 | 156674 | 155350 | 887.53 | 141772 | 130203.43 | 7877.29 | 88193 | 79394.63 | 3717.71 |
| | | 2op | 159066 | 158382.73 | 462.08 | 156927 | 155329.73 | 1138.33 | 144391 | 131080.67 | 6044 | 84824 | 78541.5 | 3630.67 |
| | 50 | rnd | 159026 | 158108.63 | 489.2 | 157636 | 156651.97 | 700.83 | 152558 | 146090.03 | 4354.26 | 106865 | 92144.73 | 6847.05 |
| | | 2op | 159170 | 158196.23 | 553.82 | 157573 | 156626.8 | 676.95 | 151241 | 146573.83 | 3146.39 | 103236 | 89415.43 | 6636.6 |
| 51 | 20 | rnd | 159448 | 158766.53 | 593.93 | 159303 | 158186.13 | 664.8 | 155651 | 152732.87 | 2061.05 | 129048 | 116570.83 | 5727.14 |
| | | 2op | 159502 | 158868.5 | 380.15 | 159275 | 158281.13 | 580.63 | 154816 | 152456.3 | 2104.59 | 123016 | 115031.13 | 4429.12 |
| | 50 | rnd | 159533 | 158885.97 | 462.96 | 159529 | 158325.53 | 618.28 | 157850 | 156035.33 | 841.6 | 143518 | 134431.13 | 5566.14 |
| | | 2op | 159635 | 158835.8 | 440.5 | 159451 | 158371.57 | 421.34 | 157477 | 155909.33 | 998.74 | 143917 | 135704.6 | 5247.92 |

Table A.1646: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162794 | 162407.93 | 260.51 | 162242 | 161491.73 | 503.37 | 161512 | 159541.37 | 1061.81 | 154440 | 146558.4 | 3996.1 |
| | | 2op | 162908 | 162528.23 | 223.03 | 162259 | 161588.43 | 542.42 | 161271 | 159165.03 | 1114.83 | 153092 | 146423.87 | 3959.19 |
| | 50 | rnd | 162914 | 162635.73 | 126.85 | 162541 | 161882.8 | 473.3 | 161771 | 160802.8 | 612.57 | 158473 | 154751.13 | 2274.02 |
| | | 2op | 162984 | 162668.13 | 192.06 | 162662 | 161698.07 | 497.34 | 161800 | 160737.17 | 636.51 | 157661 | 154887.33 | 1992.24 |
| 51 | 20 | rnd | 162947 | 162520.6 | 182.53 | 162595 | 161898.3 | 399.3 | 162292 | 161378.57 | 524.45 | 160871 | 157996.6 | 1769.95 |
| | | 2op | 162875 | 162549.53 | 169.24 | 162469 | 161883.03 | 496.45 | 162252 | 161018.67 | 825.99 | 160037 | 158075.17 | 1611.14 |
| | 50 | rnd | 163016 | 162624.17 | 342.78 | 162726 | 162190.63 | 281.62 | 162334 | 161767.93 | 447.36 | 161152 | 159282.97 | 1055.96 |
| | | 2op | 163024 | 162715.93 | 146.68 | 162753 | 162330.8 | 267.08 | 162306 | 161763.73 | 412.61 | 160832 | 159524.77 | 831.75 |

Table A.1647: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 159317 | 158485.1 | 457.68 | 159492 | 158243.27 | 557.35 | 153846 | 150925.5 | 1587.53 | 88162 | 77488.43 | 3764.45 |
| | | 2op | 159317 | 158458.23 | 510.16 | 159626 | 158494.7 | 582.71 | 154667 | 150907.83 | 1908.85 | 84278 | 76814.43 | 4312.87 |
| | 50 | rnd | 159213 | 158304.53 | 548.5 | 159239 | 158249.43 | 493.64 | 154612 | 150847.57 | 4028.51 | 102168 | 88381.57 | 7086.46 |
| | | 2op | 158940 | 158226.3 | 495.76 | 159095 | 158208.87 | 450.13 | 154491 | 148736.6 | 8565.26 | 102278 | 88167.33 | 7132.33 |
| 51 | 20 | rnd | 159941 | 159252.9 | 505.62 | 159941 | 159252.9 | 505.62 | 158324 | 157121.17 | 513.82 | 130917 | 118685.33 | 7250.69 |
| | | 2op | 159877 | 159275.73 | 367.07 | 159877 | 159275.73 | 367.07 | 158011 | 157035.2 | 535.96 | 131711 | 116658.5 | 7621.86 |
| | 50 | rnd | 159628 | 158880.63 | 411.31 | 159628 | 158880.63 | 411.31 | 158175 | 157326.3 | 475.15 | 148895 | 137160.4 | 5859.24 |
| | | 2op | 159683 | 158966.57 | 448.84 | 159683 | 158966.57 | 448.84 | 158121 | 157375.17 | 440.99 | 146373 | 138493.13 | 4549.83 |

Table A.1648: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162786 | 162439.37 | 263.5 | 162606 | 162258.07 | 268.19 | 160704 | 159882.23 | 645.37 | 150851 | 145048.87 | 3524.45 |
| | | 2op | 162794 | 162493.3 | 241.17 | 162671 | 162183.7 | 310.71 | 161145 | 160078.93 | 646.45 | 149397 | 142387.57 | 3711.96 |
| | 50 | rnd | 162987 | 162710.23 | 154.45 | 162679 | 162327.4 | 231.67 | 161611 | 160352.17 | 995.18 | 156850 | 152946.33 | 3076.55 |
| | | 2op | 162917 | 162684.83 | 147.67 | 162695 | 162370.13 | 192.43 | 161627 | 160863.97 | 647.49 | 157074 | 152861.93 | 2603.25 |
| 51 | 20 | rnd | 162889 | 162596.17 | 158.3 | 162797 | 162470.2 | 206.97 | 162354 | 161735.97 | 276.78 | 157233 | 152755.77 | 2110.04 |
| | | 2op | 162869 | 162608.23 | 135.27 | 162732 | 162489.27 | 160.53 | 162212 | 161720.5 | 295.78 | 158619 | 152779.73 | 2292.17 |
| | 50 | rnd | 162935 | 162735.67 | 133.71 | 162923 | 162508.57 | 203.17 | 162347 | 161942.9 | 214.37 | 159160 | 156638.17 | 2134.95 |
| | | 2op | 162943 | 162717.67 | 129.08 | 162873 | 162543.7 | 159.37 | 162259 | 161850.77 | 233.62 | 159834 | 157122.33 | 2179.37 |

Table A.1649: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 175384 | 174877.5 | 465.42 | 173785 | 172311.6 | 1071.3 | 159672 | 142466.13 | 8437.69 | 97024 | 87163.27 | 4836.45 |
| | | 2op | 175447 | 174940.93 | 398.82 | 173593 | 172138.27 | 1162.62 | 153433 | 140665.9 | 8267.43 | 98060 | 87513.13 | 3980.74 |
| | 50 | rnd | 175530 | 175010.17 | 368.89 | 174228 | 173274.3 | 614.84 | 169550 | 162788.5 | 4743.85 | 112629 | 99024.83 | 7640.69 |
| | | 2op | 175398 | 175122.73 | 228.75 | 174308 | 173635.1 | 535.91 | 167735 | 162102.13 | 3514.49 | 109695 | 99255.2 | 6040.42 |
| 51 | 20 | rnd | 175810 | 175399.47 | 247.84 | 175246 | 174578.47 | 424.24 | 172401 | 168557.27 | 2540.98 | 143199 | 125890.3 | 7064.78 |
| | | 2op | 175704 | 175323.63 | 309.89 | 175435 | 174816.53 | 370.36 | 172482 | 168447.57 | 2298.37 | 140582 | 128336.1 | 5717.38 |
| | 50 | rnd | 175886 | 175401.93 | 319.06 | 175449 | 174835.87 | 432.12 | 173721 | 172457.4 | 1006.28 | 158320 | 148341.73 | 5789.84 |
| | | 2op | 175854 | 175459.07 | 375.57 | 175611 | 175033.13 | 308.68 | 173702 | 172601.97 | 729.4 | 161970 | 149679.83 | 6364.23 |

Table A.1650: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179691 | 179131.17 | 264.83 | 178940 | 178123.37 | 635.71 | 177266 | 175936.2 | 1022.55 | 168893 | 162717.3 | 4385.04 |
| | | 2op | 179605 | 179308.97 | 175.87 | 179053 | 178353.53 | 477.59 | 177557 | 175886.6 | 1109.87 | 170311 | 163986.77 | 3611.36 |
| | 50 | rnd | 179572 | 179280.33 | 266.83 | 179175 | 178711.03 | 464.18 | 178481 | 177371.43 | 709.87 | 174810 | 171397.37 | 1897.12 |
| | | 2op | 179873 | 179454.33 | 192.21 | 179381 | 178787.37 | 411.65 | 178358 | 177532.33 | 585.91 | 175509 | 171634.43 | 2077.3 |
| 51 | 20 | rnd | 179511 | 179141.6 | 260.29 | 179246 | 178772.47 | 340.86 | 178764 | 177893.13 | 549.31 | 176707 | 174722.47 | 1105.83 |
| | | 2op | 179614 | 179253.4 | 291.43 | 179430 | 178656.57 | 520.69 | 178846 | 178048.23 | 595.68 | 176790 | 174100.7 | 1623.6 |
| | 50 | rnd | 179739 | 179407.87 | 145.62 | 179477 | 178996.8 | 246.06 | 178989 | 178360.1 | 600.67 | 177368 | 175863.27 | 1010.48 |
| | | 2op | 179763 | 179463.57 | 147.82 | 179434 | 179125.9 | 195.26 | 179247 | 178662 | 413.04 | 177901 | 176104.4 | 810.83 |

Table A.1651: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 175494 | 174910.53 | 393.86 | 173456 | 172189.9 | 1104.37 | 156562 | 141446.47 | 7837.47 | 94605 | 84359.73 | 4559.68 |
| | | 2op | 175366 | 174892.9 | 306.65 | 173395 | 172087.33 | 951.68 | 153488 | 142629.6 | 7399.94 | 92600 | 85372.3 | 3553.6 |
| | 50 | rnd | 175359 | 174978.37 | 325.97 | 173998 | 173165.4 | 754.84 | 167790 | 161872.03 | 3241.87 | 127391 | 99683.23 | 9123.4 |
| | | 2op | 175596 | 174975.43 | 265.89 | 174080 | 173300.3 | 538.81 | 167745 | 161846.4 | 4071.73 | 112886 | 96617.87 | 7705.1 |
| 51 | 20 | rnd | 175758 | 175286.13 | 340.76 | 175454 | 174708.2 | 444.57 | 172723 | 168950.57 | 2140.48 | 135762 | 125361.37 | 5711.03 |
| | | 2op | 175801 | 175357.2 | 305.43 | 175410 | 174862.27 | 290.66 | 172600 | 169145.9 | 2029.9 | 144502 | 126471.7 | 5615.72 |
| | 50 | rnd | 175907 | 175473.1 | 319.63 | 175449 | 174960.8 | 264.33 | 173802 | 172654.3 | 665.94 | 157775 | 148342.67 | 5944.18 |
| | | 2op | 175883 | 175338.67 | 460.57 | 175661 | 175135.17 | 286.12 | 173669 | 172311.87 | 1004.96 | 157199 | 146053.67 | 6480.94 |

Table A.1652: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179364 | 179051.07 | 219.69 | 178874 | 178308.83 | 570.48 | 177593 | 175697.8 | 1333.36 | 169661 | 163524.8 | 4292.57 |
| | | 2op | 179719 | 179277.83 | 221.5 | 179202 | 178436.7 | 569.59 | 177517 | 176008.33 | 1012.75 | 170599 | 163967.67 | 4030.3 |
| | 50 | rnd | 179697 | 179272.33 | 226.81 | 179005 | 178545.67 | 404.2 | 178452 | 177335.03 | 730.43 | 173771 | 171269.8 | 1778.17 |
| | | 2op | 179673 | 179424.97 | 165.73 | 179279 | 178791.13 | 355.78 | 178218 | 177221.7 | 605.72 | 175405 | 170582.73 | 2541.34 |
| 51 | 20 | rnd | 179722 | 179225.23 | 232.2 | 179183 | 178669.8 | 414.66 | 178842 | 177864.67 | 956.07 | 176974 | 174322 | 1261.66 |
| | | 2op | 179732 | 179327 | 204.9 | 179279 | 178772.17 | 463.74 | 178963 | 178157.17 | 627.76 | 176702 | 174120.83 | 1578.75 |
| | 50 | rnd | 179546 | 179365.57 | 165.85 | 179365 | 178931.07 | 274.81 | 179046 | 178440.57 | 401.77 | 177317 | 175883.5 | 916.2 |
| | | 2op | 179718 | 179452.5 | 151.47 | 179487 | 179065.27 | 311.89 | 179194 | 178501.2 | 498.29 | 177701 | 176093.6 | 957.31 |

Table A.1653: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 175439 | 174961.33 | 242.5 | 175146 | 174781.33 | 263.13 | 170379 | 168038.3 | 1814.57 | 91851 | 83722.8 | 5356.35 |
| | | 2op | 175373 | 174960.8 | 241.56 | 175254 | 174723.73 | 533.03 | 170273 | 167538.17 | 1965.76 | 92002 | 84310.7 | 4231.48 |
| | 50 | rnd | 175271 | 174851.23 | 194.55 | 175247 | 174813.4 | 271.4 | 171302 | 167198.7 | 6566.4 | 105803 | 95016.13 | 7167.74 |
| | | 2op | 175234 | 174817.97 | 320.78 | 175234 | 174830.67 | 224.58 | 170990 | 167012.93 | 8620.42 | 117816 | 94895.2 | 9106.23 |
| 51 | 20 | rnd | 175676 | 175297.03 | 205.06 | 175676 | 175297.03 | 205.06 | 173682 | 172891.13 | 378.28 | 154933 | 135302.87 | 9795.07 |
| | | 2op | 175804 | 175350.37 | 229.11 | 175804 | 175350.37 | 229.11 | 173763 | 172856.77 | 478.39 | 154323 | 135544.53 | 9963.06 |
| | 50 | rnd | 175467 | 174926.67 | 247.63 | 175467 | 174926.67 | 247.63 | 173724 | 173059.17 | 387.43 | 163569 | 154602.93 | 6084.83 |
| | | 2op | 175338 | 174990.77 | 240.94 | 175338 | 174990.77 | 240.94 | 173388 | 172830.07 | 342.38 | 163531 | 154982.83 | 4920.19 |

Table A.1654: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179452 | 179136.77 | 156.58 | 179188 | 178858.7 | 183.01 | 177363 | 176433.07 | 521.74 | 166558 | 161081.97 | 4012.78 |
| | | 2op | 179680 | 179204.77 | 241.11 | 179351 | 179058.17 | 171.46 | 177310 | 176400.07 | 586.92 | 169032 | 160384.83 | 4488.94 |
| | 50 | rnd | 179598 | 179361.1 | 128.79 | 179423 | 179063.9 | 219.12 | 178001 | 177092.5 | 620.99 | 172508 | 169309.1 | 2535.39 |
| | | 2op | 179735 | 179472.13 | 190.77 | 179579 | 179117.03 | 206.06 | 178260 | 177116.57 | 973.37 | 173471 | 169824.5 | 2911.28 |
| 51 | 20 | rnd | 179459 | 179242.87 | 169.31 | 179376 | 179115.07 | 178.74 | 178673 | 178239.63 | 235.28 | 175086 | 168501.17 | 2862.86 |
| | | 2op | 179870 | 179337.2 | 199.55 | 179584 | 179252.13 | 141.41 | 178824 | 178312.77 | 274.35 | 174191 | 168995.87 | 2469.61 |
| | 50 | rnd | 179660 | 179344.7 | 160.41 | 179601 | 179225.13 | 184.83 | 178871 | 178516.2 | 190.04 | 176445 | 172381.53 | 2941.92 |
| | | 2op | 179807 | 179517.07 | 110.78 | 179550 | 179329.27 | 116.44 | 179054 | 178577.43 | 233.46 | 176458 | 172200.97 | 2992.08 |

Table A.1655: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 328938 | 325844.33 | 1680.29 | 318983 | 309314.27 | 3751.15 | 252110 | 220884.67 | 16297.33 | 164776 | 154139.67 | 5612.12 |
| | | 2op | 329612 | 325687.8 | 1682.21 | 318869 | 309819.93 | 5225.5 | 245256 | 223695.63 | 10846.12 | 167739 | 156273.67 | 6198.86 |
| | 50 | rnd | 329438 | 326680.23 | 1681.56 | 326432 | 319008.87 | 3239.61 | 279089 | 268506.83 | 9686.08 | 173166 | 163086.87 | 5852.37 |
| | | 2op | 330625 | 326959.77 | 1614.22 | 324166 | 319221.2 | 2514.01 | 285840 | 268017.97 | 8609.7 | 183547 | 161604.9 | 7468.27 |
| 51 | 20 | rnd | 332374 | 329035.7 | 1686.47 | 331659 | 326903.33 | 2274.34 | 307731 | 294865.63 | 6426.98 | 219116 | 204601.1 | 8051.1 |
| | | 2op | 333076 | 329067.27 | 2095.42 | 332044 | 326183.43 | 2454.07 | 305432 | 292861.1 | 7186.11 | 216605 | 202708.6 | 7166.85 |
| | 50 | rnd | 332682 | 329159.4 | 1668.86 | 331488 | 328297.87 | 1673.39 | 319413 | 312240.17 | 4311.64 | 256897 | 234637.9 | 10230.31 |
| | | 2op | 334830 | 329826.23 | 1900.31 | 331850 | 328706.1 | 1623.33 | 316560 | 310037.77 | 4197.2 | 254089 | 232972.67 | 12523.72 |

Table A.1656: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342113 | 340935.67 | 842.86 | 340940 | 338739.47 | 1060.93 | 335893 | 332548.53 | 2558.59 | 304674 | 292141.97 | 8466.52 |
| | | 2op | 342427 | 341224.23 | 861.59 | 340705 | 338867.6 | 1055.43 | 337966 | 332229.83 | 2719.98 | 310027 | 295332.87 | 9568.57 |
| | 50 | rnd | 342471 | 341528.5 | 584.55 | 342039 | 339680.2 | 1059.72 | 339096 | 335834.5 | 2444.16 | 327513 | 316918.43 | 6708.23 |
| | | 2op | 342702 | 341680 | 718.17 | 341585 | 339472.53 | 1320.35 | 340226 | 336948.6 | 1362.69 | 326604 | 317823.9 | 7556.49 |
| 51 | 20 | rnd | 342136 | 341129 | 692.03 | 341767 | 339801.67 | 1212.87 | 339745 | 337180.33 | 1742.75 | 332131 | 328169.27 | 2640.25 |
| | | 2op | 342404 | 341188.7 | 673.34 | 341300 | 339352.3 | 1035.24 | 340007 | 338063.43 | 1391.97 | 334539 | 326656.97 | 3976.2 |
| | 50 | rnd | 342832 | 341912.2 | 520.81 | 341954 | 340574.87 | 980.52 | 341616 | 339251 | 1034.4 | 337368 | 331933.73 | 3047.01 |
| | | 2op | 342675 | 341982.23 | 629.46 | 342344 | 340565.83 | 966.85 | 341086 | 339340.27 | 914.1 | 336940 | 333807.2 | 1975.79 |

Table A.1657: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 328591 | 325676.6 | 1876.78 | 317760 | 307208.1 | 4339.3 | 246893 | 222810.7 | 12366.35 | 163480 | 152000.43 | 5365.3 |
| | | 2op | 328589 | 326352.83 | 1505.59 | 316109 | 310378.93 | 4418.03 | 248403 | 224273.77 | 12277.98 | 165864 | 153059.9 | 5673.59 |
| | 50 | rnd | 330516 | 326432.57 | 1515.16 | 324619 | 318270.33 | 2677.8 | 281117 | 267465.37 | 8569.75 | 170112 | 158220.7 | 6374.1 |
| | | 2op | 328805 | 325539 | 1847.03 | 324476 | 318279.7 | 2636.02 | 282667 | 269283.23 | 7599.7 | 177929 | 159967.87 | 7649.01 |
| 51 | 20 | rnd | 332669 | 328674.87 | 1836.55 | 330571 | 326643.63 | 1813.28 | 307307 | 293026.03 | 7143.41 | 215023 | 202322.3 | 8488.76 |
| | | 2op | 332026 | 329065.17 | 1579.29 | 330683 | 326368.27 | 2524.92 | 308944 | 291836.3 | 10311.38 | 211684 | 199589.2 | 6445.31 |
| | 50 | rnd | 333607 | 329775.53 | 1435.25 | 331757 | 327968.93 | 1733.9 | 321221 | 310981.6 | 4872.22 | 256009 | 235306 | 9588.15 |
| | | 2op | 333465 | 330165.3 | 1387.36 | 332082 | 328373.73 | 1578.03 | 320296 | 311184.63 | 4264.58 | 251352 | 234070 | 11798.45 |

Table A.1658: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342151 | 340958.5 | 868.14 | 341341 | 338558.53 | 1138.56 | 337554 | 332281.47 | 2533.27 | 304887 | 289135.5 | 8389.93 |
| | | 2op | 342556 | 340859.87 | 988.71 | 341159 | 338578.23 | 1413.21 | 336495 | 330890.27 | 3526.07 | 306717 | 292283.77 | 9436.89 |
| | 50 | rnd | 342459 | 341530.37 | 660.65 | 340886 | 338955.73 | 1248.77 | 339481 | 336281.07 | 1574.11 | 323671 | 314920.03 | 6588.43 |
| | | 2op | 342298 | 341423.13 | 620.5 | 341918 | 339482.13 | 1188.63 | 339004 | 336130.8 | 1933.8 | 321672 | 314422.9 | 5711.29 |
| 51 | 20 | rnd | 342453 | 341009.47 | 717.61 | 341728 | 339615.03 | 1105.37 | 340011 | 337794.67 | 1732.97 | 331992 | 327461.97 | 3884.77 |
| | | 2op | 342123 | 341062.63 | 643.94 | 341161 | 339774 | 1002.25 | 340792 | 337915.37 | 1823.36 | 333555 | 328014.17 | 3905.7 |
| | 50 | rnd | 342584 | 341674.07 | 603.14 | 342034 | 340628.1 | 681.67 | 341197 | 339330.53 | 1221.39 | 337807 | 332616.97 | 3652.6 |
| | | 2op | 342502 | 341842 | 504.22 | 342082 | 340741.57 | 862.54 | 340672 | 339182.4 | 866.45 | 337112 | 333562.13 | 2345.46 |

Table A.1659: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 331710 | 328230.53 | 1965.96 | 331710 | 328231.53 | 2015.63 | 292936 | 276526.87 | 15122.56 | 164703 | 154965.47 | 5160.97 |
| | | 2op | 332181 | 328439.9 | 1920.81 | 332181 | 328354.77 | 1942.56 | 299015 | 280357.17 | 20525.63 | 162864 | 154786.2 | 4865.99 |
| | 50 | rnd | 330560 | 327631.1 | 1528.32 | 330560 | 327566.5 | 1515.52 | 307552 | 278428.7 | 18281.03 | 172030 | 157684.27 | 6002.23 |
| | | 2op | 331234 | 327974.93 | 1825.19 | 331234 | 327951.6 | 1799.76 | 304890 | 273937.47 | 25710.92 | 164622 | 156103.57 | 4811.2 |
| 51 | 20 | rnd | 334611 | 332129.43 | 1411.1 | 334611 | 332129.43 | 1411.1 | 327753 | 323951.37 | 2184.52 | 228550 | 208002.13 | 10670.92 |
| | | 2op | 333949 | 331651.47 | 1390.66 | 333949 | 331651.47 | 1390.66 | 327722 | 323280.43 | 2720.64 | 225314 | 207888.7 | 11326.06 |
| | 50 | rnd | 332556 | 330253.23 | 1607.66 | 332556 | 330253.23 | 1607.66 | 329002 | 326860.13 | 1393.36 | 263243 | 242063.1 | 11754.04 |
| | | 2op | 333634 | 330158.4 | 1886.94 | 333634 | 330158.4 | 1886.94 | 330160 | 326399.23 | 1700.21 | 260935 | 241752.33 | 9840.94 |

Table A.1660: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342167 | 341237.27 | 701.96 | 341639 | 340387.37 | 776.45 | 336865 | 333376.23 | 2029.16 | 297592 | 284955.7 | 9178.54 |
| | | 2op | 342401 | 340986.93 | 691.42 | 341884 | 340329.03 | 882.15 | 336707 | 333244.9 | 2472.09 | 297919 | 285163.8 | 7124.27 |
| | 50 | rnd | 342570 | 342018.63 | 366.02 | 342299 | 341222.2 | 588.13 | 339576 | 335039.7 | 2586.62 | 319397 | 310171.33 | 7504.93 |
| | | 2op | 342708 | 341811.93 | 412.5 | 342109 | 341098.9 | 536.19 | 338466 | 335853.23 | 2500.15 | 321169 | 309684.93 | 5376.02 |
| 51 | 20 | rnd | 342440 | 341545.43 | 625.86 | 342070 | 341184.17 | 598.32 | 340535 | 339107.7 | 1423.39 | 321883 | 299731.77 | 8468.96 |
| | | 2op | 342566 | 341386.9 | 654.83 | 342332 | 341181.73 | 719.18 | 341092 | 339289.13 | 1096.15 | 323582 | 301696.47 | 9908.06 |
| | 50 | rnd | 342379 | 341929.63 | 303.71 | 342494 | 341697.97 | 465.11 | 341418 | 340126.83 | 743.13 | 334583 | 312811.77 | 10897.52 |
| | | 2op | 342555 | 342130.53 | 380.42 | 342412 | 341679.63 | 387.07 | 341285 | 340090.43 | 769.88 | 333476 | 315581.47 | 12285.82 |

Table A.1661: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 214712 | 211470.23 | 1926.58 | 211728 | 200530.13 | 4071.26 | 166866 | 154881.57 | 5741.27 | 154147 | 148324.67 | 3545.4 |
| | | 2op | 217833 | 211488.03 | 2538.02 | 208034 | 200536.47 | 4794.68 | 165323 | 155090.83 | 5003.23 | 158716 | 149148.93 | 3794.25 |
| | 50 | rnd | 215848 | 211085.77 | 2461.36 | 211289 | 205581.6 | 3332.31 | 181535 | 170088.53 | 5658.89 | 151669 | 147319.8 | 2879.14 |
| | | 2op | 219307 | 211107.2 | 2849.25 | 211372 | 206264.8 | 2748.75 | 179985 | 169525.3 | 5843.22 | 152280 | 147228.87 | 3172.76 |
| 51 | 20 | rnd | 220503 | 216958.43 | 2269.66 | 219446 | 214809.9 | 2275.41 | 202751 | 193180.5 | 6450.82 | 173148 | 166528.13 | 4019.45 |
| | | 2op | 222679 | 217290.8 | 2368.43 | 219332 | 214946.67 | 2237.55 | 203057 | 193912.6 | 5162.52 | 177254 | 167656.53 | 3980.78 |
| | 50 | rnd | 218714 | 215591.67 | 2016.5 | 219749 | 215020.43 | 2184.26 | 211036 | 205063 | 4048.01 | 174602 | 163730 | 4365.05 |
| | | 2op | 219619 | 215520.37 | 2381.45 | 220892 | 215358.63 | 1947.69 | 209853 | 204032.5 | 3589.12 | 177802 | 166513.8 | 4896.38 |

Table A.1662: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226296 | 225079.8 | 715.22 | 226126 | 224455.97 | 968.8 | 225017 | 221394.6 | 1829.28 | 212289 | 203822.13 | 4980.35 |
| | | 2op | 226441 | 225530.47 | 582.85 | 226323 | 225107.57 | 1007.62 | 224480 | 222538.9 | 1385.35 | 211507 | 205115.6 | 4008.85 |
| | 50 | rnd | 226932 | 225128.37 | 836.61 | 226209 | 224792.17 | 790.39 | 225815 | 223596.87 | 1138.27 | 220397 | 215413.83 | 3835.14 |
| | | 2op | 226539 | 225762.13 | 443.17 | 226731 | 225389.37 | 694.35 | 225988 | 224255.73 | 821.87 | 221518 | 215422.67 | 3308.6 |
| 51 | 20 | rnd | 226744 | 225058.1 | 853.71 | 226499 | 225326.63 | 631.94 | 226011 | 224489.33 | 832.51 | 222833 | 219285.97 | 2485.53 |
| | | 2op | 226356 | 225806.23 | 497.28 | 226922 | 225729.7 | 636.05 | 226482 | 224917.57 | 790.32 | 224078 | 220773.8 | 2607.39 |
| | 50 | rnd | 226584 | 225108.1 | 894.08 | 227555 | 225740.4 | 807.61 | 226436 | 224774.77 | 957.44 | 224548 | 222576.77 | 1297.31 |
| | | 2op | 226713 | 225743.4 | 533.6 | 226490 | 226068.1 | 431.31 | 226533 | 225502.4 | 519.09 | 224871 | 222867.1 | 1438.41 |

Table A.1663: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 215778 | 211124.1 | 2848.94 | 208018 | 200401.37 | 3927.47 | 162888 | 152996.3 | 4337.26 | 152313 | 146440.9 | 3259.75 |
| | | 2op | 214361 | 210602.5 | 1915.21 | 208311 | 200596.03 | 2990.54 | 164863 | 153921 | 4757.98 | 154537 | 146931.4 | 3324.62 |
| | 50 | rnd | 215109 | 210613.83 | 2267.93 | 210117 | 204716 | 3409.05 | 179541 | 168566.27 | 7293.46 | 153420 | 145734.13 | 2876.24 |
| | | 2op | 213744 | 210556.17 | 1891.24 | 210501 | 205372.9 | 3110.38 | 180364 | 169234.73 | 5581.58 | 154756 | 147033.3 | 3499.26 |
| 51 | 20 | rnd | 220015 | 216657.5 | 1618.88 | 219673 | 215006.6 | 2378.64 | 206924 | 193295.57 | 5097.32 | 173240 | 165947.27 | 3857.14 |
| | | 2op | 220417 | 216293.83 | 1927.64 | 218019 | 214474.47 | 2236.96 | 199583 | 193739.87 | 4037.91 | 170951 | 166150.97 | 3453.96 |
| | 50 | rnd | 222089 | 215488.1 | 2618.44 | 219889 | 215478.43 | 1965.02 | 210151 | 202362.33 | 3691.16 | 170799 | 163447.73 | 3893.2 |
| | | 2op | 220683 | 215739 | 2090.81 | 219116 | 215146.6 | 3125.28 | 211406 | 203806.93 | 3596.5 | 172379 | 163415.6 | 4427.34 |

Table A.1664: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226204 | 224988.77 | 721.79 | 226110 | 224377.9 | 1016 | 224464 | 221642.93 | 1473.81 | 212219 | 204990.27 | 4228.1 |
| | | 2op | 226628 | 225777.67 | 527.12 | 226473 | 225005.5 | 821.35 | 225178 | 222761.67 | 1237.18 | 211186 | 204075.6 | 4063.61 |
| | 50 | rnd | 226699 | 225388.43 | 611.95 | 226609 | 224846.03 | 711.39 | 226415 | 223814.37 | 1177.11 | 218755 | 212300.53 | 3336.66 |
| | | 2op | 226624 | 225750.07 | 616.9 | 226365 | 225458.27 | 573.96 | 225294 | 223598.13 | 1270.76 | 219218 | 214900.8 | 2614.1 |
| 51 | 20 | rnd | 226863 | 225160.27 | 852.16 | 226451 | 225164.6 | 839.01 | 226064 | 224351.37 | 738.14 | 224134 | 219989.07 | 1923.59 |
| | | 2op | 226660 | 225719.3 | 567.45 | 226884 | 225821.13 | 549.25 | 226510 | 224898.27 | 820.64 | 223540 | 219907.33 | 2254.12 |
| | 50 | rnd | 226482 | 225062.33 | 942.93 | 226524 | 225523.6 | 674.11 | 226504 | 224814 | 950.37 | 223784 | 221722.3 | 1300.83 |
| | | 2op | 226374 | 225851.53 | 309.67 | 226712 | 226176.03 | 296.2 | 226547 | 225354.07 | 585.26 | 224598 | 222434.33 | 1504.42 |

Table A.1665: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 225165 | 220709.03 | 1813.01 | 223638 | 219852.07 | 1896.56 | 175161 | 164785.23 | 6502.22 | 153546 | 144947.03 | 3295.51 |
| | | 2op | 225404 | 221267.13 | 2036.96 | 223751 | 220399.8 | 2033.94 | 177171 | 164419.4 | 7619.45 | 154687 | 147373.1 | 2862.03 |
| | 50 | rnd | 222494 | 218192.63 | 2071.83 | 222396 | 219100.47 | 1761.89 | 185214 | 170950.2 | 6392.43 | 150325 | 145545.13 | 3299.49 |
| | | 2op | 223399 | 219307.33 | 2299.31 | 223396 | 220115.93 | 1785.65 | 182979 | 173972.67 | 6206.09 | 154091 | 146741.9 | 2879.96 |
| 51 | 20 | rnd | 226192 | 224971.6 | 890.21 | 226192 | 224954.17 | 964.6 | 216699 | 205090.97 | 9000.31 | 174303 | 165962.03 | 3441.06 |
| | | 2op | 226654 | 225595.17 | 717.74 | 226654 | 225580.13 | 719.27 | 219513 | 207382.63 | 6872.98 | 172620 | 166388.8 | 3576.8 |
| | 50 | rnd | 227024 | 224749.8 | 890.91 | 226451 | 224710.2 | 886.94 | 221363 | 214173.67 | 5337.33 | 166685 | 160819.37 | 3534.24 |
| | | 2op | 226773 | 225083.9 | 964.05 | 226773 | 225062.9 | 960.65 | 218589 | 213642.83 | 3878.54 | 171607 | 163067.13 | 4139.21 |

Table A.1666: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226670 | 225205.93 | 851.16 | 226561 | 225064.8 | 1053.1 | 223959 | 222019.53 | 1286.85 | 209555 | 199635.13 | 3884.96 |
| | | 2op | 226752 | 225888.17 | 446.34 | 226691 | 225808.37 | 456.81 | 224029 | 222759.6 | 871.56 | 207742 | 201156.2 | 3910.53 |
| | 50 | rnd | 226916 | 225392.87 | 732.09 | 227024 | 225237.37 | 936.51 | 225353 | 223459.27 | 1289.5 | 214329 | 210177.07 | 3465.3 |
| | | 2op | 226272 | 225905 | 316 | 226849 | 225959.73 | 349.02 | 225337 | 224250.2 | 667.74 | 217873 | 212558.37 | 2559.1 |
| 51 | 20 | rnd | 226836 | 225260.3 | 927.34 | 226573 | 225466.37 | 667.93 | 226158 | 224822.63 | 835.93 | 220846 | 216060.03 | 1913.07 |
| | | 2op | 226887 | 226099.97 | 328.45 | 226887 | 226110.73 | 342.62 | 226487 | 225399.53 | 558.82 | 223846 | 216701.9 | 2222.19 |
| | 50 | rnd | 227383 | 225419.07 | 645.27 | 226449 | 225131.4 | 782.06 | 226015 | 224467.73 | 880.3 | 223092 | 219125.13 | 2255.47 |
| | | 2op | 226430 | 226017.17 | 244.35 | 226448 | 226005.6 | 251.06 | 226523 | 225324.27 | 621.64 | 223639 | 219803.2 | 1948.05 |

Table A.1667: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 431429 | 426803.23 | 2516.26 | 404868 | 390429.93 | 9986.65 | 336522 | 330596.23 | 3715.86 | 343851 | 330899.33 | 4637.24 |
| | | 2op | 433194 | 427300.43 | 3045.04 | 401333 | 388022.13 | 8513.02 | 342578 | 336211.6 | 3194.46 | 342519 | 334878.1 | 4183.67 |
| | 50 | rnd | 435109 | 428529.97 | 3060.12 | 418456 | 408841.6 | 5334.85 | 346110 | 336743.27 | 5443.71 | 345067 | 329337.83 | 4795.05 |
| | | 2op | 434140 | 427669.67 | 3033.91 | 419376 | 410891.73 | 5169.71 | 346958 | 337203.1 | 5101.08 | 344117 | 333180.87 | 4210.85 |
| 51 | 20 | rnd | 436363 | 431074.6 | 2551.63 | 431802 | 425461.2 | 3640.83 | 390027 | 369170.3 | 9835.6 | 363952 | 351035.73 | 4840.55 |
| | | 2op | 436258 | 431820.03 | 2391.44 | 432271 | 426149.17 | 3272.62 | 382508 | 369924.37 | 7884.46 | 363366 | 354951.23 | 3985.97 |
| | 50 | rnd | 438444 | 430271.3 | 2482.24 | 435302 | 428352.7 | 2770.52 | 408913 | 395445.07 | 7200.24 | 359452 | 346502.73 | 4003.62 |
| | | 2op | 436875 | 431216.4 | 2461.8 | 433056 | 428289.57 | 2490.85 | 410367 | 396664.33 | 6868.9 | 354512 | 348197.6 | 3878.07 |

Table A.1668: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441014 | 438709.1 | 1345.97 | 441436 | 438150.1 | 1639.82 | 438090 | 434995.63 | 1532.09 | 422400 | 413272.37 | 4914.59 |
| | | 2op | 438659 | 437918.8 | 478.44 | 438303 | 437543.37 | 511.32 | 437153 | 434959.13 | 1350.94 | 424157 | 416355.43 | 4972.53 |
| | 50 | rnd | 441085 | 438385.83 | 1269.67 | 440537 | 438383.73 | 1192.35 | 439854 | 437394.17 | 1394.82 | 432552 | 426859.93 | 3191.36 |
| | | 2op | 438852 | 437926.43 | 408.47 | 438931 | 437520.57 | 558.57 | 437905 | 436651.97 | 750.74 | 432091 | 428093.43 | 2509.75 |
| 51 | 20 | rnd | 440692 | 438319.87 | 1186.39 | 440499 | 437915.83 | 1244.84 | 440292 | 437819.57 | 1371.67 | 436460 | 432566.7 | 2111.53 |
| | | 2op | 438919 | 437898.53 | 465.34 | 439388 | 437697.53 | 686.93 | 438291 | 437124.83 | 616.02 | 434890 | 432426.9 | 1453.12 |
| | 50 | rnd | 440822 | 438381.9 | 1276.54 | 441543 | 438701.13 | 1305.29 | 440231 | 438379.17 | 1133.36 | 438374 | 435013.9 | 2068.28 |
| | | 2op | 438528 | 437994.1 | 281.81 | 438645 | 437936.17 | 327.4 | 438394 | 437484.93 | 484.54 | 436703 | 434707.23 | 1500.12 |

Table A.1669: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 430844 | 426179.3 | 2155.21 | 400314 | 387415 | 9213.25 | 338752 | 331313.77 | 4497.29 | 339504 | 330320.5 | 4924.71 |
| | | 2op | 430427 | 426388.67 | 3046.97 | 407779 | 388526.2 | 9950.04 | 339873 | 333756.37 | 3448.64 | 339510 | 332304.87 | 4210.6 |
| | 50 | rnd | 433365 | 426725.93 | 2687.13 | 416304 | 407566.57 | 5805.1 | 351510 | 335338.3 | 6642.55 | 339114 | 329155.8 | 4199.76 |
| | | 2op | 435457 | 428043.9 | 2720.37 | 420455 | 408331.7 | 7439.59 | 349977 | 336428.03 | 5244.99 | 338367 | 331631.53 | 3756.99 |
| 51 | 20 | rnd | 437446 | 432124.3 | 2729.65 | 434262 | 425306.6 | 3936.5 | 386483 | 370534.73 | 9173.68 | 361371 | 351461.17 | 5473.93 |
| | | 2op | 435214 | 430987.57 | 2100.73 | 432056 | 425935.43 | 3179.83 | 388904 | 371635.5 | 8778.67 | 360487 | 354512.77 | 2985.92 |
| | 50 | rnd | 434417 | 430661.8 | 2033.05 | 431520 | 427073.7 | 2530.94 | 406284 | 392923.87 | 8373.24 | 354868 | 345343.8 | 5191.67 |
| | | 2op | 435283 | 431060 | 2541.18 | 433942 | 428857.97 | 2100.86 | 409598 | 394196.53 | 9151.04 | 357455 | 350057.43 | 3928.8 |

Table A.1670: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441331 | 438796.7 | 1042.68 | 440780 | 437996.03 | 1471.42 | 438173 | 434436.27 | 1750.68 | 424759 | 413943.87 | 5761.54 |
| | | 2op | 438836 | 438063.43 | 415.66 | 439047 | 437643.73 | 736.04 | 436729 | 434713.13 | 1254.83 | 424511 | 413909.3 | 4121.88 |
| | 50 | rnd | 441252 | 438682.27 | 1253.83 | 441052 | 438467.43 | 1301.7 | 439057 | 436931.47 | 1369.92 | 432277 | 423949.43 | 4609.35 |
| | | 2op | 439074 | 438111.7 | 393.96 | 438860 | 437667.1 | 451.63 | 437733 | 436357.27 | 943.03 | 432668 | 426309.5 | 3097.17 |
| 51 | 20 | rnd | 442088 | 438571.6 | 1329.39 | 440492 | 438323.93 | 1277.32 | 439636 | 437484.57 | 1163.95 | 436097 | 432248.83 | 2276.28 |
| | | 2op | 439106 | 437928.47 | 397.47 | 439467 | 437848.67 | 540.8 | 438769 | 437490.53 | 669.51 | 436177 | 431825 | 2253.84 |
| | 50 | rnd | 441849 | 438827.97 | 1162.99 | 441084 | 438430.07 | 1245.87 | 440272 | 438219.47 | 1162.38 | 437964 | 434344.77 | 1841.87 |
| | | 2op | 438758 | 437991.83 | 313.68 | 438676 | 437842.9 | 414.9 | 439356 | 437640.47 | 698.17 | 436913 | 434857.73 | 1186.72 |

Table A.1671: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 437707 | 434721.7 | 1748.96 | 437090 | 433630.27 | 2095.54 | 355499 | 338626.1 | 6123.8 | 342098 | 331414.93 | 5146.53 |
| | | 2op | 437302 | 434995.17 | 1826.16 | 436187 | 434124.97 | 1340.68 | 352029 | 341432.7 | 4845.7 | 339379 | 332591.23 | 3696.01 |
| | 50 | rnd | 437285 | 434352.97 | 1653.22 | 436837 | 433900.03 | 1935.98 | 355913 | 340403.13 | 8489.4 | 333643 | 327366.8 | 3470.27 |
| | | 2op | 439596 | 435099.2 | 1828.13 | 436979 | 434413.13 | 1493.96 | 361607 | 342583.53 | 7913.32 | 338501 | 331289.7 | 4005.4 |
| 51 | 20 | rnd | 440519 | 438443.33 | 1152.44 | 440519 | 438363.2 | 1191.94 | 415508 | 394706.87 | 12016.61 | 357709 | 350409 | 4212.49 |
| | | 2op | 438748 | 437502.67 | 766.66 | 438733 | 437566.47 | 830.09 | 414034 | 394209.3 | 11886.74 | 360857 | 353334.03 | 4518.95 |
| | 50 | rnd | 440181 | 437977.93 | 1521.47 | 440176 | 437940.03 | 1528.25 | 423566 | 411330.23 | 9412.18 | 357630 | 345763.2 | 4816.27 |
| | | 2op | 439855 | 437782.6 | 1072.77 | 439808 | 437596.77 | 970.47 | 423411 | 409859.73 | 8838.44 | 358770 | 348967.77 | 4700.82 |

Table A.1672: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440451 | 438420.27 | 1312.36 | 440302 | 438651.87 | 965.17 | 438299 | 434938.7 | 1443.19 | 415475 | 407564.87 | 4190.78 |
| | | 2op | 439071 | 437993.07 | 412.32 | 439131 | 437870 | 550.71 | 437092 | 434587.37 | 1714.31 | 416551 | 409613.23 | 4315.62 |
| | 50 | rnd | 441123 | 438904.37 | 1233.96 | 440977 | 438531.77 | 1624.85 | 439228 | 436579.37 | 1658.26 | 429729 | 423661.6 | 3185.39 |
| | | 2op | 438834 | 438062.73 | 420.41 | 438492 | 437974.4 | 277.19 | 437925 | 436391.9 | 756.42 | 428883 | 422755.2 | 3195.98 |
| 51 | 20 | rnd | 441005 | 438838.77 | 1174.05 | 440943 | 438896.27 | 1192.68 | 440550 | 438101.77 | 1358.41 | 431048 | 421136.8 | 4334.01 |
| | | 2op | 439298 | 438007.67 | 353.54 | 438520 | 437909.17 | 266.94 | 438488 | 437348.9 | 486.69 | 431823 | 423175.97 | 4832.71 |
| | 50 | rnd | 440755 | 438859.37 | 1139.77 | 441177 | 438754.23 | 1339.36 | 441121 | 438223.43 | 1333.16 | 436595 | 428407.2 | 5403.16 |
| | | 2op | 438757 | 438046.3 | 284.15 | 439018 | 437987.3 | 346.75 | 439140 | 437382.27 | 521.98 | 435254 | 430926.47 | 4096.93 |

Table A.1673: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 114594 | 112048.47 | 1137.22 | 111386 | 109082.63 | 1491.42 | 96956 | 91612.93 | 2230.84 | 92983 | 89488.53 | 1406.45 |
| | | 2op | 115494 | 113257.2 | 1043.3 | 112472 | 109841.77 | 1814.83 | 96114 | 92478.33 | 2165.06 | 93054 | 90017.73 | 1818.92 |
| | 50 | rnd | 114702 | 112337.53 | 882.25 | 113401 | 111430.23 | 1021.86 | 102644 | 97683.37 | 3014.96 | 90860 | 88308.13 | 1718.82 |
| | | 2op | 115345 | 112669.5 | 1145.87 | 114273 | 111550.9 | 1326.66 | 102781 | 98455.3 | 2072.74 | 91899 | 89407 | 1424.91 |
| 51 | 20 | rnd | 115192 | 113837.97 | 649.12 | 115291 | 113509.87 | 849.23 | 110230 | 106234.8 | 1923.37 | 100058 | 96612.97 | 1948.43 |
| | | 2op | 115963 | 114482.5 | 710.2 | 115353 | 113998.67 | 612.16 | 111752 | 107579.33 | 1987.7 | 100500 | 98062.2 | 1461.41 |
| | 50 | rnd | 114975 | 113536.63 | 871.31 | 115555 | 113606.6 | 1072.35 | 113115 | 110492.43 | 1425.06 | 98135 | 95031.7 | 1578.93 |
| | | 2op | 115223 | 114305.9 | 611.38 | 115887 | 114175.1 | 851.65 | 114062 | 110859.27 | 1704.71 | 99503 | 96379.23 | 1387.41 |

Table A.1674: *j*02459_7: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115917 | 114914.27 | 478.1 | 115549 | 114677.17 | 473.27 | 116066 | 114202.93 | 605.84 | 111310 | 109303.5 | 1130.29 |
| | | 2op | 116365 | 115556.13 | 227.15 | 115837 | 115364.7 | 273.94 | 115632 | 114816.67 | 456.29 | 113081 | 110610.87 | 1356.73 |
| | 50 | rnd | 115603 | 114850.8 | 431.59 | 115839 | 114798.8 | 426.6 | 115611 | 114675.67 | 512.85 | 113978 | 112562.03 | 1024.8 |
| | | 2op | 115856 | 115471.67 | 195.45 | 115966 | 115528.33 | 233.79 | 115724 | 115146 | 273.53 | 114268 | 113230.7 | 575.77 |
| 51 | 20 | rnd | 116000 | 114779.17 | 659.36 | 115898 | 115072.23 | 491.29 | 115516 | 114563.47 | 528.96 | 115064 | 113598.1 | 1085.57 |
| | | 2op | 115713 | 115437.5 | 173.6 | 116478 | 115633.77 | 262.9 | 115666 | 115247.2 | 215.36 | 114965 | 114191.3 | 559.52 |
| | 50 | rnd | 115724 | 114903.17 | 436.63 | 115787 | 115074.9 | 495.86 | 115773 | 114845.07 | 495.86 | 115145 | 114040.4 | 640.24 |
| | | 2op | 115840 | 115512.1 | 162.73 | 116451 | 115800.37 | 206.29 | 115744 | 115371.9 | 222.86 | 115521 | 114682.17 | 498.47 |

Table A.1675: *j*02459_7: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 114160 | 112683.37 | 940.58 | 112203 | 108923.3 | 1358.53 | 96421 | 91491.47 | 2057.01 | 93595 | 88936.83 | 1600.28 |
| | | 2op | 114775 | 112976.47 | 1074.59 | 111695 | 109585.73 | 1556.1 | 95202 | 91828.83 | 2007.87 | 92724 | 89657.4 | 1419.4 |
| | 50 | rnd | 114482 | 112523.77 | 1076.36 | 112835 | 110134.97 | 1604.02 | 101498 | 96202.1 | 3264.58 | 90488 | 87858.57 | 1770.03 |
| | | 2op | 115145 | 112917.17 | 1130.69 | 112747 | 111071.9 | 1177.32 | 100924 | 97031.53 | 2355.83 | 91196 | 88809.63 | 1336.65 |
| 51 | 20 | rnd | 115112 | 113752.1 | 1015.91 | 115103 | 113231.7 | 923.58 | 110121 | 106351 | 2678.97 | 99769 | 96070.37 | 1688.56 |
| | | 2op | 115685 | 114349.13 | 703.81 | 115438 | 113942.9 | 874.34 | 111890 | 107209.57 | 1999.16 | 100099 | 96849.4 | 1400.82 |
| | 50 | rnd | 114970 | 113561.5 | 814.74 | 115185 | 113754.73 | 932.91 | 111835 | 110104.77 | 1135.07 | 97853 | 95085.23 | 1250.93 |
| | | 2op | 115754 | 114166.23 | 902.73 | 115645 | 113973.63 | 985.11 | 113668 | 111379.63 | 1516.72 | 98707 | 96095.13 | 1815.31 |

Table A.1676: *j*02459_7: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115811 | 114915.53 | 515.9 | 115836 | 114903.7 | 543.61 | 115007 | 114196.33 | 491.14 | 111075 | 109167.2 | 1461.86 |
| | | 2op | 115785 | 115515.9 | 164 | 115616 | 115292.63 | 197.33 | 115558 | 114639.47 | 446.27 | 113050 | 109989.7 | 1547.78 |
| | 50 | rnd | 115753 | 114846.67 | 461.52 | 115673 | 114922.57 | 512.21 | 115558 | 114233.7 | 574.53 | 113270 | 111978.5 | 1144.19 |
| | | 2op | 116072 | 115503.53 | 220.28 | 116023 | 115508.83 | 218.75 | 115692 | 114985.17 | 297.36 | 114534 | 112710.07 | 1020.4 |
| 51 | 20 | rnd | 115955 | 114928.97 | 599.5 | 115910 | 115024.13 | 514.93 | 115649 | 114680.83 | 514.46 | 114904 | 113635 | 782.72 |
| | | 2op | 115933 | 115467.7 | 225.67 | 116152 | 115753.77 | 243.91 | 115717 | 115247.17 | 256.06 | 115412 | 114220.8 | 533.99 |
| | 50 | rnd | 115968 | 114971.63 | 526.88 | 115737 | 115016.27 | 410.19 | 116040 | 114832.03 | 547.72 | 115226 | 114154.1 | 581.95 |
| | | 2op | 116078 | 115466.8 | 211.61 | 116487 | 115793.47 | 202.72 | 115986 | 115327.03 | 251.98 | 115435 | 114725.93 | 390.09 |

Table A.1677: *j02459_7*: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115732 | 114541.9 | 577.51 | 116085 | 114643.8 | 705.72 | 101180 | 95573.2 | 3475.57 | 92446 | 89009.6 | 1713.8 |
| | | 2op | 116018 | 115178.1 | 447.19 | 116011 | 115133.37 | 399.87 | 104896 | 95468.13 | 3211.42 | 93023 | 90265.33 | 1731.41 |
| | 50 | rnd | 115277 | 114261 | 644.63 | 115374 | 114365.9 | 699.22 | 102924 | 97760.83 | 3885.04 | 91473 | 88006.9 | 1551.69 |
| | | 2op | 116016 | 114784 | 581.06 | 115998 | 114738.73 | 512.13 | 104841 | 98002.4 | 3496.05 | 92008 | 89491.1 | 1307.32 |
| 51 | 20 | rnd | 116044 | 115131.8 | 451.13 | 116044 | 115069.97 | 411.4 | 113853 | 111827.43 | 1581.75 | 100564 | 96203.3 | 1787.54 |
| | | 2op | 116134 | 115447.73 | 271.51 | 116134 | 115441.97 | 276.14 | 114590 | 110993.73 | 2439.19 | 99390 | 97502.9 | 1559.2 |
| | 50 | rnd | 116111 | 115193.97 | 370.63 | 116111 | 115294.07 | 456.83 | 115098 | 113055.7 | 1169.43 | 97940 | 94924.53 | 1610.04 |
| | | 2op | 116442 | 115776.17 | 335.59 | 116442 | 115775.77 | 338.84 | 114853 | 113734.13 | 764.66 | 99239 | 95493.33 | 1709.62 |

Table A.1678: *j02459_7*: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115915 | 114969.87 | 351.58 | 116144 | 114950.17 | 548.94 | 114773 | 113879.17 | 551.4 | 110754 | 107555.13 | 1583.68 |
| | | 2op | 116352 | 115517.9 | 238.57 | 115734 | 115450.27 | 157.44 | 115580 | 114664.77 | 405.13 | 111076 | 108777.97 | 1288.81 |
| | 50 | rnd | 115807 | 114912.2 | 427.52 | 116007 | 114703.57 | 595.9 | 115334 | 114377.53 | 521.69 | 113402 | 111138.73 | 1411.88 |
| | | 2op | 115751 | 115510.9 | 186.78 | 115973 | 115498.7 | 197.99 | 115761 | 115117.5 | 266.11 | 113637 | 111778.7 | 841.94 |
| 51 | 20 | rnd | 116096 | 114981.43 | 498.03 | 115909 | 115007.8 | 528.91 | 115421 | 114702.8 | 466.48 | 113922 | 112775.93 | 780.1 |
| | | 2op | 115828 | 115514.67 | 179.66 | 116082 | 115508.13 | 210.09 | 115939 | 115302.03 | 258.04 | 114661 | 113669.2 | 512.74 |
| | 50 | rnd | 115832 | 114861.87 | 624.03 | 115758 | 114986.43 | 584.54 | 115498 | 114618.37 | 514.94 | 114904 | 113821.67 | 617.95 |
| | | 2op | 116091 | 115565.77 | 219.41 | 116190 | 115492.53 | 207.25 | 115711 | 115342.33 | 201.03 | 115072 | 114328.17 | 411.29 |

Table A.1679: *j02459_7*: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38169 | 37265.2 | 499.02 | 38104 | 37070.6 | 499.54 | 35457 | 33219.9 | 1102.11 | 31025 | 29320.63 | 804.13 |
| | | 2op | 38409 | 37533.33 | 517.42 | 38089 | 37192.8 | 559.17 | 36243 | 33814.67 | 1086.29 | 31649 | 29788.4 | 903.08 |
| | 50 | rnd | 38015 | 37313.53 | 426.11 | 37986 | 37137.27 | 497.47 | 37128 | 35245.73 | 946.61 | 30955 | 29482.3 | 776.98 |
| | | 2op | 38246 | 37551.8 | 555.68 | 38146 | 36908.07 | 526.76 | 36850 | 35398.3 | 784.15 | 31532 | 29825.17 | 888.83 |
| 51 | 20 | rnd | 38407 | 38011.97 | 304.42 | 38576 | 38063.27 | 257.66 | 38232 | 37576.27 | 547.37 | 36006 | 34832.67 | 480.49 |
| | | 2op | 38437 | 38085.7 | 249.48 | 38511 | 38207.83 | 173.67 | 38420 | 37600.17 | 435.05 | 35991 | 34946.83 | 618.46 |
| | 50 | rnd | 38532 | 38067.87 | 242.15 | 38466 | 38107.47 | 206.44 | 38242 | 37598.53 | 377.1 | 36181 | 34582.17 | 870.42 |
| | | 2op | 38465 | 38039.23 | 343.51 | 38538 | 38173.67 | 183.71 | 38290 | 37487.5 | 427.65 | 36731 | 34970.07 | 755.33 |

Table A.1680: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38534 | 38262.97 | 164.95 | 38560 | 38300.17 | 177.24 | 38475 | 38144.97 | 252.8 | 37913 | 36590.93 | 704.58 |
| | | 2op | 38414 | 38349.83 | 79.22 | 38437 | 38404.7 | 14.56 | 38530 | 38260.87 | 116.97 | 37787 | 36764.97 | 602.51 |
| | 50 | rnd | 38559 | 38247.87 | 184.82 | 38620 | 38305.8 | 212.47 | 38527 | 38164.37 | 224.26 | 38172 | 37572.77 | 423.12 |
| | | 2op | 38414 | 38390.17 | 45.45 | 38442 | 38425.47 | 14.08 | 38509 | 38357.33 | 56.45 | 38288 | 37758 | 296.28 |
| 51 | 20 | rnd | 38566 | 38282.57 | 190.39 | 38594 | 38368.47 | 158.76 | 38614 | 38296.03 | 164.23 | 38410 | 37832.6 | 356.97 |
| | | 2op | 38434 | 38389.37 | 51.22 | 38442 | 38429.13 | 13.34 | 38515 | 38390.5 | 36.66 | 38397 | 38025.37 | 325.2 |
| | 50 | rnd | 38681 | 38270.77 | 210.66 | 38661 | 38395.23 | 190.19 | 38661 | 38313.47 | 181.43 | 38436 | 38073.73 | 220.86 |
| | | 2op | 38426 | 38387.17 | 50.21 | 38442 | 38436.77 | 9.86 | 38521 | 38407.03 | 26.35 | 38408 | 38226.73 | 131.53 |

Table A.1681: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38307 | 37213.13 | 570.11 | 37796 | 36845.6 | 421.59 | 35691 | 33517.83 | 862.46 | 31112 | 29189.57 | 802.05 |
| | | 2op | 38375 | 37324.47 | 602.72 | 38336 | 37126.27 | 666.62 | 35031 | 33631.93 | 973.87 | 30851 | 29497.63 | 677.8 |
| | 50 | rnd | 38240 | 37426.73 | 512.17 | 38199 | 37044.3 | 550 | 36706 | 35325.43 | 832.04 | 31260 | 29122.97 | 798.77 |
| | | 2op | 38407 | 37546.33 | 496.54 | 38260 | 36939.33 | 712.71 | 37036 | 35325.8 | 880.15 | 30926 | 29358.27 | 857.89 |
| 51 | 20 | rnd | 38469 | 38054.43 | 273.18 | 38521 | 38064.67 | 224.17 | 38252 | 37438.5 | 509.88 | 35395 | 34425.03 | 504.28 |
| | | 2op | 38443 | 38068.97 | 296.06 | 38414 | 38150.3 | 205.42 | 38249 | 37560.47 | 449.49 | 35669 | 34626.6 | 513.64 |
| | 50 | rnd | 38425 | 37942.23 | 360.16 | 38472 | 38009.5 | 322.34 | 38391 | 37571.13 | 449.16 | 36497 | 34724.87 | 880.51 |
| | | 2op | 38436 | 38069.63 | 233.28 | 38432 | 38076.73 | 239.14 | 38405 | 37771.1 | 414.06 | 36482 | 34694.9 | 942.54 |

Table A.1682: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38663 | 38316.23 | 192.58 | 38648 | 38360.43 | 172.11 | 38531 | 37915.1 | 341.39 | 37695 | 36567 | 643.78 |
| | | 2op | 38434 | 38370.77 | 70.42 | 38528 | 38412.03 | 26.99 | 38476 | 38190.43 | 165.49 | 37709 | 36716.47 | 697.77 |
| | 50 | rnd | 38509 | 38210 | 205.07 | 38677 | 38365.1 | 193.28 | 38546 | 38199.97 | 224.61 | 37966 | 37402.4 | 420.26 |
| | | 2op | 38413 | 38380 | 55.17 | 38442 | 38426.57 | 14.62 | 38423 | 38309.67 | 87.71 | 38040 | 37349.27 | 510.66 |
| 51 | 20 | rnd | 38631 | 38287.13 | 221.77 | 38613 | 38345.83 | 188.49 | 38600 | 38275.5 | 151.94 | 38280 | 37851.73 | 319.31 |
| | | 2op | 38441 | 38394.4 | 47.96 | 38442 | 38425.47 | 13.43 | 38427 | 38390.23 | 21.65 | 38437 | 38126.77 | 177.26 |
| | 50 | rnd | 38662 | 38215.13 | 236.21 | 38608 | 38350.83 | 137.73 | 38625 | 38297.7 | 170.78 | 38502 | 38015.8 | 248.8 |
| | | 2op | 38414 | 38383.83 | 55.06 | 38442 | 38433.33 | 11.52 | 38437 | 38408.97 | 14.79 | 38454 | 38214.37 | 178.05 |

Table A.1683: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38640 | 38288.7 | 171.57 | 38502 | 38274.73 | 175.02 | 37141 | 35411 | 1418.9 | 31886 | 28945.6 | 1143.2 |
| | | 2op | 38442 | 38349.03 | 85.2 | 38438 | 38333.57 | 107.33 | 37368 | 35624.73 | 1071.65 | 30643 | 28750.37 | 883.61 |
| | 50 | rnd | 38581 | 38212.97 | 206.93 | 38561 | 38199.27 | 248.83 | 37202 | 35687.6 | 1284.6 | 30695 | 28935.63 | 843.36 |
| | | 2op | 38437 | 38272.87 | 173.72 | 38437 | 38274.9 | 171.24 | 37459 | 36120.33 | 1068.3 | 30308 | 28899.07 | 781.35 |
| 51 | 20 | rnd | 38573 | 38319.93 | 157.78 | 38631 | 38292.1 | 182.96 | 38614 | 37944.9 | 513.98 | 34950 | 33593.7 | 856.05 |
| | | 2op | 38442 | 38421 | 17.17 | 38442 | 38435.9 | 7.59 | 38451 | 38234.9 | 182.38 | 35360 | 33619.93 | 886.77 |
| | 50 | rnd | 38572 | 38329.73 | 175.17 | 38651 | 38310.67 | 197.77 | 38437 | 38043.37 | 330.73 | 34731 | 33300.3 | 827.42 |
| | | 2op | 38442 | 38433.3 | 12.27 | 38442 | 38431.47 | 11.8 | 38454 | 38207.47 | 158.77 | 34763 | 33463.77 | 821.44 |

Table A.1684: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38679 | 38297.53 | 181.21 | 38559 | 38261.67 | 204.6 | 38534 | 37934.4 | 252.86 | 36776 | 35637.1 | 578.53 |
| | | 2op | 38414 | 38405.87 | 6.42 | 38416 | 38398.9 | 21.9 | 38384 | 38160.93 | 187.53 | 36946 | 35728.2 | 731.58 |
| | 50 | rnd | 38695 | 38352.03 | 179.8 | 38604 | 38267.5 | 212.56 | 38469 | 38078.1 | 211.52 | 38127 | 37070.37 | 595.59 |
| | | 2op | 38429 | 38409.8 | 4 | 38422 | 38405.07 | 8.76 | 38426 | 38275.47 | 121.44 | 38002 | 37134.17 | 426.4 |
| 51 | 20 | rnd | 38574 | 38298.17 | 176.22 | 38579 | 38273.83 | 184.78 | 38660 | 38222.13 | 250.41 | 38337 | 37614.1 | 349.88 |
| | | 2op | 38437 | 38413.77 | 10.82 | 38437 | 38411.27 | 9.83 | 38412 | 38367.17 | 42.25 | 38375 | 37876.23 | 225 |
| | 50 | rnd | 38528 | 38289.53 | 188.74 | 38554 | 38342.33 | 161.2 | 38562 | 38170.67 | 240.61 | 38464 | 37847.83 | 288.83 |
| | | 2op | 38437 | 38411.17 | 5.99 | 38430 | 38405.93 | 9.24 | 38427 | 38360.23 | 37.72 | 38404 | 38104.1 | 185.6 |

Table A.1685: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47393 | 46646.03 | 524.15 | 47143 | 45888.73 | 591.67 | 41959 | 39633.9 | 1047.29 | 37480 | 36262.37 | 683.61 |
| | | 2op | 47772 | 46477.7 | 607.49 | 47183 | 45691.77 | 708.23 | 41991 | 39875.67 | 1613.67 | 37931 | 36459.53 | 854.77 |
| | 50 | rnd | 47873 | 46737.13 | 669.97 | 47450 | 46283.17 | 641.32 | 44234 | 42414.87 | 1082.51 | 37794 | 36353.1 | 807.18 |
| | | 2op | 47750 | 46320.67 | 705.28 | 47613 | 45764.7 | 833.67 | 44714 | 42455.1 | 1172.93 | 38289 | 36381.83 | 1029.63 |
| 51 | 20 | rnd | 47766 | 47216 | 389.28 | 47825 | 47135.5 | 500.48 | 47309 | 45616.73 | 885.3 | 42769 | 41415.97 | 727.64 |
| | | 2op | 47830 | 47316.57 | 388.01 | 47830 | 47263.27 | 464.27 | 47498 | 45828.13 | 871.44 | 42659 | 41345.9 | 598.36 |
| | 50 | rnd | 47948 | 47170.33 | 407.95 | 47888 | 47410 | 356.59 | 47525 | 46545.97 | 565.57 | 43880 | 41001.6 | 1008.23 |
| | | 2op | 47814 | 47033.27 | 473.27 | 47741 | 47273.2 | 329.31 | 47693 | 46530.03 | 716.91 | 42623 | 41008.03 | 908.26 |

Table A.1686: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47886 | 47627.43 | 205.51 | 47947 | 47542.73 | 284.05 | 47843 | 47331.5 | 377.03 | 46885 | 45372.9 | 713.62 |
| | | 2op | 47758 | 47491.73 | 158.76 | 47758 | 47738.47 | 14.3 | 47890 | 47233.03 | 348.85 | 46642 | 45228.17 | 951.36 |
| | 50 | rnd | 48052 | 47560.2 | 276.19 | 47976 | 47573.93 | 293.16 | 47802 | 47474.53 | 237.57 | 47570 | 46566.37 | 581.93 |
| | | 2op | 47758 | 47516.27 | 168.89 | 47758 | 47754.43 | 4.35 | 47740 | 47403.17 | 152.73 | 47409 | 46469.33 | 477.63 |
| 51 | 20 | rnd | 47934 | 47517.07 | 303.44 | 47977 | 47662.77 | 205.16 | 47915 | 47544.67 | 314.79 | 47759 | 47065.67 | 412.36 |
| | | 2op | 47758 | 47509.53 | 185.29 | 47758 | 47756.87 | 1.28 | 47758 | 47561.57 | 172.22 | 47501 | 47169.53 | 263.43 |
| | 50 | rnd | 47863 | 47464.67 | 270.3 | 47942 | 47571.23 | 264.72 | 47943 | 47588.97 | 221.86 | 47800 | 47310.2 | 237.16 |
| | | 2op | 47758 | 47463.83 | 123.94 | 47758 | 47756.8 | 1.49 | 47756 | 47711.67 | 57.99 | 47675 | 47211.43 | 213.09 |

Table A.1687: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47550 | 46550.83 | 615.12 | 47118 | 46100.8 | 655.3 | 41597 | 39743.27 | 1317.16 | 38280 | 36383.33 | 1033.65 |
| | | 2op | 47518 | 46441.6 | 642.56 | 47111 | 45845.97 | 719.98 | 41778 | 39709.87 | 1097.11 | 37576 | 36128.37 | 861.67 |
| | 50 | rnd | 47934 | 46454.73 | 754.48 | 47747 | 46376.83 | 599.99 | 44284 | 42015.1 | 1372.59 | 37123 | 35980.3 | 685.55 |
| | | 2op | 47572 | 46485.33 | 574.2 | 47343 | 46020.83 | 819.99 | 43875 | 41733.67 | 1246.34 | 38311 | 35980.5 | 902.82 |
| 51 | 20 | rnd | 47769 | 47201.43 | 386.39 | 47847 | 47116.63 | 477.38 | 47465 | 45913.33 | 999.45 | 42597 | 41282.67 | 587.09 |
| | | 2op | 47758 | 47226.5 | 429.86 | 47755 | 47099.1 | 495.67 | 47160 | 46050.33 | 759.65 | 42971 | 41254.6 | 562.19 |
| | 50 | rnd | 47881 | 47272.4 | 410.73 | 47732 | 47009.3 | 507.18 | 47753 | 46602.67 | 629.23 | 43612 | 41229.37 | 983.21 |
| | | 2op | 47740 | 47219.2 | 364.33 | 47728 | 47219.67 | 377.15 | 47657 | 46783.43 | 590.39 | 42587 | 40691.27 | 722.1 |

Table A.1688: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47923 | 47577.73 | 239.73 | 48029 | 47598.27 | 264.21 | 47770 | 47203.03 | 359.01 | 46820 | 45260.23 | 648.71 |
| | | 2op | 47758 | 47547.7 | 155.28 | 47756 | 47711.47 | 83.75 | 47683 | 47303.57 | 208.06 | 47146 | 45293.2 | 1024.95 |
| | 50 | rnd | 47790 | 47496.1 | 277.46 | 47919 | 47579.17 | 226.56 | 47843 | 47381.37 | 371.35 | 47414 | 46578 | 479.29 |
| | | 2op | 47758 | 47497.07 | 169.47 | 47758 | 47754.23 | 4.86 | 47777 | 47414.3 | 239.82 | 47132 | 46452.93 | 471.46 |
| 51 | 20 | rnd | 48051 | 47597.33 | 267.28 | 47978 | 47604.8 | 246.49 | 47927 | 47598.8 | 219.83 | 47590 | 46973.8 | 575.68 |
| | | 2op | 47758 | 47479.13 | 146.49 | 47758 | 47756.3 | 3.12 | 47822 | 47541.1 | 186.81 | 47696 | 47142.13 | 274.04 |
| | 50 | rnd | 47871 | 47509.6 | 236.59 | 47864 | 47530.73 | 271.78 | 47996 | 47610.3 | 268.07 | 47759 | 47321.67 | 330.89 |
| | | 2op | 47758 | 47524.47 | 167.25 | 47758 | 47757.2 | 1.35 | 47756 | 47722.13 | 35.9 | 47618 | 47303.47 | 167.85 |

Table A.1689: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47567.3 | 242.5 | 47961 | 47521.17 | 287.43 | 44871 | 41313.9 | 2099.09 | 37879 | 36275.43 | 909.02 |
| | | 2op | 47758 | 47539.97 | 266.37 | 47758 | 47509.47 | 274.61 | 44492 | 41820.07 | 1930.09 | 37837 | 36094.33 | 811.25 |
| | 50 | rnd | 48034 | 47603.77 | 318.07 | 48032 | 47477.4 | 326.16 | 45559 | 43175.03 | 1157.1 | 38597 | 36037.57 | 946.59 |
| | | 2op | 47821 | 47540.5 | 207.92 | 47821 | 47541.07 | 234.61 | 44992 | 42879.17 | 1283.06 | 37858 | 36022.27 | 1011.12 |
| 51 | 20 | rnd | 47918 | 47538.53 | 277.91 | 48052 | 47682.33 | 194.31 | 47781 | 47081.5 | 567.69 | 43166 | 40703.93 | 886.03 |
| | | 2op | 47758 | 47731.23 | 53.26 | 47758 | 47749.97 | 10.88 | 47609 | 47079.93 | 447.85 | 41925 | 40767.1 | 750.48 |
| | 50 | rnd | 47879 | 47558.87 | 306.57 | 47978 | 47579.47 | 220.57 | 47958 | 47254.07 | 375.32 | 42316 | 39635.1 | 850.76 |
| | | 2op | 47758 | 47745.97 | 35.19 | 47758 | 47732.53 | 81.54 | 47755 | 47330.4 | 273.19 | 41722 | 39986.63 | 844.35 |

Table A.1690: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48035 | 47547.63 | 311.63 | 47943 | 47537.3 | 257.2 | 47933 | 47370.4 | 297.95 | 45984 | 44565.83 | 779.41 |
| | | 2op | 47758 | 47567.7 | 160.8 | 47758 | 47566.03 | 157.97 | 47617 | 47179.93 | 317.8 | 45428 | 44376.4 | 709.35 |
| | 50 | rnd | 47973 | 47625.97 | 226.58 | 47961 | 47617.77 | 231.6 | 47913 | 47309.17 | 307.62 | 47024 | 46019.2 | 526.56 |
| | | 2op | 47758 | 47676.6 | 133.77 | 47758 | 47696.93 | 114.9 | 47723 | 47398.67 | 164.27 | 47136 | 45883.77 | 652.75 |
| 51 | 20 | rnd | 47936 | 47628.17 | 261.02 | 47872 | 47543 | 259.65 | 47917 | 47563.23 | 275.98 | 47501 | 46802.67 | 467.29 |
| | | 2op | 47758 | 47706.87 | 97.01 | 47758 | 47747.63 | 35.09 | 47752 | 47553.7 | 182.55 | 47467 | 46844.33 | 299.17 |
| | 50 | rnd | 48051 | 47608.87 | 208.55 | 47848 | 47523.03 | 252.49 | 47931 | 47522.2 | 308.61 | 47757 | 47171.7 | 366.2 |
| | | 2op | 47758 | 47670.43 | 126.09 | 47830 | 47739.13 | 63.06 | 47754 | 47453.3 | 162.22 | 47463 | 47062.7 | 287.91 |

Table A.1691: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54382 | 53421.4 | 608.38 | 54240 | 52853.1 | 722.59 | 49446 | 46016 | 1895.11 | 44689 | 42781.13 | 1045.65 |
| | | 2op | 54645 | 53594.37 | 526.55 | 54241 | 52715.77 | 729.96 | 49400 | 46786.6 | 1547.2 | 45078 | 43090.8 | 846.77 |
| | 50 | rnd | 54516 | 53372.63 | 632.69 | 54256 | 53125.53 | 686.96 | 51766 | 49315.9 | 1312.22 | 44371 | 42715.27 | 913.96 |
| | | 2op | 54641 | 53685.97 | 661.26 | 54389 | 53226.57 | 669.21 | 51880 | 49486.7 | 1509.76 | 44875 | 43098.33 | 838.86 |
| 51 | 20 | rnd | 54788 | 53896.03 | 593.19 | 54862 | 53873.57 | 498.12 | 53933 | 52759.93 | 648.55 | 49773 | 48320.87 | 607.4 |
| | | 2op | 54712 | 54337.67 | 265.43 | 54686 | 54234.67 | 253.55 | 54639 | 52915.73 | 913.19 | 49652 | 48351.87 | 610.83 |
| | 50 | rnd | 54901 | 54009.43 | 518.17 | 54765 | 54120 | 434.05 | 54612 | 53286.57 | 774.2 | 50688 | 48321.73 | 1165.02 |
| | | 2op | 54676 | 54284.43 | 341.02 | 54764 | 54259.97 | 257.66 | 54489 | 53657.27 | 481.31 | 50644 | 48259.33 | 1159.66 |

Table A.1692: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54793 | 54253.83 | 275 | 55066 | 54444.33 | 407.23 | 54631 | 54088.4 | 356.94 | 53031 | 51670.23 | 863.01 |
| | | 2op | 54753 | 54724.37 | 28.79 | 54745 | 54702.77 | 34.82 | 54801 | 54369.67 | 267.91 | 53647 | 52280.83 | 849.95 |
| | 50 | rnd | 54895 | 54361.03 | 369.55 | 55001 | 54441.43 | 361.34 | 54826 | 54258.83 | 425.04 | 54351 | 53325.87 | 588.87 |
| | | 2op | 54753 | 54727.5 | 21.3 | 54756 | 54745.6 | 6.18 | 54738 | 54580.6 | 97.71 | 54608 | 53701.37 | 503.62 |
| 51 | 20 | rnd | 55010 | 54376.63 | 353.69 | 55013 | 54535.17 | 297.67 | 54971 | 54300.33 | 376.89 | 54522 | 53762.77 | 517.85 |
| | | 2op | 54754 | 54712.6 | 71.95 | 54770 | 54748.2 | 7.64 | 54780 | 54666.2 | 62.83 | 54595 | 54263.6 | 208.13 |
| | 50 | rnd | 54961 | 54497.07 | 260.07 | 54899 | 54554.23 | 267.08 | 54748 | 54320.77 | 346.05 | 54630 | 54007.83 | 373.37 |
| | | 2op | 54754 | 54736.17 | 20.39 | 54754 | 54751.13 | 4.65 | 54959 | 54721.93 | 65.62 | 54743 | 54460.2 | 159.17 |

Table A.1693: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54204 | 53325.2 | 562.68 | 53550 | 52432.53 | 693.38 | 49543 | 46369.77 | 1181.07 | 43897 | 42513.77 | 881.1 |
| | | 2op | 54491 | 53452.3 | 595.05 | 53816 | 52635.97 | 672.7 | 48070 | 46001.03 | 1317.05 | 45431 | 42829.87 | 953.9 |
| | 50 | rnd | 54520 | 53207.6 | 800.98 | 53751 | 52670.33 | 784.93 | 51277 | 49342.23 | 1148.85 | 43651 | 42407.43 | 798.27 |
| | | 2op | 54709 | 53527.57 | 584.77 | 54460 | 53209.4 | 612.37 | 51582 | 49438.1 | 1218.16 | 44246 | 42910.83 | 685.16 |
| 51 | 20 | rnd | 54998 | 54093.37 | 465.1 | 54569 | 53859.1 | 542.59 | 53995 | 52738.17 | 719.59 | 49175 | 47693.87 | 737.34 |
| | | 2op | 54738 | 54221.27 | 384.29 | 54635 | 54195.3 | 351.16 | 54260 | 52926.2 | 798.12 | 49513 | 48406.07 | 621.3 |
| | 50 | rnd | 54650 | 54068.47 | 324.96 | 54944 | 54136.67 | 481.49 | 54637 | 53443.83 | 483.27 | 50070 | 47723.9 | 1083.61 |
| | | 2op | 54875 | 54207.4 | 417.12 | 54864 | 54172.07 | 437.67 | 54691 | 53482 | 612.4 | 49836 | 48221.87 | 947.41 |

Table A.1694: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54901 | 54348.93 | 340.78 | 54895 | 54497.73 | 272.87 | 54665 | 54036.17 | 418.31 | 53445 | 51824.63 | 1098.42 |
| | | 2op | 54935 | 54711.23 | 96.64 | 54958 | 54726.93 | 76.14 | 54738 | 54433.83 | 158.98 | 53402 | 52354 | 719.21 |
| | 50 | rnd | 54883 | 54349.57 | 379.39 | 55037 | 54534.27 | 327.76 | 54751 | 54070 | 388.54 | 54072 | 52972.57 | 702.37 |
| | | 2op | 54754 | 54729.73 | 25.75 | 54756 | 54744.47 | 9.96 | 54811 | 54551.63 | 179.23 | 54373 | 53665.23 | 525.01 |
| 51 | 20 | rnd | 54855 | 54381.93 | 275.9 | 55017 | 54519.77 | 319.39 | 54879 | 54304.23 | 284.97 | 54587 | 53794.93 | 563.24 |
| | | 2op | 54754 | 54712.87 | 48.91 | 54756 | 54746.57 | 8.08 | 54951 | 54651.53 | 93.78 | 54880 | 54159.13 | 272.29 |
| | 50 | rnd | 54974 | 54434.9 | 334.06 | 54959 | 54581.83 | 261.07 | 54940 | 54438.57 | 298.67 | 54727 | 54046.57 | 375.94 |
| | | 2op | 54754 | 54733.6 | 17.8 | 54771 | 54752.47 | 5.61 | 54947 | 54701.53 | 58.1 | 54751 | 54447.87 | 198.1 |

Table A.1695: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55009 | 54373.13 | 432.26 | 54721 | 54300.4 | 323.27 | 51043 | 48333.17 | 1763.8 | 44831 | 42487.73 | 1074.24 |
| | | 2op | 54895 | 54562.87 | 202.79 | 54895 | 54546.2 | 205.42 | 51999 | 48353.73 | 2109.81 | 45454 | 43435.63 | 1078.81 |
| | 50 | rnd | 55111 | 54369.03 | 375.07 | 54817 | 54181.73 | 378.47 | 52515 | 49809.93 | 1348.49 | 43904 | 42194.2 | 890.53 |
| | | 2op | 54768 | 54533 | 225.37 | 54728 | 54504.83 | 231.67 | 52444 | 49858.83 | 1598.66 | 44775 | 42803.13 | 789.09 |
| 51 | 20 | rnd | 54974 | 54506.2 | 365.18 | 55014 | 54460.13 | 286.91 | 54794 | 54027.6 | 519.22 | 48572 | 47079.17 | 938.85 |
| | | 2op | 54754 | 54724.8 | 27.24 | 54754 | 54729.83 | 25 | 54638 | 54213.53 | 379.59 | 49221 | 47588.93 | 840.64 |
| | 50 | rnd | 55010 | 54662.93 | 237.15 | 54956 | 54476.73 | 390.94 | 54792 | 53968.13 | 549.26 | 48535 | 46466.3 | 971.07 |
| | | 2op | 54754 | 54738.43 | 22.34 | 54769 | 54735.7 | 19.69 | 54642 | 54266.73 | 288.53 | 48379 | 46760.53 | 919.12 |

Table A.1696: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54884 | 54353.97 | 433.4 | 54898 | 54465 | 309.32 | 54608 | 54042.37 | 386.84 | 52610 | 50625.4 | 1179.7 |
| | | 2op | 54754 | 54740.17 | 14.58 | 54943 | 54734.83 | 45.73 | 54675 | 54385.07 | 193.62 | 53091 | 51680.63 | 726.52 |
| | 50 | rnd | 54945 | 54509.03 | 233.33 | 54982 | 54544.67 | 323.26 | 54834 | 54143.53 | 301.6 | 53919 | 52791.4 | 659.18 |
| | | 2op | 54745 | 54742.67 | 7.62 | 54754 | 54735.4 | 17.9 | 54857 | 54564.67 | 105.68 | 54075 | 53209.47 | 622.33 |
| 51 | 20 | rnd | 54811 | 54419.87 | 303.17 | 54923 | 54321.17 | 309.74 | 54788 | 54347.87 | 320.05 | 54419 | 53554 | 534.42 |
| | | 2op | 54756 | 54747.9 | 4.49 | 54756 | 54745.47 | 8.88 | 54866 | 54681.67 | 56.01 | 54316 | 53901.47 | 329.54 |
| | 50 | rnd | 54964 | 54471.57 | 285.52 | 54917 | 54404.53 | 359.15 | 54891 | 54336.5 | 476.77 | 54686 | 53809.23 | 495.3 |
| | | 2op | 54754 | 54746.8 | 3.66 | 54754 | 54738.87 | 17.66 | 54864 | 54653 | 73.57 | 54758 | 54321.13 | 155.44 |

Table A.1697: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11059.17 | 286.41 | 11478 | 11245.23 | 132.38 | 11368 | 10929.73 | 258.04 | 10538 | 10122.97 | 284.84 |
| | | 2op | 11305 | 10997.67 | 150.04 | 11410 | 11276.97 | 70.51 | 11305 | 10914.37 | 215.68 | 10631 | 10139.83 | 225.33 |
| | 50 | rnd | 11478 | 11068.37 | 251.49 | 11478 | 11260 | 123.54 | 11478 | 11219.73 | 168.9 | 10608 | 10185.1 | 273.41 |
| | | 2op | 11305 | 10988.93 | 176.33 | 11373 | 11256.1 | 86.7 | 11308 | 11113.47 | 145.29 | 10924 | 10239.43 | 246.93 |
| 51 | 20 | rnd | 11478 | 11175.9 | 165.75 | 11478 | 11243.27 | 151.02 | 11478 | 11259.83 | 132.74 | 11478 | 11178.9 | 181.79 |
| | | 2op | 11346 | 11047.9 | 84.18 | 11305 | 11134.5 | 59.13 | 11373 | 11234.97 | 82.55 | 11285 | 11060.8 | 72.47 |
| | 50 | rnd | 11413 | 11177.3 | 151.81 | 11478 | 11317.13 | 125.02 | 11478 | 11306.93 | 132.87 | 11478 | 11136.2 | 192.07 |
| | | 2op | 11153 | 11066.77 | 72.63 | 11411 | 11218.73 | 96.86 | 11394 | 11286.07 | 55.57 | 11146 | 10968 | 121.42 |

Table A.1698: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11372 | 11145.3 | 179.89 | 11478 | 11256.67 | 110.01 | 11478 | 11275.67 | 185.8 | 11434 | 11149.87 | 176.24 |
| | | 2op | 11109 | 11033 | 40.17 | 11285 | 11133.53 | 52.77 | 11109 | 11107.47 | 8.4 | 11247 | 11019.57 | 85.97 |
| | 50 | rnd | 11411 | 11152.3 | 146.28 | 11478 | 11215.63 | 147.86 | 11478 | 11220.9 | 172.03 | 11470 | 11243.23 | 140.52 |
| | | 2op | 11109 | 11027.67 | 35.09 | 11285 | 11151.63 | 67.95 | 11285 | 11128.83 | 52.84 | 11109 | 11057.2 | 50.34 |
| 51 | 20 | rnd | 11409 | 11113.3 | 156.94 | 11478 | 11279.77 | 145.24 | 11478 | 11243.37 | 164.42 | 11478 | 11240.2 | 147.56 |
| | | 2op | 11109 | 11020.8 | 28.24 | 11256 | 11113.9 | 26.84 | 11256 | 11131.8 | 52.54 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11090.63 | 179.6 | 11478 | 11275.43 | 147.81 | 11478 | 11201.03 | 158.02 | 11478 | 11276.33 | 134.98 |
| | | 2op | 11109 | 11020.6 | 30.71 | 11109 | 11109 | 0 | 11305 | 11153.13 | 69.54 | 11109 | 11109 | 0 |

Table A.1699: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 10983.47 | 278.07 | 11478 | 11231.9 | 160.98 | 11382 | 10899.13 | 258.31 | 10539 | 9826.27 | 363.09 |
| | | 2op | 11285 | 10985.9 | 183.95 | 11309 | 11261.17 | 58.35 | 11227 | 10797.7 | 222.3 | 10555 | 10013.07 | 296.68 |
| | 50 | rnd | 11478 | 11043.23 | 250.31 | 11478 | 11237.07 | 176.45 | 11413 | 11107.7 | 160.71 | 10738 | 10172.2 | 259.05 |
| | | 2op | 11285 | 11024.4 | 162.18 | 11410 | 11251.9 | 87.97 | 11305 | 11068.1 | 127.49 | 11051 | 10117.53 | 344.34 |
| 51 | 20 | rnd | 11478 | 11173.2 | 155.78 | 11478 | 11203.27 | 135.29 | 11411 | 11249.6 | 89.07 | 11476 | 11153.27 | 192.07 |
| | | 2op | 11109 | 11034.7 | 62.1 | 11305 | 11130.7 | 68.67 | 11373 | 11201.4 | 96.36 | 11285 | 11082.57 | 60.12 |
| | 50 | rnd | 11478 | 11193.5 | 173.47 | 11478 | 11289.63 | 147.93 | 11478 | 11327.13 | 93.72 | 11478 | 11178.1 | 224.55 |
| | | 2op | 11305 | 11035.83 | 101.85 | 11373 | 11239.5 | 89.34 | 11373 | 11286.77 | 44.51 | 11305 | 11004.2 | 116.14 |

Table A.1700: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11168.63 | 164.17 | 11478 | 11265.77 | 101.67 | 11478 | 11216.93 | 163.27 | 11349 | 11107.5 | 153 |
| | | 2op | 11109 | 11017.53 | 25.78 | 11285 | 11140.87 | 60.28 | 11305 | 11111.27 | 43.41 | 11099 | 10983.93 | 72.71 |
| | 50 | rnd | 11321 | 11087.2 | 199.64 | 11478 | 11256.93 | 140.16 | 11413 | 11211.53 | 137.28 | 11478 | 11238.77 | 128.88 |
| | | 2op | 11109 | 11026.93 | 34.72 | 11305 | 11171.13 | 81.54 | 11256 | 11121.93 | 40.27 | 11123 | 11061.83 | 46.26 |
| 51 | 20 | rnd | 11394 | 11123.87 | 192.93 | 11413 | 11246.87 | 134.18 | 11478 | 11306.97 | 119.24 | 11478 | 11257.13 | 122.01 |
| | | 2op | 11101 | 11021.47 | 27.02 | 11109 | 11109 | 0 | 11305 | 11132.17 | 60.42 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11222.9 | 107.09 | 11478 | 11214.17 | 143.17 | 11478 | 11281.6 | 144.31 | 11478 | 11294.5 | 130.46 |
| | | 2op | 11109 | 11022.73 | 33.75 | 11109 | 11109 | 0 | 11256 | 11149.7 | 64.33 | 11109 | 11109 | 0 |

Table A.1701: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11237.8 | 147.52 | 11478 | 11282.87 | 133.65 | 11365 | 10998.77 | 284.71 | 9990 | 8984.53 | 412.12 |
| | | 2op | 11109 | 11078.67 | 44.96 | 11394 | 11281.5 | 71.43 | 11305 | 10908.77 | 220.29 | 9768 | 8939.67 | 320.82 |
| | 50 | rnd | 11478 | 11203.57 | 144.72 | 11478 | 11277.17 | 111.1 | 11478 | 10911.03 | 306.19 | 10118 | 9182.77 | 470.64 |
| | | 2op | 11256 | 11074.53 | 61.04 | 11394 | 11230.3 | 102.8 | 11285 | 10925.13 | 232.65 | 10218 | 9014.13 | 475.75 |
| 51 | 20 | rnd | 11478 | 11234.97 | 137.18 | 11478 | 11296.03 | 133.86 | 11478 | 11235.87 | 129.61 | 11173 | 10766.73 | 248.27 |
| | | 2op | 11109 | 11084.47 | 41.38 | 11305 | 11205.33 | 82.16 | 11305 | 11094.2 | 76.54 | 10827 | 10516.67 | 182.37 |
| | 50 | rnd | 11413 | 11239.83 | 124.89 | 11478 | 11297.57 | 109.51 | 11478 | 11142.27 | 164.56 | 11372 | 10773.77 | 348.03 |
| | | 2op | 11305 | 11110.8 | 44.34 | 11305 | 11202.57 | 80.12 | 11160 | 11018.43 | 93.77 | 11128 | 10584.1 | 344.82 |

Table A.1702: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11170 | 184.61 | 11394 | 11179.93 | 168.21 | 11403 | 11116.4 | 234.1 | 10937 | 10131.33 | 475.38 |
| | | 2op | 11109 | 11044.4 | 42.57 | 11271 | 11104.93 | 42 | 11101 | 10966.37 | 83.47 | 10938 | 10234.9 | 415.19 |
| | 50 | rnd | 11394 | 11204.3 | 126.68 | 11478 | 11219.43 | 163.05 | 11411 | 11217.43 | 112.12 | 11357 | 10815 | 313.6 |
| | | 2op | 11109 | 11061.27 | 45.83 | 11256 | 11117.67 | 35.68 | 11283 | 11036.47 | 97.14 | 11227 | 10783.7 | 219.78 |
| 51 | 20 | rnd | 11411 | 11163.2 | 165.52 | 11478 | 11254.8 | 133.08 | 11478 | 11195.1 | 197.44 | 11338 | 11003.83 | 191.05 |
| | | 2op | 11109 | 11084.2 | 41.22 | 11109 | 11105.8 | 16.78 | 11254 | 11106.43 | 38.67 | 11143 | 10850.3 | 168.48 |
| | 50 | rnd | 11411 | 11189.57 | 157.16 | 11478 | 11236.93 | 154.41 | 11478 | 11265.9 | 98.64 | 11400 | 11118.53 | 177.83 |
| | | 2op | 11109 | 11082.73 | 41.24 | 11109 | 11097.57 | 28.55 | 11109 | 11104.63 | 13.19 | 11295 | 10967.2 | 103.3 |

Table A.1703: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13743.17 | 218.09 | 14161 | 13962.8 | 119.79 | 13962 | 13518.47 | 240.7 | 13315 | 12819.77 | 298.78 |
| | | 2op | 14038 | 13837.87 | 136.03 | 14133 | 14009.97 | 57.55 | 13983 | 13476.83 | 279.97 | 13257 | 12723.17 | 270.36 |
| | 50 | rnd | 14157 | 13740.3 | 272.79 | 14133 | 13913.87 | 138.4 | 14159 | 13736.97 | 173.48 | 13391 | 12802.53 | 276.93 |
| | | 2op | 14038 | 13828.7 | 179.44 | 14157 | 14026.13 | 96.31 | 14093 | 13752.1 | 174.49 | 13305 | 12879.23 | 233.89 |
| 51 | 20 | rnd | 14133 | 13850.57 | 183.37 | 14137 | 13901.97 | 127.19 | 14161 | 13932.23 | 140.08 | 14074 | 13763.2 | 195.17 |
| | | 2op | 14038 | 13855.6 | 84.62 | 14157 | 13998.63 | 46.28 | 14038 | 13989.93 | 29.45 | 13992 | 13823.87 | 102.3 |
| | 50 | rnd | 14071 | 13792.37 | 219 | 14161 | 13964.67 | 135.58 | 14161 | 13967.67 | 134.43 | 13938 | 13664.47 | 165.65 |
| | | 2op | 14018 | 13883.73 | 89.06 | 14157 | 14031.07 | 46.83 | 14157 | 14039.07 | 61.02 | 14038 | 13670.87 | 166.07 |

Table A.1704: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13822.57 | 197.31 | 14157 | 13937.83 | 171.16 | 14157 | 13893.8 | 164.65 | 14053 | 13711.83 | 190.63 |
| | | 2op | 13938 | 13770.97 | 60.78 | 14157 | 13976.53 | 48.9 | 13995 | 13954.53 | 41.53 | 13919 | 13724.57 | 127.18 |
| | 50 | rnd | 14131 | 13852.9 | 171.38 | 14137 | 13933.8 | 136.12 | 14161 | 13971 | 122.13 | 14127 | 13844.03 | 176.19 |
| | | 2op | 13938 | 13791.8 | 64.6 | 14157 | 14006.23 | 57.53 | 14038 | 13970.67 | 25.73 | 13982 | 13760.63 | 94.53 |
| 51 | 20 | rnd | 14161 | 13867.4 | 140.69 | 14161 | 13844.2 | 194.13 | 14161 | 13935.9 | 146.35 | 14159 | 13917.73 | 134.8 |
| | | 2op | 13938 | 13803.1 | 78.63 | 14062 | 13981.37 | 27.76 | 14038 | 13971.1 | 22.21 | 14038 | 13863.57 | 91.22 |
| | 50 | rnd | 14159 | 13865.53 | 169.23 | 14161 | 13906.3 | 150.41 | 14161 | 13986.2 | 134.46 | 14155 | 13886.93 | 148.99 |
| | | 2op | 13827 | 13753.13 | 49.22 | 14038 | 13959.33 | 28.25 | 14157 | 14007.07 | 50.36 | 13993 | 13870.9 | 75.35 |

Table A.1705: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13750.1 | 225.77 | 14137 | 13946.5 | 140.07 | 13915 | 13521.53 | 225.68 | 13004 | 12516 | 319.07 |
| | | 2op | 14018 | 13814.27 | 161.8 | 14157 | 13990.87 | 75.03 | 13879 | 13465.5 | 213.5 | 13462 | 12708.67 | 306.24 |
| | 50 | rnd | 14038 | 13729.37 | 233.53 | 14157 | 13972.83 | 129.62 | 13998 | 13679.07 | 205.3 | 13363 | 12771.87 | 308.56 |
| | | 2op | 13995 | 13842.77 | 132.75 | 14157 | 14052.77 | 67.43 | 13993 | 13727.1 | 149.38 | 13483 | 12794.57 | 321.66 |
| 51 | 20 | rnd | 14137 | 13845.23 | 169.02 | 14137 | 13901.57 | 124.46 | 14161 | 13901.1 | 157.46 | 14069 | 13806.63 | 175.2 |
| | | 2op | 14038 | 13857.3 | 94.17 | 14157 | 14001.87 | 51.06 | 14157 | 14003.7 | 53.55 | 13900 | 13749.13 | 130.06 |
| | 50 | rnd | 14139 | 13879.53 | 171.38 | 14161 | 13986.13 | 108.98 | 14161 | 14008.17 | 123.52 | 14053 | 13617.7 | 218.59 |
| | | 2op | 14038 | 13897.17 | 101.68 | 14133 | 14008.3 | 42.95 | 14157 | 14015.63 | 53.11 | 13893 | 13674.87 | 132.7 |

Table A.1706: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14135 | 13866.77 | 166.27 | 14161 | 13979.03 | 140.05 | 14161 | 13899.07 | 159.57 | 13914 | 13683.27 | 135.24 |
| | | 2op | 13938 | 13774.33 | 67.58 | 14157 | 13981.7 | 53.41 | 13995 | 13943.93 | 54.67 | 13888 | 13643.77 | 148.34 |
| | 50 | rnd | 14133 | 13840.27 | 172.43 | 14161 | 13931.07 | 152.81 | 14157 | 13947.27 | 144.94 | 14051 | 13825.37 | 120.66 |
| | | 2op | 13938 | 13780.67 | 66.37 | 14157 | 13991.97 | 54.45 | 14038 | 13957.4 | 34.57 | 13918 | 13750.6 | 87.82 |
| 51 | 20 | rnd | 14125 | 13831.17 | 194.21 | 14161 | 13916.37 | 175.5 | 14157 | 13913.27 | 159.74 | 14131 | 13879.63 | 161.27 |
| | | 2op | 13932 | 13778.33 | 58.27 | 14157 | 13983 | 42.07 | 14005 | 13964.83 | 29.74 | 13988 | 13843.6 | 78.61 |
| | 50 | rnd | 14101 | 13868.1 | 143.19 | 14161 | 13883.77 | 163.71 | 14161 | 13954.73 | 133.02 | 14155 | 13940.73 | 146.06 |
| | | 2op | 13827 | 13774.87 | 53.23 | 14064 | 13959.8 | 47.54 | 14157 | 13983.33 | 50.94 | 13995 | 13866.37 | 78.2 |

Table A.1707: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13878.23 | 140.38 | 14139 | 13959.73 | 95.12 | 13966 | 13535.77 | 292.36 | 12525 | 11487.4 | 449.64 |
| | | 2op | 14038 | 13926.8 | 73.79 | 14157 | 14019.13 | 42.47 | 13925 | 13553.2 | 305.29 | 12861 | 11700.63 | 473.52 |
| | 50 | rnd | 14161 | 13861.27 | 194.28 | 14139 | 13964.93 | 129.98 | 14039 | 13561.7 | 272.06 | 12639 | 11720.9 | 515.21 |
| | | 2op | 14038 | 13976.77 | 63.49 | 14064 | 13999.23 | 32.25 | 13958 | 13706 | 227.78 | 12838 | 11991.97 | 504.14 |
| 51 | 20 | rnd | 14137 | 13877.7 | 134.96 | 14161 | 13939.97 | 119.02 | 14131 | 13844.23 | 174.65 | 13752 | 13256.93 | 312.91 |
| | | 2op | 14038 | 13934.17 | 71.49 | 14064 | 14013.23 | 26.89 | 14038 | 13872.67 | 116.94 | 13930 | 13302.03 | 240.25 |
| | 50 | rnd | 14137 | 13880.67 | 118.01 | 14133 | 13939.43 | 134.2 | 14161 | 13847.43 | 187.12 | 14084 | 13464.1 | 305.07 |
| | | 2op | 14038 | 13973.77 | 44.61 | 14157 | 14014.47 | 46.58 | 14004 | 13842.03 | 126.87 | 13811 | 13285.63 | 273.35 |

Table A.1708: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14155 | 13902.47 | 166.6 | 14126 | 13904.43 | 174.22 | 14124 | 13802 | 169.19 | 13852 | 13178.9 | 365.89 |
| | | 2op | 13938 | 13826.63 | 65.28 | 14038 | 13936.43 | 74.54 | 13995 | 13715.1 | 131.12 | 13605 | 13000.2 | 440.3 |
| | 50 | rnd | 14137 | 13936.87 | 186.17 | 14159 | 13909.53 | 171.35 | 14127 | 13783.6 | 186.03 | 13901 | 13509.7 | 208.07 |
| | | 2op | 13932 | 13823.77 | 38.79 | 14038 | 13974.3 | 38.83 | 14004 | 13827.4 | 128.79 | 13786 | 13480.2 | 246.27 |
| 51 | 20 | rnd | 14161 | 13918.73 | 168.8 | 14123 | 13888.57 | 138.77 | 14097 | 13850.87 | 190.17 | 14090 | 13732.97 | 163.51 |
| | | 2op | 13938 | 13835.63 | 48.76 | 13995 | 13898.3 | 60.09 | 14118 | 13879.77 | 109.04 | 13935 | 13668.07 | 128.92 |
| | 50 | rnd | 14137 | 13943.67 | 131.83 | 14062 | 13897.1 | 104.09 | 14139 | 13920.33 | 146.26 | 14094 | 13737.9 | 195.96 |
| | | 2op | 13968 | 13843.87 | 40.88 | 14038 | 13910.83 | 60.02 | 14038 | 13927.47 | 88.68 | 13826 | 13660.33 | 84.54 |

Table A.1709: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18082 | 17746.47 | 236.84 | 18251 | 17937.7 | 181.19 | 17795 | 17009.73 | 414.67 | 16674 | 15637.97 | 348.27 |
| | | 2op | 18074 | 17873.33 | 196.52 | 18017 | 17930.33 | 128.41 | 17650 | 16964.53 | 397.24 | 16166 | 15732.73 | 352.63 |
| | 50 | rnd | 18175 | 17778.4 | 274.93 | 18181 | 17960.63 | 191.44 | 18125 | 17412.4 | 340.44 | 16581 | 15751.33 | 433.32 |
| | | 2op | 18017 | 17904.47 | 161.29 | 18142 | 17987.37 | 71.3 | 18076 | 17483.7 | 364.84 | 16689 | 15897.87 | 347.54 |
| 51 | 20 | rnd | 18184 | 17882.43 | 160.35 | 18171 | 17982.77 | 123.51 | 18301 | 17881.43 | 205.76 | 17965 | 17550.83 | 248.93 |
| | | 2op | 18017 | 17975.97 | 100.7 | 18017 | 18015.1 | 9.34 | 18107 | 17977.7 | 40 | 17820 | 17567.77 | 152.91 |
| | 50 | rnd | 18114 | 17843.17 | 185.36 | 18132 | 17934.07 | 146.31 | 18156 | 17934.97 | 133.85 | 17967 | 17403.87 | 325.01 |
| | | 2op | 18017 | 17993.47 | 48.15 | 18017 | 18016.13 | 4.75 | 18017 | 18005.13 | 18.56 | 18002 | 17594.17 | 209.61 |

Table A.1710: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18143 | 17890.73 | 145.52 | 18165 | 17930.1 | 152.73 | 18169 | 17871.3 | 182.31 | 17875 | 17497.57 | 220.97 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18002.6 | 14.65 | 17904 | 17693.97 | 99.72 |
| | 50 | rnd | 18156 | 17876.2 | 127.77 | 18301 | 18025.17 | 143.34 | 18301 | 17879.03 | 228.86 | 18004 | 17720.37 | 189.32 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18004 | 17872.4 | 76.22 |
| 51 | 20 | rnd | 18184 | 17880.5 | 180.57 | 18301 | 17875.9 | 170.64 | 18301 | 17921.9 | 159.94 | 18148 | 17863.1 | 177.83 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17968.63 | 25.75 |
| | 50 | rnd | 18184 | 17916.2 | 181.99 | 18176 | 17868.23 | 174.15 | 18195 | 17952.67 | 158.8 | 18151 | 17900.53 | 164.61 |
| | | 2op | 18017 | 18006.27 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17987.1 | 24.92 |

Table A.1711: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17656.03 | 342.71 | 18171 | 17856.13 | 182.58 | 17608 | 16974.27 | 383.34 | 16169 | 15484.07 | 458.31 |
| | | 2op | 18041 | 17860.37 | 198.43 | 18017 | 17898.5 | 129.02 | 17748 | 17125.83 | 381.86 | 16170 | 15567.03 | 349.59 |
| | 50 | rnd | 18097 | 17749 | 225.69 | 18176 | 17944.1 | 160.33 | 17941 | 17316.6 | 353.77 | 16136 | 15580.9 | 382.04 |
| | | 2op | 18092 | 17911.63 | 199.18 | 18034 | 17985.6 | 48.93 | 17896 | 17362.1 | 345.93 | 16303 | 15649.67 | 411.97 |
| 51 | 20 | rnd | 18275 | 17892.53 | 184.86 | 18131 | 17992 | 121.33 | 18275 | 17952.93 | 170.3 | 17778 | 17485.6 | 198.87 |
| | | 2op | 18142 | 17989.73 | 99.05 | 18017 | 18016.37 | 3.47 | 18046 | 17965.13 | 56.5 | 17872 | 17561.17 | 158.46 |
| | 50 | rnd | 18301 | 17960.47 | 159.22 | 18301 | 17989.8 | 139.98 | 18301 | 17945.3 | 160.1 | 17916 | 17439.77 | 265.63 |
| | | 2op | 18017 | 17984.2 | 63.1 | 18017 | 18016.2 | 3.43 | 18017 | 17999.63 | 22.09 | 17934 | 17427.1 | 280.59 |

Table A.1712: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17870.23 | 179.1 | 18171 | 17955.07 | 171.08 | 18291 | 17888.4 | 166.95 | 17914 | 17478.43 | 286.34 |
| | | 2op | 18017 | 18003.77 | 13.63 | 18017 | 18017 | 0 | 18017 | 17997.03 | 13.61 | 17884 | 17646.5 | 129.79 |
| | 50 | rnd | 18172 | 17849.03 | 190.33 | 18292 | 17970.67 | 144.56 | 18172 | 17955.1 | 154.2 | 18017 | 17747.53 | 175.32 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18017 | 0 | 18017 | 18016.57 | 1.41 | 17989 | 17858.13 | 79.47 |
| 51 | 20 | rnd | 18175 | 17882.77 | 154.38 | 18186 | 17902.33 | 160.16 | 18301 | 17973.67 | 194.01 | 18065 | 17820.63 | 186.87 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18016 | 17967.7 | 33.83 |
| | 50 | rnd | 18142 | 17866.1 | 160.53 | 18301 | 17879.9 | 224.78 | 18165 | 17952.83 | 141.16 | 18282 | 17873.17 | 211.6 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17985.2 | 20.38 |

Table A.1713: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17906.57 | 197.48 | 18181 | 17977.53 | 138.71 | 18013 | 17399.7 | 344.61 | 15807 | 14793.13 | 474.68 |
| | | 2op | 18017 | 18016.4 | 3.29 | 18017 | 18010.63 | 20.65 | 18114 | 17496.53 | 359.04 | 15949 | 14809.47 | 456.97 |
| | 50 | rnd | 18143 | 17890.3 | 136.91 | 18301 | 18007.93 | 129.11 | 18118 | 17453.97 | 423.05 | 15945 | 14715.5 | 636.67 |
| | | 2op | 18017 | 18006.03 | 56.76 | 18017 | 18006.33 | 21.96 | 17994 | 17457.47 | 396.04 | 16018 | 14805.07 | 541.46 |
| 51 | 20 | rnd | 18181 | 17931.77 | 213.77 | 18165 | 17957.23 | 162.7 | 18120 | 17881.17 | 168.18 | 17285 | 16672.43 | 299.52 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17977.43 | 76.84 | 17674 | 16729.37 | 417.54 |
| | 50 | rnd | 18176 | 18028.27 | 98.52 | 18152 | 17952.37 | 122.63 | 18176 | 17940.1 | 138.54 | 17534 | 16850.07 | 474.76 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17949.43 | 150.63 | 17515 | 16908.9 | 310.02 |

Table A.1714: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18156 | 17884.4 | 193.66 | 18141 | 17907.5 | 159.38 | 18282 | 17813.53 | 240.71 | 17780 | 16984.5 | 498 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18008 | 17939.37 | 62.16 | 17786 | 17203.47 | 434.91 |
| | 50 | rnd | 18184 | 17914.6 | 128.72 | 18298 | 17939.03 | 158.41 | 18171 | 17859.47 | 184.06 | 17971 | 17518.33 | 249.39 |
| | | 2op | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 17986.43 | 25.53 | 17894 | 17584.97 | 185.66 |
| 51 | 20 | rnd | 18175 | 17942.77 | 167.6 | 18175 | 17926.4 | 187.94 | 18216 | 17920.7 | 164.4 | 18081 | 17707.67 | 209.57 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18006.5 | 17.43 | 18004 | 17873.27 | 100.37 |
| | 50 | rnd | 18142 | 17909.17 | 161.79 | 18142 | 17900.87 | 154.13 | 18180 | 17878.3 | 202.3 | 18139 | 17791.6 | 182.43 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18010.23 | 9.2 | 18017 | 17891.5 | 143.43 |

Table A.1715: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21184 | 20679.3 | 306.76 | 21121 | 20812.17 | 237.97 | 20733 | 20066.17 | 503.06 | 18941 | 18320.5 | 289.96 |
| | | 2op | 21154 | 20739.77 | 161.72 | 21047 | 20834.7 | 115.45 | 20635 | 19940.77 | 314.89 | 19262 | 18380.7 | 373.69 |
| | 50 | rnd | 21170 | 20703.37 | 299.5 | 21182 | 20934.1 | 152.87 | 21234 | 20259.63 | 443.05 | 19846 | 18566.63 | 584.4 |
| | | 2op | 21027 | 20778.3 | 155.76 | 21193 | 21009.1 | 86.78 | 20915 | 20317.57 | 363.2 | 19201 | 18533.87 | 382.65 |
| 51 | 20 | rnd | 21164 | 20810.97 | 215.6 | 21196 | 20931.77 | 188.02 | 21098 | 20864.43 | 192.78 | 20972 | 20382.07 | 244.13 |
| | | 2op | 21015 | 20805.7 | 106.11 | 21102 | 20920.17 | 100.84 | 21015 | 20757.57 | 124.22 | 20652 | 20302.6 | 187.32 |
| | 50 | rnd | 21245 | 20805.13 | 323.25 | 21196 | 20941.03 | 186.2 | 21206 | 20904.83 | 160.06 | 20849 | 20269.13 | 388.17 |
| | | 2op | 21025 | 20813.17 | 72.85 | 21154 | 20971.43 | 84.15 | 21166 | 20842.1 | 100.68 | 20839 | 20353.07 | 265.51 |

Table A.1716: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21209 | 20886.27 | 178.4 | 21172 | 20899.83 | 205.3 | 21097 | 20821.03 | 178.75 | 21037 | 20528.37 | 239.59 |
| | | 2op | 20829 | 20829 | 0 | 20997 | 20834.6 | 30.67 | 20987 | 20820.33 | 80.19 | 20916 | 20487.13 | 182.55 |
| | 50 | rnd | 21212 | 20874.83 | 199.01 | 21212 | 20897.8 | 198.62 | 21176 | 20887.87 | 221.32 | 21142 | 20653.97 | 205.42 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20836 | 20829.1 | 1.35 | 20954 | 20666.77 | 107.3 |
| 51 | 20 | rnd | 21162 | 20896.7 | 173.99 | 21186 | 20968.93 | 167.93 | 21173 | 20898.13 | 210.17 | 21151 | 20837.83 | 187 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20973 | 20797.6 | 89.02 |
| | 50 | rnd | 21209 | 20915 | 193.04 | 21202 | 20847.2 | 237.11 | 21181 | 20936.8 | 150.26 | 21156 | 20849.77 | 204.17 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 1.1 | 20829 | 20828.8 | 1.1 | 20980 | 20811.5 | 58.27 |

Table A.1717: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20770.23 | 292.98 | 21113 | 20801.77 | 268.05 | 20785 | 19806.23 | 518.95 | 19186 | 18195.6 | 429.26 |
| | | 2op | 21060 | 20776.37 | 186.56 | 21207 | 20808.33 | 138.78 | 21097 | 19883.73 | 548.29 | 18880 | 18160.87 | 453.51 |
| | 50 | rnd | 21235 | 20648.27 | 387.28 | 21173 | 20970.47 | 147.74 | 20822 | 19975.83 | 439.03 | 19325 | 18305.13 | 364.74 |
| | | 2op | 21217 | 20759.73 | 222.79 | 21193 | 20966.67 | 107.13 | 20928 | 20194.3 | 360.92 | 19555 | 18217.1 | 644.11 |
| 51 | 20 | rnd | 21190 | 20826.8 | 228.09 | 21161 | 20930.8 | 149.16 | 21190 | 20778.67 | 259.94 | 20711 | 20315.1 | 261.9 |
| | | 2op | 21052 | 20827.87 | 92.2 | 21068 | 20915.3 | 89.01 | 20977 | 20785.53 | 87.03 | 20757 | 20315.8 | 204.73 |
| | 50 | rnd | 21180 | 20867.07 | 202.58 | 21196 | 20977.3 | 174.01 | 21208 | 20958.27 | 134.19 | 20909 | 20259.1 | 326.86 |
| | | 2op | 21120 | 20801.7 | 160.92 | 21115 | 20990.97 | 78.07 | 21047 | 20850.2 | 89.59 | 20800 | 20220.93 | 303.89 |

Table A.1718: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21209 | 20830.53 | 181.2 | 21212 | 20941.1 | 164.55 | 21177 | 20910.23 | 232.4 | 20934 | 20415.97 | 289.51 |
| | | 2op | 20829 | 20828.8 | 1.1 | 20829 | 20829 | 0 | 20987 | 20831 | 61.35 | 20836 | 20468.33 | 160.3 |
| | 50 | rnd | 21198 | 20898.77 | 176.38 | 21218 | 20952.87 | 150.41 | 21184 | 20831.1 | 209.25 | 20999 | 20623.47 | 188.1 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 1.1 | 20985 | 20835.53 | 30.81 | 20947 | 20662.5 | 127.64 |
| 51 | 20 | rnd | 21162 | 20922.23 | 149.35 | 21190 | 20925.43 | 188.75 | 21188 | 20843.63 | 193.22 | 21138 | 20835.77 | 168.27 |
| | | 2op | 20867 | 20830.27 | 6.94 | 20991 | 20834.4 | 29.58 | 20829 | 20829 | 0 | 20953 | 20792.43 | 69.68 |
| | 50 | rnd | 21182 | 20880.37 | 208.01 | 21165 | 20886.37 | 189.61 | 21161 | 20942.23 | 147.17 | 21119 | 20861.3 | 200.98 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 1.1 | 20829 | 20828.8 | 1.1 | 20980 | 20801.37 | 59.74 |

Table A.1719: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21162 | 20880.8 | 186.17 | 21220 | 20947.43 | 153.8 | 20897 | 20103.23 | 526.59 | 18481 | 17370.8 | 662.38 |
| | | 2op | 21029 | 20825.67 | 57.4 | 21193 | 20896.67 | 104.87 | 20978 | 20372.73 | 337.26 | 18483 | 17464 | 491.9 |
| | 50 | rnd | 21271 | 20946.37 | 167.11 | 21233 | 20987.9 | 146.36 | 20907 | 20332.53 | 384.56 | 18464 | 17270.77 | 581.35 |
| | | 2op | 21019 | 20844.93 | 61.98 | 21193 | 20902.17 | 129.62 | 21021 | 20399.33 | 423.97 | 18660 | 17417.83 | 564.1 |
| 51 | 20 | rnd | 21203 | 20908.67 | 184.8 | 21203 | 20947.63 | 166.58 | 21129 | 20873.8 | 229.6 | 20303 | 19502.1 | 386.28 |
| | | 2op | 20889 | 20831 | 10.95 | 21057 | 20948.17 | 74.25 | 20987 | 20815.57 | 52.28 | 20198 | 19543.77 | 383.65 |
| | 50 | rnd | 21196 | 20926.7 | 163.55 | 21212 | 20949.2 | 160.81 | 21212 | 20838.73 | 243.57 | 20645 | 19831.8 | 408.66 |
| | | 2op | 21193 | 20873.2 | 106.75 | 21210 | 21022.67 | 110.12 | 20987 | 20827.2 | 87.19 | 20338 | 19640.2 | 393.43 |

Table A.1720: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21214 | 20938.83 | 177.52 | 21165 | 20843.83 | 225.67 | 21089 | 20715.1 | 227.99 | 20504 | 19796.43 | 425.89 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.97 | 0.18 | 20973 | 20752.8 | 95.02 | 20365 | 19944.07 | 338.05 |
| | 50 | rnd | 21218 | 20878.97 | 236.8 | 21156 | 20881.6 | 170.85 | 21196 | 20789.33 | 222.24 | 20865 | 20365.33 | 298.2 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.1 | 2.9 | 20979 | 20810.83 | 59.31 | 20792 | 20360.63 | 260.83 |
| 51 | 20 | rnd | 21203 | 20872.33 | 204.7 | 21209 | 20914.97 | 209.5 | 21271 | 20884.53 | 234.65 | 20995 | 20622.8 | 227.2 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20978 | 20828.6 | 44.22 | 20972 | 20626.97 | 163.94 |
| | 50 | rnd | 21203 | 20876.27 | 177.05 | 21182 | 20953.2 | 160 | 21122 | 20806.33 | 204.78 | 21148 | 20714.17 | 240.47 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20987 | 20828.77 | 33.77 | 20924 | 20721 | 102.65 |

Table A.1721: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 589.57 | 3.17 | 596 | 592.47 | 1.7 | 595 | 591.67 | 2.34 | 595 | 580.2 | 5.53 |
| | | 2op | 595 | 590.8 | 3.89 | 596 | 592.83 | 1.68 | 596 | 592.13 | 1.89 | 593 | 578.9 | 5.55 |
| | 50 | rnd | 594 | 589.33 | 3.55 | 596 | 593.77 | 1.45 | 596 | 593.47 | 1.78 | 590 | 583.33 | 3.48 |
| | | 2op | 595 | 591.23 | 2.86 | 595 | 594.1 | 1.27 | 596 | 593.67 | 1.6 | 594 | 584.3 | 3.52 |
| 51 | 20 | rnd | 595 | 590.67 | 2.81 | 596 | 593.83 | 1.21 | 596 | 594.57 | 0.97 | 596 | 592.97 | 1.85 |
| | | 2op | 596 | 592.97 | 1.88 | 596 | 594.7 | 1.21 | 596 | 594.93 | 0.83 | 596 | 594.6 | 0.86 |
| | 50 | rnd | 596 | 591.03 | 3.56 | 596 | 594.47 | 1.28 | 596 | 594.93 | 0.98 | 596 | 593.03 | 1.9 |
| | | 2op | 596 | 592.37 | 3.03 | 596 | 594.7 | 0.92 | 596 | 594.83 | 1.09 | 596 | 594.07 | 1.34 |

Table A.1722: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 589.9 | 3.73 | 596 | 592.57 | 2.5 | 596 | 592.93 | 2.07 | 595 | 589.93 | 3.57 |
| | | 2op | 594 | 590.57 | 2.24 | 595 | 594.57 | 1.41 | 595 | 594 | 1.34 | 594 | 590.37 | 3.29 |
| | 50 | rnd | 596 | 590.87 | 3.9 | 596 | 591.9 | 2.41 | 596 | 593.33 | 2.11 | 595 | 591.5 | 3.06 |
| | | 2op | 594 | 590.83 | 2.25 | 595 | 594.67 | 1.65 | 595 | 594.73 | 1.28 | 595 | 593.57 | 1.76 |
| 51 | 20 | rnd | 596 | 591.07 | 3.06 | 596 | 592 | 2.79 | 596 | 592.43 | 2.8 | 596 | 591.5 | 2.35 |
| | | 2op | 594 | 590.9 | 2.52 | 595 | 594.47 | 1.28 | 595 | 594.83 | 0.59 | 595 | 594.1 | 0.8 |
| | 50 | rnd | 596 | 591.57 | 2.92 | 596 | 591.2 | 3.17 | 596 | 592.83 | 2.57 | 596 | 591.77 | 2.4 |
| | | 2op | 594 | 591.3 | 2.37 | 595 | 594.73 | 0.45 | 595 | 595 | 0 | 595 | 594.03 | 0.93 |

Table A.1723: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 586.63 | 3.76 | 595 | 592.43 | 1.83 | 596 | 591.3 | 2.44 | 585 | 577.03 | 4.16 |
| | | 2op | 595 | 589.63 | 4.08 | 595 | 592.2 | 2.14 | 596 | 591.57 | 2.61 | 590 | 578.53 | 5.92 |
| | 50 | rnd | 595 | 588.97 | 4.02 | 596 | 593.7 | 1.32 | 596 | 593 | 1.86 | 589 | 581.1 | 3.54 |
| | | 2op | 596 | 590.57 | 3.84 | 596 | 593.77 | 1.25 | 595 | 593.07 | 1.36 | 591 | 581.43 | 3.96 |
| 51 | 20 | rnd | 595 | 590.63 | 2.97 | 596 | 593.8 | 1.3 | 596 | 594.33 | 1.94 | 596 | 592.67 | 2.25 |
| | | 2op | 595 | 592.73 | 2.43 | 596 | 594.47 | 1.25 | 596 | 594.6 | 1 | 596 | 594.83 | 0.75 |
| | 50 | rnd | 595 | 591.23 | 2.25 | 596 | 594.7 | 0.95 | 596 | 594.73 | 0.91 | 596 | 592.07 | 2.42 |
| | | 2op | 595 | 592.57 | 2.84 | 596 | 594.8 | 0.96 | 596 | 594.97 | 0.72 | 595 | 592.9 | 1.97 |

Table A.1724: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 590.93 | 3.35 | 596 | 592.53 | 2.73 | 595 | 592.3 | 2.74 | 594 | 588.77 | 3.67 |
| | | 2op | 594 | 591.4 | 2.16 | 595 | 594.73 | 0.78 | 595 | 593.87 | 1.17 | 595 | 590.4 | 3.52 |
| | 50 | rnd | 596 | 590.8 | 3.39 | 596 | 592.73 | 2.36 | 595 | 592.23 | 2.49 | 596 | 591.1 | 3.1 |
| | | 2op | 594 | 591.4 | 2.42 | 595 | 594.97 | 0.18 | 595 | 594.93 | 0.25 | 595 | 593.23 | 2.36 |
| 51 | 20 | rnd | 595 | 590.73 | 3.35 | 596 | 591.2 | 2.82 | 596 | 593 | 2.44 | 595 | 592.17 | 2.13 |
| | | 2op | 594 | 591.13 | 2.34 | 595 | 594.77 | 0.43 | 595 | 594.7 | 1.12 | 595 | 594.1 | 0.55 |
| | 50 | rnd | 596 | 591.27 | 3.23 | 596 | 591.47 | 2.89 | 596 | 591.7 | 2.55 | 596 | 591.77 | 3.29 |
| | | 2op | 594 | 591.33 | 2.43 | 595 | 594.43 | 0.5 | 595 | 595 | 0 | 595 | 594.2 | 0.48 |

Table A.1725: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.6 | 2.39 | 596 | 594.23 | 1.38 | 590 | 579.03 | 6.14 | 564 | 552 | 5.69 |
| | | 2op | 596 | 593.57 | 1.96 | 596 | 594.57 | 0.94 | 594 | 582.1 | 6.29 | 558 | 550.57 | 4.05 |
| | 50 | rnd | 595 | 591.63 | 2.74 | 595 | 592.77 | 1.63 | 591 | 580.6 | 5.31 | 582 | 555.27 | 9.94 |
| | | 2op | 595 | 593.33 | 1.9 | 596 | 594.2 | 1.45 | 590 | 582.4 | 4.29 | 579 | 555.03 | 10.05 |
| 51 | 20 | rnd | 596 | 593.13 | 1.85 | 596 | 594.57 | 1.01 | 596 | 591.67 | 2.2 | 592 | 581.3 | 5.78 |
| | | 2op | 595 | 594.2 | 0.41 | 596 | 595.1 | 0.4 | 595 | 592.9 | 2.09 | 594 | 581.07 | 6.07 |
| | 50 | rnd | 596 | 593 | 1.44 | 596 | 594.3 | 1.21 | 596 | 589.8 | 3.19 | 588 | 576.43 | 7.36 |
| | | 2op | 596 | 594.87 | 0.51 | 596 | 595.07 | 0.25 | 595 | 590.33 | 2.8 | 593 | 576.97 | 8.81 |

Table A.1726: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.87 | 3.04 | 596 | 591.73 | 2.43 | 594 | 584.23 | 7.44 | 580 | 556.17 | 11.03 |
| | | 2op | 594 | 593.07 | 1.8 | 595 | 594 | 0.45 | 595 | 584.67 | 7.74 | 582 | 560.67 | 10.98 |
| | 50 | rnd | 595 | 592.27 | 1.93 | 596 | 591.3 | 3.22 | 594 | 587.9 | 4.54 | 586 | 570.53 | 9.29 |
| | | 2op | 594 | 593.1 | 1.6 | 595 | 593.97 | 1 | 595 | 589.47 | 4.23 | 591 | 568.03 | 11.93 |
| 51 | 20 | rnd | 596 | 590.63 | 2.93 | 595 | 590.53 | 2.78 | 596 | 590.5 | 3.24 | 593 | 579.1 | 7.34 |
| | | 2op | 595 | 593.6 | 1.16 | 595 | 594.07 | 0.25 | 594 | 592.7 | 2.82 | 590 | 582.6 | 6.55 |
| | 50 | rnd | 596 | 591.77 | 2.47 | 596 | 591.4 | 3.05 | 596 | 591.47 | 3.23 | 595 | 582 | 8.96 |
| | | 2op | 595 | 593.53 | 1.36 | 594 | 594 | 0 | 595 | 593.83 | 1.32 | 595 | 584.9 | 6.24 |

Table A.1727: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 769.13 | 4.7 | 777 | 773.37 | 2.06 | 777 | 772.6 | 2.7 | 769 | 760.03 | 5.49 |
| | | 2op | 775 | 767.67 | 3.34 | 777 | 773.4 | 1.99 | 777 | 772.37 | 2.4 | 766 | 757.9 | 4.82 |
| | 50 | rnd | 777 | 768.8 | 4.34 | 777 | 774.4 | 1.22 | 777 | 774.6 | 1.63 | 775 | 764 | 5.32 |
| | | 2op | 775 | 769.3 | 3.54 | 777 | 774.7 | 1.6 | 777 | 774.9 | 1.65 | 775 | 764.1 | 3.97 |
| 51 | 20 | rnd | 777 | 772.07 | 3.44 | 777 | 773.27 | 2.29 | 777 | 774.5 | 1.2 | 777 | 773 | 2.49 |
| | | 2op | 774 | 767.5 | 5.22 | 777 | 773.53 | 1.59 | 777 | 773.73 | 1.26 | 777 | 772.03 | 1.73 |
| | 50 | rnd | 777 | 771.93 | 3.46 | 777 | 774.63 | 1.54 | 777 | 775.43 | 1.36 | 777 | 773.7 | 1.99 |
| | | 2op | 775 | 770.4 | 1.89 | 777 | 774.67 | 1.65 | 777 | 775.33 | 1.47 | 777 | 772.57 | 1.94 |

Table A.1728: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 766.33 | 6.98 | 777 | 773.83 | 2.45 | 777 | 772.73 | 2.46 | 776 | 768.97 | 7.51 |
| | | 2op | 770 | 768.03 | 2.04 | 777 | 769.8 | 1.63 | 774 | 770 | 1.58 | 772 | 767.13 | 4.83 |
| | 50 | rnd | 775 | 767.13 | 4.93 | 776 | 771.83 | 2.74 | 777 | 773.27 | 2.53 | 777 | 770.23 | 5.76 |
| | | 2op | 770 | 767.3 | 2.23 | 772 | 769.7 | 0.65 | 772 | 769.8 | 0.66 | 770 | 768.93 | 1.78 |
| 51 | 20 | rnd | 775 | 767.53 | 6.51 | 777 | 770.13 | 6.04 | 777 | 773.17 | 1.95 | 777 | 770.13 | 7.79 |
| | | 2op | 770 | 767.8 | 2.95 | 774 | 769.67 | 0.96 | 774 | 769.87 | 1.5 | 774 | 769.63 | 1.75 |
| | 50 | rnd | 775 | 768.4 | 5.68 | 777 | 771 | 3.61 | 777 | 770.9 | 4.97 | 777 | 772.2 | 3.74 |
| | | 2op | 770 | 767.27 | 2.18 | 770 | 769.47 | 0.51 | 772 | 769.63 | 0.67 | 772 | 769.7 | 0.79 |

Table A.1729: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 765.83 | 7.94 | 777 | 773.1 | 2.11 | 777 | 772.53 | 2.46 | 768 | 757.07 | 7.54 |
| | | 2op | 775 | 767.13 | 6.75 | 777 | 773.33 | 2.17 | 777 | 772.57 | 2.18 | 767 | 755.87 | 5.82 |
| | 50 | rnd | 775 | 768.67 | 3.7 | 777 | 774 | 1.6 | 777 | 774.3 | 1.34 | 768 | 760.5 | 3.91 |
| | | 2op | 776 | 768.03 | 6.27 | 777 | 774.53 | 1.63 | 777 | 774.73 | 1.55 | 773 | 760.8 | 4.32 |
| 51 | 20 | rnd | 777 | 771.77 | 3.21 | 777 | 774.03 | 2.06 | 777 | 774.63 | 1.56 | 777 | 772.93 | 3.11 |
| | | 2op | 771 | 766.87 | 4.64 | 777 | 773.03 | 1.79 | 777 | 773.73 | 1.55 | 775 | 772.33 | 1.47 |
| | 50 | rnd | 775 | 772.27 | 2.43 | 777 | 775.1 | 1.32 | 777 | 775.8 | 1.1 | 776 | 773.27 | 2.55 |
| | | 2op | 776 | 769.7 | 2.89 | 777 | 774.53 | 1.57 | 777 | 775.1 | 1.99 | 777 | 772.87 | 2.15 |

Table A.1730: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 766 | 7.94 | 777 | 772.03 | 3.57 | 777 | 772.87 | 2.45 | 777 | 769.9 | 6.66 |
| | | 2op | 770 | 767.4 | 2.67 | 774 | 769.77 | 1.33 | 772 | 769.47 | 0.86 | 771 | 767.57 | 3.33 |
| | 50 | rnd | 775 | 767.6 | 8.16 | 777 | 769.03 | 8.46 | 777 | 772.67 | 3 | 777 | 770.03 | 6.08 |
| | | 2op | 770 | 767.27 | 2.07 | 770 | 769.43 | 0.5 | 772 | 769.87 | 0.86 | 775 | 769.53 | 2.47 |
| 51 | 20 | rnd | 775 | 766.07 | 9.3 | 777 | 767.47 | 10.18 | 777 | 771.8 | 5.48 | 777 | 772.6 | 3.38 |
| | | 2op | 770 | 767.47 | 2.53 | 774 | 769.67 | 0.96 | 777 | 769.93 | 1.62 | 774 | 769.57 | 1.07 |
| | 50 | rnd | 775 | 767.93 | 5.9 | 777 | 769 | 7.65 | 777 | 771.73 | 3.64 | 777 | 773.1 | 3.5 |
| | | 2op | 770 | 767.93 | 2.26 | 770 | 769.4 | 0.5 | 770 | 769.2 | 0.76 | 770 | 769.6 | 0.5 |

Table A.1731: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 770.73 | 3.34 | 777 | 774.37 | 1.77 | 776 | 762.1 | 7.31 | 749 | 723.1 | 12.54 |
| | | 2op | 774 | 769.6 | 1.77 | 777 | 774.4 | 1.43 | 770 | 759.83 | 6.54 | 738 | 720.53 | 8.32 |
| | 50 | rnd | 777 | 772.07 | 2.99 | 777 | 774.87 | 1.55 | 775 | 762.53 | 6.33 | 773 | 725.67 | 17.49 |
| | | 2op | 777 | 771.63 | 2.2 | 777 | 774.13 | 1.57 | 776 | 763.6 | 6.09 | 761 | 724.43 | 15.17 |
| 51 | 20 | rnd | 777 | 772.23 | 2.36 | 777 | 774.03 | 2.01 | 777 | 772.4 | 2.5 | 775 | 763.23 | 5.51 |
| | | 2op | 772 | 769.63 | 0.93 | 777 | 772.97 | 1.59 | 777 | 771.97 | 1.85 | 772 | 762.27 | 4.62 |
| | 50 | rnd | 777 | 774.03 | 1.9 | 777 | 774.5 | 1.66 | 776 | 771.5 | 2.47 | 776 | 755.37 | 9.75 |
| | | 2op | 777 | 770.93 | 2 | 777 | 773.93 | 1.86 | 775 | 770.5 | 2.05 | 770 | 755.6 | 8.14 |

Table A.1732: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 768.43 | 7.28 | 776 | 770.5 | 3.4 | 775 | 765.93 | 6.24 | 757 | 729.77 | 14.48 |
| | | 2op | 770 | 768.43 | 1.65 | 770 | 769.5 | 0.73 | 774 | 763.07 | 6.37 | 766 | 730.6 | 18.24 |
| | 50 | rnd | 775 | 768.1 | 6.5 | 777 | 770.83 | 3.51 | 777 | 769.53 | 4.14 | 772 | 749.4 | 15.54 |
| | | 2op | 770 | 768.9 | 1.49 | 774 | 770.1 | 1.54 | 772 | 767.13 | 3.43 | 772 | 750.7 | 16.25 |
| 51 | 20 | rnd | 775 | 769.43 | 5.92 | 777 | 769.4 | 6.99 | 777 | 770.97 | 4.43 | 776 | 764.63 | 7.88 |
| | | 2op | 770 | 769.27 | 0.91 | 770 | 769.67 | 0.48 | 770 | 769.03 | 1.03 | 772 | 758.07 | 12.74 |
| | 50 | rnd | 775 | 767.7 | 8.23 | 777 | 770.93 | 2.92 | 777 | 770.13 | 4.67 | 777 | 763.8 | 8.67 |
| | | 2op | 770 | 769.33 | 0.48 | 774 | 769.63 | 1.33 | 774 | 769.5 | 0.97 | 770 | 763.77 | 4.23 |

Table A.1733: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 909.8 | 6.08 | 921 | 916.4 | 2.81 | 919 | 915.37 | 2.81 | 911 | 901.4 | 4.64 |
| | | 2op | 919 | 909.97 | 5.15 | 919 | 916.67 | 1.56 | 919 | 915.77 | 1.92 | 910 | 901.67 | 4.94 |
| | 50 | rnd | 918 | 912.43 | 4.05 | 921 | 917.23 | 1.83 | 921 | 917.93 | 1.66 | 912 | 902.53 | 4.55 |
| | | 2op | 918 | 911.73 | 4.21 | 921 | 917.53 | 2 | 921 | 917.8 | 1.95 | 914 | 905.3 | 4.84 |
| 51 | 20 | rnd | 918 | 913.57 | 2.87 | 921 | 916.03 | 2.48 | 921 | 917.57 | 2.33 | 921 | 916.2 | 3.24 |
| | | 2op | 916 | 912.97 | 3.44 | 919 | 916.43 | 1.89 | 921 | 918.33 | 1.97 | 921 | 916.3 | 1.53 |
| | 50 | rnd | 918 | 913.77 | 2.87 | 921 | 917.13 | 1.96 | 921 | 917.33 | 1.97 | 921 | 914.93 | 3.44 |
| | | 2op | 917 | 913.6 | 3.34 | 921 | 918.1 | 1.71 | 921 | 919.4 | 1.67 | 921 | 916.6 | 2.54 |

Table A.1734: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 914.97 | 2.74 | 921 | 914.4 | 2.97 | 921 | 915.87 | 2.84 | 921 | 914.47 | 4.78 |
| | | 2op | 916 | 912.37 | 3.55 | 918 | 915.6 | 1.59 | 916 | 916 | 0 | 918 | 914.43 | 3.16 |
| | 50 | rnd | 919 | 913.27 | 5.04 | 921 | 915.03 | 3.08 | 921 | 915.67 | 2.71 | 921 | 914.73 | 3.18 |
| | | 2op | 916 | 913.13 | 3.56 | 916 | 915.9 | 0.55 | 921 | 916.23 | 0.97 | 916 | 915.73 | 0.91 |
| 51 | 20 | rnd | 919 | 913.6 | 5.34 | 921 | 916.2 | 2.82 | 921 | 915.4 | 3.17 | 921 | 914.93 | 3.07 |
| | | 2op | 916 | 912.9 | 3.61 | 918 | 916.07 | 0.37 | 918 | 915.97 | 0.67 | 916 | 916 | 0 |
| | 50 | rnd | 921 | 914.33 | 3.18 | 919 | 914.73 | 2.73 | 921 | 914 | 3.12 | 921 | 916 | 2.74 |
| | | 2op | 916 | 913.03 | 3.46 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.1735: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 909.67 | 5.06 | 919 | 916.13 | 1.61 | 921 | 914.43 | 2.6 | 912 | 898.63 | 5.33 |
| | | 2op | 916 | 910.63 | 4.37 | 921 | 916.5 | 2.3 | 921 | 915.03 | 3.47 | 910 | 898.4 | 5.7 |
| | 50 | rnd | 917 | 911 | 4.2 | 919 | 916.73 | 1.7 | 921 | 917.27 | 2.33 | 913 | 902.9 | 4.84 |
| | | 2op | 919 | 911.73 | 4.18 | 921 | 917.8 | 1.73 | 921 | 917.2 | 2.2 | 917 | 902.5 | 5.6 |
| 51 | 20 | rnd | 919 | 914.03 | 2.91 | 921 | 915.87 | 2.93 | 921 | 916.53 | 2.13 | 921 | 916.77 | 2.93 |
| | | 2op | 918 | 913.23 | 3.53 | 921 | 916.67 | 2.2 | 921 | 918.4 | 1.79 | 921 | 916.43 | 1.79 |
| | 50 | rnd | 919 | 914.37 | 3.18 | 921 | 917.4 | 1.63 | 921 | 917.97 | 1.5 | 919 | 915.6 | 2.51 |
| | | 2op | 919 | 913.43 | 3.21 | 921 | 918.23 | 1.72 | 921 | 918.63 | 1.45 | 921 | 916.63 | 2.31 |

Table A.1736: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.7 | 3.52 | 921 | 915.63 | 3.44 | 921 | 916.67 | 2.35 | 918 | 913.87 | 2.52 |
| | | 2op | 916 | 912.6 | 3.22 | 916 | 915.8 | 0.76 | 918 | 916.23 | 0.63 | 918 | 914.53 | 4.25 |
| | 50 | rnd | 919 | 912.77 | 5.65 | 919 | 914.13 | 3.12 | 921 | 915.43 | 2.75 | 919 | 915.17 | 3.44 |
| | | 2op | 916 | 912.13 | 4.17 | 916 | 915.77 | 0.77 | 921 | 916.6 | 1.48 | 918 | 915.67 | 1.77 |
| 51 | 20 | rnd | 918 | 913.3 | 4.18 | 921 | 914.43 | 4.1 | 919 | 914.73 | 2.35 | 921 | 915.57 | 3.39 |
| | | 2op | 916 | 912.47 | 3.62 | 916 | 916 | 0 | 916 | 915.77 | 1.28 | 916 | 915.87 | 0.57 |
| | 50 | rnd | 918 | 911.93 | 3.16 | 919 | 914.73 | 2.83 | 919 | 915.2 | 2.92 | 921 | 915.43 | 3.65 |
| | | 2op | 916 | 911.7 | 3.7 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.1737: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.97 | 3.07 | 921 | 916.73 | 2.39 | 917 | 903.57 | 6.65 | 883 | 854.37 | 11.74 |
| | | 2op | 918 | 915.03 | 2.28 | 921 | 916.97 | 2.17 | 914 | 903.47 | 5.59 | 898 | 857.9 | 16.44 |
| | 50 | rnd | 921 | 916.13 | 2.71 | 921 | 917.4 | 1.65 | 916 | 904.13 | 5.88 | 910 | 856.97 | 14.42 |
| | | 2op | 919 | 915.37 | 1.73 | 919 | 916.77 | 1.48 | 918 | 904.97 | 5.56 | 897 | 855.73 | 16.26 |
| 51 | 20 | rnd | 921 | 915.97 | 2.4 | 921 | 917.67 | 2.5 | 919 | 915.57 | 1.99 | 916 | 903.53 | 5.64 |
| | | 2op | 916 | 915.83 | 0.91 | 921 | 917.1 | 1.58 | 917 | 915.23 | 1.81 | 917 | 905.83 | 5.41 |
| | 50 | rnd | 921 | 916.93 | 3.32 | 921 | 917.53 | 2.43 | 921 | 913.07 | 2.97 | 921 | 903.93 | 9.81 |
| | | 2op | 916 | 915.97 | 0.18 | 921 | 916.7 | 1.58 | 918 | 912.53 | 3.06 | 916 | 900.23 | 8.47 |

Table A.1738: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.57 | 3.16 | 921 | 914.93 | 3.67 | 919 | 911.4 | 6.86 | 904 | 870.27 | 15.89 |
| | | 2op | 916 | 915.67 | 1.27 | 916 | 916 | 0 | 919 | 911.07 | 6.85 | 905 | 874.4 | 15.49 |
| | 50 | rnd | 921 | 914.17 | 3.73 | 921 | 914.83 | 2.83 | 921 | 913.37 | 4.39 | 917 | 889.43 | 16.84 |
| | | 2op | 916 | 915.83 | 0.91 | 916 | 916 | 0 | 916 | 915.3 | 2.04 | 916 | 892.33 | 17.75 |
| 51 | 20 | rnd | 919 | 914.2 | 3.37 | 921 | 915.37 | 3.33 | 919 | 915.2 | 3.25 | 918 | 904.47 | 10 |
| | | 2op | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 915.63 | 1.45 | 919 | 905.2 | 8.67 |
| | 50 | rnd | 919 | 914.87 | 3.37 | 921 | 915.7 | 3.92 | 919 | 913.93 | 3.22 | 919 | 910.8 | 6.99 |
| | | 2op | 916 | 915.87 | 0.73 | 916 | 916 | 0 | 916 | 916 | 0 | 919 | 909.87 | 5.2 |

Table A.1739: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1569 | 1531.77 | 16.01 | 1536 | 1520.93 | 9.89 | 1541 | 1468.73 | 20.62 | 1426 | 1340.77 | 27.92 |
| | | 2op | 1560 | 1538.4 | 14.9 | 1535 | 1520.1 | 9.11 | 1497 | 1464.57 | 19.04 | 1479 | 1343.47 | 36.63 |
| | 50 | rnd | 1571 | 1532.17 | 15.04 | 1539 | 1524.23 | 7.19 | 1524 | 1494.17 | 16.9 | 1452 | 1376.63 | 26.57 |
| | | 2op | 1565 | 1528.33 | 16.55 | 1545 | 1523.27 | 8.47 | 1537 | 1490.1 | 15.13 | 1458 | 1378.73 | 33.86 |
| 51 | 20 | rnd | 1568 | 1542.07 | 15.85 | 1563 | 1540.53 | 12.04 | 1573 | 1542.2 | 16.01 | 1535 | 1503.2 | 16.73 |
| | | 2op | 1568 | 1547.1 | 10.84 | 1570 | 1543.37 | 12.35 | 1568 | 1542.3 | 10.1 | 1534 | 1504.53 | 15.84 |
| | 50 | rnd | 1562 | 1544.93 | 11.68 | 1565 | 1541.87 | 12.86 | 1556 | 1536.93 | 9.34 | 1524 | 1490.27 | 19.56 |
| | | 2op | 1565 | 1546.57 | 8.36 | 1569 | 1543.4 | 11.96 | 1553 | 1536.9 | 9.75 | 1530 | 1486.43 | 23.06 |

Table A.1740: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1556.03 | 10.06 | 1577 | 1553.7 | 13.25 | 1569 | 1546.07 | 14.14 | 1522 | 1489.53 | 24.08 |
| | | 2op | 1567 | 1555.17 | 3.11 | 1569 | 1561.1 | 6.27 | 1567 | 1548.37 | 11.64 | 1519 | 1486.93 | 18.88 |
| | 50 | rnd | 1573 | 1559.3 | 7.11 | 1576 | 1561.87 | 6.27 | 1571 | 1552.37 | 11.59 | 1554 | 1516.4 | 20.16 |
| | | 2op | 1557 | 1553 | 3.74 | 1572 | 1565.93 | 4.98 | 1569 | 1557.1 | 5.6 | 1546 | 1521.5 | 14.53 |
| 51 | 20 | rnd | 1578 | 1554.73 | 10.76 | 1577 | 1555.67 | 11.11 | 1578 | 1559.93 | 10.07 | 1569 | 1546.53 | 11.02 |
| | | 2op | 1565 | 1554.57 | 2.6 | 1572 | 1565.27 | 5 | 1572 | 1560.2 | 7.56 | 1561 | 1545.8 | 9.88 |
| | 50 | rnd | 1574 | 1555.3 | 11.99 | 1577 | 1559.87 | 9.52 | 1577 | 1561.57 | 9.61 | 1566 | 1548.93 | 11.49 |
| | | 2op | 1558 | 1553.5 | 4.35 | 1573 | 1564.47 | 5.25 | 1575 | 1565.43 | 4.46 | 1562 | 1550.6 | 6.84 |

Table A.1741: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1550 | 1530 | 13.45 | 1548 | 1519.97 | 8.86 | 1505 | 1464.73 | 20.44 | 1396 | 1335 | 31.84 |
| | | 2op | 1559 | 1531.1 | 15.46 | 1536 | 1519.67 | 9.64 | 1511 | 1464.17 | 25.31 | 1388 | 1330.13 | 40.34 |
| | 50 | rnd | 1557 | 1525.1 | 21.58 | 1540 | 1520.63 | 8.07 | 1534 | 1488.6 | 19.23 | 1447 | 1366.13 | 31.03 |
| | | 2op | 1563 | 1532.83 | 14.8 | 1539 | 1521.73 | 9.79 | 1528 | 1489.13 | 14.68 | 1461 | 1372.9 | 37.23 |
| 51 | 20 | rnd | 1577 | 1545.73 | 15.82 | 1564 | 1541.77 | 12.04 | 1562 | 1538.67 | 14.67 | 1536 | 1498.27 | 18.48 |
| | | 2op | 1566 | 1546.7 | 11.16 | 1558 | 1538.9 | 11.82 | 1565 | 1543.57 | 9.58 | 1546 | 1507.17 | 20.94 |
| | 50 | rnd | 1575 | 1546.37 | 14.81 | 1565 | 1540.93 | 11.08 | 1568 | 1538.6 | 10.55 | 1531 | 1488.47 | 19.68 |
| | | 2op | 1565 | 1547.33 | 13.01 | 1555 | 1541.03 | 7.84 | 1566 | 1539.7 | 11.78 | 1533 | 1490.03 | 22.36 |

Table A.1742: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1555.13 | 12.67 | 1577 | 1557.17 | 11.88 | 1572 | 1549.43 | 12.81 | 1539 | 1484.8 | 25.78 |
| | | 2op | 1558 | 1553.7 | 1.56 | 1571 | 1561.4 | 5.04 | 1564 | 1547.47 | 11.09 | 1524 | 1484.3 | 23.46 |
| | 50 | rnd | 1575 | 1557.67 | 8.38 | 1574 | 1558.93 | 8.99 | 1572 | 1557.07 | 8.04 | 1556 | 1512.5 | 22.32 |
| | | 2op | 1558 | 1554.03 | 1.67 | 1575 | 1565.93 | 4.4 | 1571 | 1558.23 | 8.3 | 1551 | 1518.4 | 18.12 |
| 51 | 20 | rnd | 1577 | 1556.47 | 12.93 | 1574 | 1556.27 | 12.38 | 1574 | 1556.8 | 9.77 | 1564 | 1538.53 | 15.67 |
| | | 2op | 1563 | 1553.03 | 6.83 | 1569 | 1564.17 | 4.45 | 1569 | 1560.13 | 4.55 | 1564 | 1546.47 | 9.51 |
| | 50 | rnd | 1572 | 1557.5 | 8.02 | 1572 | 1559.63 | 9.68 | 1572 | 1556.4 | 9.69 | 1569 | 1548.9 | 13.07 |
| | | 2op | 1556 | 1553.77 | 2.56 | 1572 | 1566.67 | 3.14 | 1569 | 1565.27 | 5.42 | 1567 | 1553.17 | 7.42 |

Table A.1743: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1548.77 | 12.73 | 1564 | 1536.27 | 14.22 | 1522 | 1478.7 | 30.79 | 1339 | 1208.97 | 45.04 |
| | | 2op | 1568 | 1552.13 | 11.48 | 1566 | 1540.47 | 16.09 | 1534 | 1470.1 | 36.61 | 1315 | 1209.73 | 44.28 |
| | 50 | rnd | 1566 | 1542.13 | 14.86 | 1557 | 1528.7 | 14.84 | 1530 | 1463.43 | 24.2 | 1436 | 1268.9 | 71.34 |
| | | 2op | 1571 | 1547.07 | 10.67 | 1565 | 1537.03 | 14.48 | 1512 | 1469.8 | 25.97 | 1379 | 1260.3 | 64.84 |
| 51 | 20 | rnd | 1579 | 1560.33 | 8.3 | 1576 | 1560.97 | 7.31 | 1575 | 1538.33 | 22.25 | 1502 | 1439.67 | 37.62 |
| | | 2op | 1564 | 1557.4 | 3.15 | 1571 | 1566.97 | 3.77 | 1571 | 1538.3 | 17.37 | 1501 | 1431.27 | 40.73 |
| | 50 | rnd | 1572 | 1558.2 | 7.23 | 1573 | 1558.57 | 8.12 | 1548 | 1509 | 20.49 | 1511 | 1445.73 | 34.02 |
| | | 2op | 1569 | 1559.7 | 5.75 | 1570 | 1558.53 | 6.94 | 1556 | 1512.2 | 29.23 | 1509 | 1449.33 | 31.76 |

Table A.1744: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1559.47 | 7.09 | 1571 | 1553.17 | 13.84 | 1545 | 1506.17 | 26.34 | 1479 | 1377.73 | 58.01 |
| | | 2op | 1558 | 1554.07 | 1.44 | 1567 | 1554.5 | 2.66 | 1556 | 1514.13 | 31.56 | 1471 | 1371.77 | 48.93 |
| | 50 | rnd | 1570 | 1556.57 | 8.29 | 1578 | 1555.47 | 10.47 | 1570 | 1535.63 | 20 | 1518 | 1447.43 | 39.19 |
| | | 2op | 1558 | 1555.1 | 1.67 | 1563 | 1555.13 | 2.32 | 1564 | 1537.47 | 20.99 | 1526 | 1449.3 | 46.79 |
| 51 | 20 | rnd | 1574 | 1557.73 | 12.21 | 1572 | 1557.8 | 10.24 | 1568 | 1545.97 | 15.93 | 1545 | 1498.47 | 34.62 |
| | | 2op | 1563 | 1554.87 | 2.06 | 1572 | 1556.33 | 4.43 | 1563 | 1550.27 | 7.8 | 1543 | 1489.37 | 33.26 |
| | 50 | rnd | 1574 | 1560.93 | 7.43 | 1570 | 1555.2 | 9.35 | 1568 | 1549.13 | 19.1 | 1567 | 1519.1 | 22.06 |
| | | 2op | 1566 | 1556.13 | 2.94 | 1573 | 1557.87 | 5.72 | 1564 | 1550.87 | 9.61 | 1562 | 1526.97 | 25.67 |

Table A.1745: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1555 | 1521.13 | 16.71 | 1560 | 1523.07 | 16.59 | 1533 | 1463.3 | 26.9 | 1407 | 1333.2 | 34.91 |
| | | 2op | 1559 | 1523.1 | 21.29 | 1542 | 1519.43 | 12.83 | 1530 | 1457.33 | 27.68 | 1448 | 1329.9 | 37.6 |
| | 50 | rnd | 1553 | 1524.63 | 16.07 | 1547 | 1521.13 | 11.5 | 1520 | 1487.8 | 16.87 | 1454 | 1367.3 | 42.09 |
| | | 2op | 1550 | 1521.37 | 16.79 | 1543 | 1519.33 | 10.21 | 1515 | 1483.03 | 18.01 | 1427 | 1353.97 | 34.37 |
| 51 | 20 | rnd | 1566 | 1538.97 | 16.23 | 1564 | 1541.43 | 12.47 | 1562 | 1541.3 | 14.88 | 1549 | 1501.97 | 19.48 |
| | | 2op | 1556 | 1534.23 | 16.28 | 1567 | 1542.17 | 10.6 | 1559 | 1539.37 | 12.74 | 1544 | 1500.6 | 24.42 |
| | 50 | rnd | 1561 | 1535.77 | 20.38 | 1556 | 1542.1 | 7.53 | 1558 | 1543.13 | 7.61 | 1537 | 1487.97 | 25.49 |
| | | 2op | 1568 | 1539.83 | 18.34 | 1556 | 1540 | 9.67 | 1561 | 1540.2 | 10.39 | 1532 | 1482.03 | 22.97 |

Table A.1746: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1562 | 1537 | 21.35 | 1570 | 1552.13 | 9.34 | 1559 | 1539.27 | 15.03 | 1542 | 1480.13 | 32.86 |
| | | 2op | 1540 | 1531.27 | 4.68 | 1564 | 1538.2 | 9.98 | 1561 | 1529.13 | 13.46 | 1527 | 1479.47 | 29.1 |
| | 50 | rnd | 1563 | 1541.27 | 16.96 | 1569 | 1554.33 | 11.25 | 1569 | 1554.1 | 11.96 | 1553 | 1520.53 | 15.39 |
| | | 2op | 1540 | 1531.23 | 1.77 | 1565 | 1547.67 | 11.13 | 1554 | 1536.53 | 7.73 | 1539 | 1513.9 | 17.86 |
| 51 | 20 | rnd | 1565 | 1542.07 | 14.96 | 1569 | 1552.93 | 7.54 | 1569 | 1555.57 | 8.03 | 1568 | 1542.63 | 12.34 |
| | | 2op | 1540 | 1531.47 | 2.27 | 1569 | 1546 | 13.42 | 1555 | 1536.33 | 9.15 | 1558 | 1523.1 | 16.08 |
| | 50 | rnd | 1564 | 1544.63 | 13.66 | 1566 | 1549.67 | 9.46 | 1567 | 1553.67 | 8.46 | 1566 | 1544.47 | 13.63 |
| | | 2op | 1531 | 1530.93 | 0.37 | 1560 | 1535.27 | 10.82 | 1565 | 1540.37 | 9.96 | 1548 | 1526.4 | 10.42 |

Table A.1747: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1562 | 1520.8 | 22.12 | 1563 | 1514.77 | 13.21 | 1496 | 1452.5 | 24.47 | 1406 | 1319.4 | 38.65 |
| | | 2op | 1553 | 1520.73 | 23.04 | 1537 | 1517.5 | 8.85 | 1520 | 1466.2 | 28.6 | 1394 | 1317.27 | 28.06 |
| | 50 | rnd | 1561 | 1523.17 | 21.6 | 1546 | 1516.57 | 11.63 | 1513 | 1480.47 | 18.93 | 1430 | 1345.43 | 34.01 |
| | | 2op | 1554 | 1520.3 | 15.21 | 1545 | 1517.87 | 11.25 | 1521 | 1484.37 | 19.62 | 1390 | 1339.17 | 26.89 |
| 51 | 20 | rnd | 1565 | 1539.6 | 17.54 | 1566 | 1534.4 | 12.32 | 1557 | 1540 | 12.59 | 1537 | 1494.8 | 21.04 |
| | | 2op | 1565 | 1535.5 | 15.22 | 1555 | 1540.37 | 10.15 | 1561 | 1540.87 | 10.16 | 1539 | 1498.97 | 20.14 |
| | 50 | rnd | 1561 | 1535.9 | 15.26 | 1556 | 1536.67 | 9.74 | 1559 | 1541.4 | 10.43 | 1539 | 1491.7 | 25.21 |
| | | 2op | 1559 | 1536.93 | 17.61 | 1563 | 1542.53 | 10.18 | 1569 | 1541.97 | 10.45 | 1522 | 1485.2 | 23.17 |

Table A.1748: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1558 | 1542.83 | 10.62 | 1567 | 1552.07 | 10.19 | 1564 | 1540.6 | 14.84 | 1524 | 1474.47 | 29.63 |
| | | 2op | 1552 | 1531.87 | 5.75 | 1566 | 1540.43 | 11.87 | 1567 | 1530.13 | 15.7 | 1507 | 1469.63 | 21.76 |
| | 50 | rnd | 1561 | 1544.43 | 11.72 | 1568 | 1555.77 | 8.03 | 1569 | 1549.2 | 12.12 | 1563 | 1506.6 | 23.88 |
| | | 2op | 1532 | 1530.37 | 3.66 | 1565 | 1551.6 | 10.15 | 1560 | 1532.4 | 8.92 | 1532 | 1500.23 | 19.86 |
| 51 | 20 | rnd | 1569 | 1538.77 | 13.46 | 1565 | 1550.37 | 10.9 | 1566 | 1553.33 | 9.16 | 1559 | 1540.8 | 12.67 |
| | | 2op | 1556 | 1532.6 | 6.12 | 1565 | 1541.23 | 11.49 | 1565 | 1538.27 | 10.53 | 1559 | 1523.03 | 17.49 |
| | 50 | rnd | 1566 | 1548.5 | 12.39 | 1567 | 1549.73 | 10.16 | 1569 | 1552.23 | 9.11 | 1560 | 1540.67 | 10.51 |
| | | 2op | 1531 | 1530.33 | 3.65 | 1561 | 1538.23 | 9.77 | 1565 | 1540.7 | 11.35 | 1546 | 1524.87 | 9.57 |

Table A.1749: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1542.87 | 17.37 | 1560 | 1541.37 | 15.03 | 1520 | 1469.47 | 30.77 | 1315 | 1189.3 | 49.94 |
| | | 2op | 1569 | 1541.97 | 16.05 | 1557 | 1533.37 | 15.03 | 1528 | 1470.43 | 36.44 | 1317 | 1199.23 | 56.74 |
| | 50 | rnd | 1570 | 1541.33 | 11.56 | 1558 | 1538.8 | 12.74 | 1525 | 1474.53 | 28.1 | 1323 | 1250.83 | 53.26 |
| | | 2op | 1567 | 1539.23 | 15.39 | 1561 | 1537.13 | 12.85 | 1535 | 1459.83 | 36.09 | 1371 | 1280.03 | 45.15 |
| 51 | 20 | rnd | 1572 | 1556.77 | 9.28 | 1570 | 1557.07 | 8.87 | 1557 | 1536.03 | 18.04 | 1534 | 1424.37 | 42.66 |
| | | 2op | 1564 | 1555.4 | 6.67 | 1565 | 1557.43 | 2.99 | 1564 | 1534.63 | 13.63 | 1494 | 1412.93 | 39.05 |
| | 50 | rnd | 1568 | 1555.07 | 8.2 | 1568 | 1554.33 | 7.24 | 1561 | 1514.57 | 24.64 | 1495 | 1440.53 | 33.19 |
| | | 2op | 1566 | 1556.4 | 6.73 | 1566 | 1553.37 | 7.19 | 1556 | 1510.7 | 29.98 | 1500 | 1440.6 | 33 |

Table A.1750: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1546.23 | 9.75 | 1562 | 1549.7 | 7.78 | 1556 | 1508.8 | 36.9 | 1468 | 1351.6 | 61.44 |
| | | 2op | 1531 | 1530.87 | 0.73 | 1540 | 1531.3 | 2.67 | 1547 | 1503.03 | 29.32 | 1454 | 1356.67 | 52.29 |
| | 50 | rnd | 1565 | 1549.1 | 9.9 | 1569 | 1550.03 | 13.76 | 1553 | 1522.43 | 20.52 | 1526 | 1438.1 | 43.87 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1530.87 | 2.32 | 1545 | 1521.6 | 14.24 | 1496 | 1412.93 | 45.63 |
| 51 | 20 | rnd | 1565 | 1550.43 | 11.58 | 1566 | 1552.27 | 8.52 | 1569 | 1541.37 | 17.55 | 1537 | 1482.17 | 30.1 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.9 | 2.75 | 1548 | 1521.93 | 15.76 | 1536 | 1468 | 43.1 |
| | 50 | rnd | 1565 | 1548.93 | 11.79 | 1565 | 1548.4 | 8.4 | 1564 | 1544 | 15.39 | 1563 | 1511.83 | 39.49 |
| | | 2op | 1531 | 1531 | 0 | 1535 | 1530.93 | 1.91 | 1554 | 1531.37 | 7.7 | 1538 | 1498.87 | 34 |

Table A.1751: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1548 | 1517.5 | 14.42 | 1538 | 1512.9 | 11.55 | 1503 | 1456.23 | 20.62 | 1396 | 1328.43 | 34.58 |
| | | 2op | 1561 | 1512.77 | 20.99 | 1524 | 1507.47 | 9.62 | 1522 | 1459.4 | 25.16 | 1432 | 1323.73 | 36.98 |
| | 50 | rnd | 1551 | 1510.7 | 17.66 | 1531 | 1511.77 | 9.44 | 1499 | 1478.2 | 12.5 | 1440 | 1358.53 | 30.69 |
| | | 2op | 1560 | 1521.7 | 19.97 | 1541 | 1511.9 | 11.73 | 1516 | 1476.73 | 14.83 | 1411 | 1356.6 | 29.97 |
| 51 | 20 | rnd | 1559 | 1527.73 | 17.02 | 1553 | 1533.27 | 11.16 | 1557 | 1539.7 | 13.18 | 1536 | 1493.13 | 19.15 |
| | | 2op | 1563 | 1537.93 | 13.38 | 1565 | 1534.67 | 13.97 | 1558 | 1534 | 13.64 | 1528 | 1489.37 | 18.75 |
| | 50 | rnd | 1547 | 1530.47 | 12.06 | 1551 | 1531.3 | 10.14 | 1555 | 1529.57 | 12.33 | 1528 | 1475.2 | 25.76 |
| | | 2op | 1558 | 1532.13 | 13.01 | 1555 | 1530.13 | 12.04 | 1565 | 1526.93 | 14.7 | 1539 | 1485.5 | 25.54 |

Table A.1752: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1558 | 1547.73 | 8.4 | 1566 | 1549.77 | 9.36 | 1566 | 1543.67 | 8.65 | 1525 | 1480.47 | 26.05 |
| | | 2op | 1553 | 1548.27 | 2.43 | 1555 | 1547.1 | 4.33 | 1551 | 1543.5 | 5.22 | 1514 | 1477.43 | 22.26 |
| | 50 | rnd | 1562 | 1547.57 | 10.02 | 1567 | 1549.43 | 9.19 | 1566 | 1550.23 | 10.26 | 1558 | 1516.5 | 17.79 |
| | | 2op | 1548 | 1547.5 | 2.11 | 1556 | 1548.23 | 3.28 | 1552 | 1547.33 | 2.71 | 1548 | 1511.1 | 16.08 |
| 51 | 20 | rnd | 1562 | 1546.03 | 9.14 | 1565 | 1550.37 | 10.02 | 1567 | 1550.23 | 9.86 | 1559 | 1535.3 | 16.62 |
| | | 2op | 1557 | 1548.37 | 1.67 | 1558 | 1547.27 | 5.4 | 1557 | 1546.7 | 5.06 | 1551 | 1533.47 | 9.96 |
| | 50 | rnd | 1565 | 1548.8 | 9.06 | 1564 | 1550.8 | 6.17 | 1568 | 1550.4 | 7.18 | 1563 | 1538.67 | 14.38 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1554 | 1541.07 | 8.21 |

Table A.1753: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1536 | 1510.6 | 14.9 | 1538 | 1510.67 | 12.37 | 1515 | 1463 | 26.43 | 1426 | 1321.13 | 35.58 |
| | | 2op | 1548 | 1513.63 | 19.01 | 1526 | 1504.97 | 8.93 | 1471 | 1441.03 | 16.2 | 1373 | 1317.63 | 32.45 |
| | 50 | rnd | 1546 | 1511.93 | 15.14 | 1527 | 1508.13 | 6.82 | 1522 | 1474.6 | 18.32 | 1436 | 1357.9 | 39.03 |
| | | 2op | 1558 | 1517.07 | 14.37 | 1534 | 1512.97 | 8.62 | 1515 | 1473.67 | 15.39 | 1410 | 1353.67 | 28.78 |
| 51 | 20 | rnd | 1561 | 1534.27 | 15.77 | 1556 | 1535 | 9.33 | 1553 | 1527.53 | 10.74 | 1517 | 1485.57 | 17.05 |
| | | 2op | 1560 | 1532.47 | 19.46 | 1558 | 1527.97 | 14.56 | 1559 | 1528.53 | 11.6 | 1525 | 1488 | 16.14 |
| | 50 | rnd | 1563 | 1530.1 | 14.09 | 1563 | 1529.83 | 12.33 | 1557 | 1529.1 | 14.65 | 1507 | 1468.47 | 20.12 |
| | | 2op | 1550 | 1530 | 15.84 | 1548 | 1527.03 | 11.05 | 1550 | 1530.47 | 12.12 | 1517 | 1475.87 | 25.3 |

Table A.1754: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1545.63 | 10.18 | 1566 | 1548.2 | 12.09 | 1567 | 1535.57 | 12.75 | 1513 | 1470.4 | 19.47 |
| | | 2op | 1560 | 1548.23 | 4.62 | 1552 | 1547.53 | 3.32 | 1555 | 1541.07 | 9.01 | 1503 | 1467 | 23.86 |
| | 50 | rnd | 1558 | 1546.1 | 9.13 | 1565 | 1549.37 | 7.86 | 1565 | 1546.27 | 12.58 | 1552 | 1511.27 | 19.78 |
| | | 2op | 1553 | 1548.17 | 0.91 | 1553 | 1547.6 | 2.3 | 1554 | 1546.53 | 4.16 | 1539 | 1503.83 | 18.01 |
| 51 | 20 | rnd | 1561 | 1543.83 | 8.96 | 1566 | 1548.03 | 10.46 | 1568 | 1549.93 | 9.06 | 1562 | 1531.2 | 17.51 |
| | | 2op | 1553 | 1547.1 | 5.13 | 1556 | 1547.4 | 4.69 | 1557 | 1548.2 | 3.36 | 1553 | 1535.23 | 10.18 |
| | 50 | rnd | 1561 | 1547.97 | 8.28 | 1566 | 1551.77 | 6.07 | 1564 | 1549 | 8.84 | 1562 | 1544.73 | 10.46 |
| | | 2op | 1548 | 1548 | 0 | 1549 | 1548.03 | 0.18 | 1550 | 1547.97 | 0.85 | 1554 | 1541.8 | 6.05 |

Table A.1755: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1562 | 1540.77 | 13.98 | 1565 | 1533.47 | 18.97 | 1521 | 1463.37 | 38.83 | 1345 | 1226.83 | 58.99 |
| | | 2op | 1562 | 1541.53 | 12.71 | 1559 | 1534.8 | 15.81 | 1521 | 1466.1 | 40.23 | 1320 | 1201.37 | 51 |
| | 50 | rnd | 1567 | 1534.97 | 12.59 | 1564 | 1531.27 | 14.45 | 1534 | 1455.4 | 35.54 | 1358 | 1280.07 | 43.72 |
| | | 2op | 1557 | 1536.2 | 11.65 | 1553 | 1524.7 | 14.8 | 1516 | 1471.47 | 21.21 | 1339 | 1246.73 | 44.55 |
| 51 | 20 | rnd | 1565 | 1551.53 | 7.87 | 1563 | 1553.97 | 7.23 | 1565 | 1529.27 | 22.1 | 1491 | 1414.83 | 46.01 |
| | | 2op | 1550 | 1547.77 | 1.7 | 1566 | 1549.93 | 3.58 | 1563 | 1534.97 | 16.57 | 1498 | 1419.33 | 36.07 |
| | 50 | rnd | 1567 | 1548.9 | 8.71 | 1570 | 1550.03 | 9.56 | 1542 | 1500.6 | 22.68 | 1492 | 1434.37 | 30.31 |
| | | 2op | 1553 | 1547.37 | 3.68 | 1561 | 1547.63 | 5.99 | 1548 | 1508.07 | 17.18 | 1506 | 1447.73 | 35.76 |

Table A.1756: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1548.07 | 7.96 | 1560 | 1547.63 | 8.86 | 1557 | 1498.83 | 41.37 | 1414 | 1356.83 | 42.48 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1547.87 | 0.73 | 1546 | 1514.6 | 26.97 | 1478 | 1357.57 | 60.04 |
| | 50 | rnd | 1564 | 1548 | 7.82 | 1563 | 1550.23 | 9.08 | 1565 | 1530.03 | 21.16 | 1511 | 1444.1 | 38.3 |
| | | 2op | 1548 | 1548 | 0 | 1557 | 1547.67 | 3.89 | 1550 | 1526.83 | 19.23 | 1527 | 1438.3 | 52.04 |
| 51 | 20 | rnd | 1561 | 1547.9 | 6.34 | 1567 | 1548.57 | 11.5 | 1557 | 1542.6 | 10.43 | 1529 | 1488.03 | 24.28 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1551 | 1543.9 | 8.84 | 1546 | 1491.37 | 31.48 |
| | 50 | rnd | 1564 | 1549.37 | 7.45 | 1560 | 1545.13 | 10.31 | 1563 | 1544.03 | 12.16 | 1568 | 1520 | 24.79 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1546.23 | 6.94 | 1553 | 1544.17 | 9.73 | 1553 | 1516.1 | 25.15 |

Table A.1757: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2651 | 2597.67 | 29.78 | 2634 | 2562.67 | 31.59 | 2518 | 2418.5 | 69.21 | 2173 | 2051.87 | 57.65 |
| | | 2op | 2645 | 2596.77 | 26.41 | 2602 | 2549.5 | 26.2 | 2484 | 2391.27 | 57.89 | 2269 | 2055.17 | 74.61 |
| | 50 | rnd | 2673 | 2629.07 | 22.96 | 2622 | 2568.23 | 20.03 | 2574 | 2480 | 40.29 | 2249 | 2147.53 | 71.34 |
| | | 2op | 2674 | 2625.17 | 24.84 | 2617 | 2568.6 | 21.59 | 2548 | 2479.93 | 52.88 | 2294 | 2164.97 | 77.72 |
| 51 | 20 | rnd | 2690 | 2643.03 | 24.64 | 2686 | 2625.33 | 25.18 | 2658 | 2582.03 | 37.09 | 2550 | 2403.87 | 54.51 |
| | | 2op | 2734 | 2655.57 | 28.68 | 2700 | 2635.67 | 24.95 | 2646 | 2584.5 | 31.23 | 2488 | 2406.17 | 42.89 |
| | 50 | rnd | 2710 | 2663.8 | 26.88 | 2680 | 2622.53 | 25.93 | 2686 | 2609.07 | 34.92 | 2544 | 2438.33 | 60.83 |
| | | 2op | 2707 | 2666.87 | 23.9 | 2675 | 2625.03 | 23.96 | 2647 | 2587.93 | 31.65 | 2561 | 2463.3 | 66 |

Table A.1758: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2761 | 2727.23 | 22.64 | 2768 | 2718.57 | 28.28 | 2704 | 2621.47 | 42.71 | 2517 | 2410.03 | 61.1 |
| | | 2op | 2778 | 2756.23 | 12.55 | 2769 | 2725.43 | 26.92 | 2746 | 2645.17 | 43.27 | 2549 | 2427.8 | 67.19 |
| | 50 | rnd | 2763 | 2734.97 | 16.72 | 2757 | 2730.3 | 18.78 | 2748 | 2696.37 | 24.2 | 2665 | 2547.13 | 64.9 |
| | | 2op | 2778 | 2757.27 | 13.44 | 2779 | 2756.13 | 12.94 | 2766 | 2702.9 | 35.75 | 2654 | 2536.93 | 64.26 |
| 51 | 20 | rnd | 2761 | 2729.03 | 22.14 | 2768 | 2732.17 | 17.56 | 2746 | 2705.67 | 23.99 | 2731 | 2605.53 | 49.78 |
| | | 2op | 2771 | 2757.3 | 13.51 | 2766 | 2748.3 | 15.73 | 2770 | 2724.63 | 24.25 | 2752 | 2631.9 | 41.52 |
| | 50 | rnd | 2762 | 2733.3 | 17.65 | 2769 | 2740.17 | 17.05 | 2765 | 2727.47 | 19.08 | 2728 | 2641.2 | 47.11 |
| | | 2op | 2775 | 2759.43 | 9.37 | 2769 | 2759.97 | 5.01 | 2765 | 2750.53 | 12.5 | 2735 | 2669.5 | 46.15 |

Table A.1759: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2635 | 2599.53 | 19.85 | 2638 | 2557.13 | 35.18 | 2511 | 2408.7 | 61.01 | 2292 | 2038.5 | 77.97 |
| | | 2op | 2672 | 2605.43 | 30.25 | 2638 | 2563.97 | 34.36 | 2538 | 2422.17 | 62.82 | 2130 | 2008.5 | 63.13 |
| | 50 | rnd | 2673 | 2623.97 | 23.78 | 2635 | 2566.57 | 25.09 | 2569 | 2476.57 | 46.72 | 2301 | 2133.4 | 89.13 |
| | | 2op | 2669 | 2624.77 | 23.45 | 2624 | 2569.63 | 24 | 2541 | 2460.6 | 53.32 | 2302 | 2110.73 | 93.9 |
| 51 | 20 | rnd | 2705 | 2627.27 | 30.94 | 2665 | 2621.17 | 19.74 | 2639 | 2583.7 | 32.15 | 2501 | 2403.27 | 47.6 |
| | | 2op | 2702 | 2651.63 | 28.98 | 2691 | 2631.3 | 24.82 | 2663 | 2590.57 | 35.72 | 2497 | 2403.27 | 52.33 |
| | 50 | rnd | 2707 | 2656.87 | 24.05 | 2680 | 2620.77 | 22.35 | 2691 | 2584 | 31.07 | 2541 | 2449.07 | 48.2 |
| | | 2op | 2701 | 2664.63 | 19.27 | 2670 | 2621.93 | 23.75 | 2640 | 2576.1 | 26.67 | 2583 | 2463.53 | 50.73 |

Table A.1760: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2767 | 2729.27 | 23.82 | 2758 | 2716.83 | 22.19 | 2736 | 2628.9 | 46.7 | 2559 | 2432.37 | 67.49 |
| | | 2op | 2771 | 2749.27 | 16.92 | 2772 | 2739.13 | 17.79 | 2715 | 2644.63 | 35.28 | 2526 | 2431.83 | 60.31 |
| | 50 | rnd | 2773 | 2730.17 | 20.99 | 2761 | 2729.63 | 18.93 | 2719 | 2667.7 | 29.52 | 2646 | 2508 | 66.58 |
| | | 2op | 2770 | 2756.67 | 11.82 | 2771 | 2747.2 | 18.61 | 2768 | 2697.03 | 36.32 | 2649 | 2507.77 | 63.22 |
| 51 | 20 | rnd | 2770 | 2729.33 | 20.35 | 2762 | 2726.67 | 20 | 2741 | 2704.47 | 26.3 | 2727 | 2601.23 | 57.27 |
| | | 2op | 2771 | 2756.77 | 9.21 | 2771 | 2754.07 | 15.07 | 2764 | 2729 | 21.61 | 2693 | 2600.7 | 61.05 |
| | 50 | rnd | 2775 | 2737.2 | 15.12 | 2772 | 2736.4 | 21.57 | 2753 | 2729.77 | 14.79 | 2707 | 2636.17 | 47.7 |
| | | 2op | 2768 | 2757.57 | 9.35 | 2773 | 2758.8 | 8.94 | 2764 | 2747.77 | 15.06 | 2724 | 2660.4 | 48.7 |

Table A.1761: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2691 | 2630.3 | 34.56 | 2666 | 2617.7 | 29.27 | 2562 | 2455.07 | 53.8 | 2089 | 1902.7 | 83.25 |
| | | 2op | 2699 | 2646.13 | 30.61 | 2701 | 2634.7 | 33.32 | 2594 | 2473.3 | 58.73 | 2104 | 1917.27 | 80.15 |
| | 50 | rnd | 2675 | 2642.7 | 18.46 | 2670 | 2604.93 | 24.8 | 2564 | 2491.03 | 40.15 | 2202 | 2030.33 | 91.3 |
| | | 2op | 2710 | 2657.13 | 24.09 | 2684 | 2621.17 | 34.05 | 2572 | 2478.67 | 55.47 | 2214 | 2058.73 | 73.88 |
| 51 | 20 | rnd | 2768 | 2733.5 | 20.34 | 2759 | 2733.93 | 18.09 | 2718 | 2650.3 | 44.89 | 2451 | 2318.73 | 70.44 |
| | | 2op | 2775 | 2750.83 | 15.57 | 2766 | 2749.27 | 14.45 | 2760 | 2674.07 | 43.16 | 2475 | 2337.2 | 63.47 |
| | 50 | rnd | 2760 | 2709.27 | 21.72 | 2759 | 2691.73 | 23.67 | 2683 | 2616.2 | 33.65 | 2563 | 2416.17 | 67.69 |
| | | 2op | 2752 | 2720.87 | 24.43 | 2772 | 2701.67 | 29.95 | 2660 | 2614.7 | 28.62 | 2464 | 2353.37 | 57.17 |

Table A.1762: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2736.87 | 15.65 | 2762 | 2735.4 | 19.1 | 2703 | 2620.67 | 44.11 | 2514 | 2338.33 | 79.24 |
| | | 2op | 2770 | 2759.93 | 7.23 | 2770 | 2755.17 | 12.32 | 2708 | 2647.17 | 41.28 | 2469 | 2289.2 | 95.24 |
| | 50 | rnd | 2765 | 2739.37 | 12.39 | 2766 | 2740.53 | 15.06 | 2717 | 2657.67 | 38.91 | 2629 | 2452.6 | 76.36 |
| | | 2op | 2769 | 2762.23 | 1.38 | 2770 | 2757.77 | 7.8 | 2749 | 2673.13 | 46.27 | 2551 | 2418.47 | 77.82 |
| 51 | 20 | rnd | 2767 | 2738.4 | 16.69 | 2757 | 2737.37 | 13.76 | 2746 | 2688.63 | 50.24 | 2689 | 2547.67 | 62.79 |
| | | 2op | 2762 | 2758.4 | 8.35 | 2771 | 2759.2 | 8.23 | 2762 | 2722.13 | 31.2 | 2678 | 2582.67 | 46.35 |
| | 50 | rnd | 2761 | 2738.43 | 18.42 | 2759 | 2734.57 | 14.26 | 2765 | 2702.57 | 33.1 | 2702 | 2606.1 | 55.4 |
| | | 2op | 2762 | 2762 | 0 | 2767 | 2757.83 | 11.95 | 2764 | 2729.5 | 22.38 | 2727 | 2625.37 | 49.91 |

Table A.1763: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2670.4 | 26.23 | 2681 | 2613.67 | 31.9 | 2603 | 2470.17 | 62.22 | 2296 | 2110.23 | 77.27 |
| | | 2op | 2738 | 2670.2 | 26.52 | 2672 | 2619 | 30.82 | 2580 | 2463.13 | 80.15 | 2220 | 2083.07 | 64.89 |
| | 50 | rnd | 2744 | 2688.37 | 25.23 | 2696 | 2639.2 | 23.76 | 2650 | 2546.6 | 54.64 | 2354 | 2171.43 | 84 |
| | | 2op | 2773 | 2688.47 | 29.8 | 2694 | 2641.27 | 17.89 | 2636 | 2546.93 | 49.46 | 2302 | 2174.63 | 63.9 |
| 51 | 20 | rnd | 2756 | 2712.63 | 24.68 | 2816 | 2702.4 | 34.67 | 2699 | 2649.53 | 32.12 | 2554 | 2451.87 | 58.7 |
| | | 2op | 2754 | 2705.27 | 27.71 | 2756 | 2697.6 | 26.36 | 2747 | 2659.03 | 41.45 | 2540 | 2447.17 | 41.21 |
| | 50 | rnd | 2760 | 2724.97 | 20.18 | 2746 | 2690.07 | 18.93 | 2741 | 2651.43 | 31.81 | 2602 | 2495.37 | 59.71 |
| | | 2op | 2778 | 2734.47 | 24.16 | 2740 | 2685.2 | 18.2 | 2725 | 2659.03 | 29.89 | 2621 | 2502.33 | 68.71 |

Table A.1764: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2834 | 2792.73 | 25.61 | 2825 | 2783.2 | 23.82 | 2775 | 2696.17 | 36.74 | 2608 | 2470.27 | 56.66 |
| | | 2op | 2818 | 2794.47 | 16.41 | 2807 | 2775.67 | 20.53 | 2763 | 2697.87 | 42.02 | 2618 | 2490.03 | 67.75 |
| | 50 | rnd | 2835 | 2806.23 | 17 | 2826 | 2799.4 | 18.92 | 2812 | 2752.57 | 27.89 | 2669 | 2577.5 | 58.93 |
| | | 2op | 2812 | 2801.63 | 8.98 | 2827 | 2795.6 | 13.81 | 2808 | 2743.6 | 37.75 | 2692 | 2571.3 | 69.18 |
| 51 | 20 | rnd | 2834 | 2801.1 | 19.41 | 2842 | 2806.87 | 14.86 | 2830 | 2785.7 | 23.51 | 2796 | 2670.13 | 55.42 |
| | | 2op | 2818 | 2802.63 | 9.93 | 2810 | 2794.97 | 11.49 | 2808 | 2771.33 | 22.25 | 2756 | 2665.63 | 48.93 |
| | 50 | rnd | 2827 | 2805.73 | 14.67 | 2834 | 2809.6 | 14.96 | 2831 | 2797.13 | 20.96 | 2826 | 2720.8 | 55.15 |
| | | 2op | 2813 | 2803.83 | 6.97 | 2817 | 2805.4 | 5.8 | 2815 | 2795.57 | 14.54 | 2797 | 2715.83 | 53.66 |

Table A.1765: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2715 | 2663.83 | 29.75 | 2673 | 2619.33 | 31.03 | 2554 | 2458.93 | 65.7 | 2194 | 2024.67 | 70.93 |
| | | 2op | 2737 | 2662.1 | 26.31 | 2673 | 2618.07 | 31.47 | 2600 | 2479.73 | 64.89 | 2181 | 2047.57 | 60.99 |
| | 50 | rnd | 2736 | 2697.47 | 24.96 | 2700 | 2632.57 | 25.27 | 2606 | 2526.1 | 53.32 | 2303 | 2159.4 | 83.73 |
| | | 2op | 2738 | 2685.93 | 21.86 | 2715 | 2631.23 | 23.3 | 2655 | 2530.87 | 60.13 | 2279 | 2163.5 | 68.1 |
| 51 | 20 | rnd | 2737 | 2704.73 | 22.67 | 2747 | 2696.67 | 23.78 | 2737 | 2649.1 | 47.63 | 2551 | 2445.23 | 46.46 |
| | | 2op | 2774 | 2709.07 | 32.06 | 2764 | 2695.73 | 27.09 | 2721 | 2654 | 43.4 | 2571 | 2460.47 | 63.35 |
| | 50 | rnd | 2769 | 2727.53 | 23.08 | 2730 | 2684.33 | 19.58 | 2721 | 2649.4 | 31.65 | 2604 | 2508.07 | 60.44 |
| | | 2op | 2772 | 2724.27 | 25.96 | 2745 | 2695.73 | 22.1 | 2719 | 2660.6 | 33.16 | 2686 | 2512.1 | 72.34 |

Table A.1766: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2826 | 2794.1 | 23.9 | 2820 | 2779.93 | 22.54 | 2774 | 2694.67 | 46.33 | 2615 | 2473.73 | 72.99 |
| | | 2op | 2824 | 2790.97 | 17.95 | 2814 | 2782.53 | 22.49 | 2784 | 2706.03 | 44.49 | 2633 | 2475.67 | 75.86 |
| | 50 | rnd | 2827 | 2803.83 | 17.26 | 2825 | 2798.9 | 19.55 | 2815 | 2743.13 | 36.46 | 2729 | 2575.57 | 72.95 |
| | | 2op | 2814 | 2799.97 | 10.3 | 2820 | 2796.8 | 13.39 | 2806 | 2744.1 | 36.47 | 2694 | 2587.07 | 60.32 |
| 51 | 20 | rnd | 2819 | 2797.23 | 18.67 | 2834 | 2803.43 | 20.65 | 2826 | 2769.33 | 29.56 | 2748 | 2671.97 | 45.49 |
| | | 2op | 2813 | 2794.87 | 17.22 | 2812 | 2798 | 10.94 | 2803 | 2772.1 | 21.49 | 2773 | 2681.17 | 58.89 |
| | 50 | rnd | 2825 | 2804.83 | 14.54 | 2835 | 2808.87 | 16.57 | 2835 | 2794.17 | 23.03 | 2774 | 2705.6 | 48.24 |
| | | 2op | 2814 | 2804.2 | 6.66 | 2816 | 2801.03 | 10.62 | 2815 | 2792.5 | 17.23 | 2789 | 2701.77 | 53.55 |

Table A.1767: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2745 | 2704.23 | 20.22 | 2748 | 2683.8 | 35.06 | 2582 | 2502.93 | 67.3 | 2168 | 1936.97 | 100.24 |
| | | 2op | 2809 | 2712.77 | 30.79 | 2788 | 2694.83 | 39.34 | 2595 | 2504.23 | 62.18 | 2147 | 1933.3 | 78.21 |
| | 50 | rnd | 2753 | 2712 | 16.28 | 2734 | 2680.23 | 32.79 | 2637 | 2525.2 | 65.24 | 2209 | 2061.87 | 77.35 |
| | | 2op | 2781 | 2710.6 | 23.78 | 2761 | 2675.5 | 27.73 | 2647 | 2551.47 | 45.7 | 2247 | 2035.7 | 96.42 |
| 51 | 20 | rnd | 2835 | 2805.5 | 19.66 | 2835 | 2802.4 | 17.92 | 2812 | 2722.6 | 52.41 | 2477 | 2349.3 | 66.11 |
| | | 2op | 2810 | 2795.03 | 12.05 | 2810 | 2796.07 | 13.02 | 2790 | 2715.8 | 42.52 | 2514 | 2367.83 | 66.35 |
| | 50 | rnd | 2827 | 2778.37 | 25.77 | 2814 | 2766 | 33.02 | 2744 | 2687.63 | 31.23 | 2545 | 2437.73 | 69.23 |
| | | 2op | 2818 | 2774.43 | 20.38 | 2803 | 2768.23 | 23.67 | 2749 | 2670.23 | 40.29 | 2534 | 2445.4 | 52.89 |

Table A.1768: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2837 | 2806.9 | 15.76 | 2836 | 2797.73 | 19.95 | 2779 | 2681.23 | 53.81 | 2507 | 2337.83 | 92.85 |
| | | 2op | 2814 | 2801.3 | 9.34 | 2814 | 2798.57 | 12.65 | 2789 | 2689.3 | 44.04 | 2498 | 2334.83 | 84.47 |
| | 50 | rnd | 2839 | 2809.8 | 14.98 | 2839 | 2807.03 | 17.11 | 2807 | 2712.13 | 53.32 | 2647 | 2508.07 | 65.18 |
| | | 2op | 2816 | 2806.03 | 4.77 | 2829 | 2804.63 | 8.48 | 2790 | 2714.33 | 59.57 | 2641 | 2509.67 | 66.07 |
| 51 | 20 | rnd | 2836 | 2811.67 | 12.97 | 2842 | 2808.2 | 16.34 | 2819 | 2756.7 | 34.94 | 2714 | 2619.93 | 50.39 |
| | | 2op | 2815 | 2806.37 | 4.56 | 2813 | 2803.97 | 5.6 | 2804 | 2762 | 43.44 | 2737 | 2614.17 | 62.68 |
| | 50 | rnd | 2836 | 2812.87 | 10.23 | 2838 | 2805.67 | 15.1 | 2827 | 2778.5 | 28.54 | 2752 | 2683.3 | 43.29 |
| | | 2op | 2810 | 2805.8 | 2.8 | 2810 | 2800.83 | 14.45 | 2806 | 2757.87 | 37.38 | 2775 | 2690.77 | 51.58 |

Table A.1769: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2604 | 2546.13 | 26.12 | 2560 | 2495.8 | 34.64 | 2446 | 2346.83 | 59.01 | 2165 | 2004.23 | 71.38 |
| | | 2op | 2587 | 2535.4 | 25.74 | 2568 | 2497.6 | 32.51 | 2447 | 2351.5 | 49.46 | 2162 | 2025.43 | 65.76 |
| | 50 | rnd | 2626 | 2562.23 | 25.01 | 2562 | 2516.53 | 17.61 | 2498 | 2425.07 | 53.1 | 2377 | 2114.1 | 103.81 |
| | | 2op | 2620 | 2562.93 | 20.92 | 2585 | 2514.23 | 24.35 | 2551 | 2439.5 | 56.2 | 2318 | 2124.23 | 77.35 |
| 51 | 20 | rnd | 2664 | 2592.9 | 34.62 | 2633 | 2573.77 | 22.16 | 2601 | 2529.17 | 44.83 | 2500 | 2375.07 | 50.47 |
| | | 2op | 2640 | 2579.3 | 33.15 | 2612 | 2576.17 | 22 | 2580 | 2523.73 | 33.34 | 2515 | 2354.57 | 56.05 |
| | 50 | rnd | 2666 | 2605.87 | 23.03 | 2591 | 2564.57 | 15.87 | 2590 | 2533.53 | 28.22 | 2484 | 2388.03 | 63.08 |
| | | 2op | 2653 | 2608.67 | 23.97 | 2610 | 2568.9 | 21.86 | 2609 | 2543.63 | 31.87 | 2519 | 2396.87 | 65.32 |

Table A.1770: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2705 | 2672.1 | 16.21 | 2697 | 2656.03 | 21.38 | 2682 | 2576.9 | 52.99 | 2508 | 2365.4 | 55.38 |
| | | 2op | 2707 | 2684.93 | 14.97 | 2700 | 2678.47 | 11.56 | 2687 | 2595.17 | 43.7 | 2520 | 2397.67 | 52.25 |
| | 50 | rnd | 2702 | 2673.87 | 16.92 | 2710 | 2674.7 | 21.24 | 2680 | 2629.63 | 31.46 | 2604 | 2472.27 | 55.62 |
| | | 2op | 2706 | 2685.27 | 12.45 | 2702 | 2682.03 | 14.27 | 2678 | 2638.13 | 16.07 | 2623 | 2485.97 | 58.91 |
| 51 | 20 | rnd | 2706 | 2679.43 | 15.49 | 2708 | 2675.8 | 20.66 | 2702 | 2658.87 | 21.4 | 2648 | 2555.1 | 49.05 |
| | | 2op | 2701 | 2688.53 | 13.51 | 2715 | 2687.03 | 13.09 | 2686 | 2659.17 | 18.76 | 2651 | 2568.43 | 58.53 |
| | 50 | rnd | 2708 | 2677.67 | 16.52 | 2717 | 2680.33 | 19.34 | 2701 | 2673.63 | 16.48 | 2661 | 2573.97 | 48.43 |
| | | 2op | 2699 | 2689.9 | 8.14 | 2700 | 2692.63 | 4.84 | 2698 | 2682.1 | 11.49 | 2669 | 2604.43 | 39.38 |

Table A.1771: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2596 | 2552.97 | 21.46 | 2571 | 2505.8 | 35.91 | 2466 | 2352.6 | 64.54 | 2090 | 1990.2 | 51.81 |
| | | 2op | 2599 | 2546.4 | 30.48 | 2576 | 2498.27 | 30.87 | 2449 | 2350.4 | 56.58 | 2087 | 1995.23 | 52.68 |
| | 50 | rnd | 2625 | 2560.43 | 25.18 | 2576 | 2520.8 | 25.67 | 2515 | 2413.47 | 43.86 | 2270 | 2117.6 | 80.34 |
| | | 2op | 2629 | 2563.6 | 30.78 | 2566 | 2508 | 22.28 | 2492 | 2421.7 | 40.67 | 2211 | 2087.9 | 78.24 |
| 51 | 20 | rnd | 2632 | 2589.9 | 26.74 | 2625 | 2572.53 | 24.97 | 2618 | 2527.93 | 51.12 | 2491 | 2366.8 | 51.13 |
| | | 2op | 2656 | 2587.27 | 30.15 | 2621 | 2573.2 | 20.2 | 2596 | 2536.5 | 32.6 | 2513 | 2371.73 | 51.1 |
| | 50 | rnd | 2639 | 2596.27 | 20.72 | 2617 | 2562.87 | 18.71 | 2603 | 2532.77 | 40.85 | 2477 | 2386.1 | 52.21 |
| | | 2op | 2653 | 2607 | 23.83 | 2612 | 2562.27 | 23.53 | 2630 | 2542.07 | 35.73 | 2511 | 2400.7 | 53.9 |

Table A.1772: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2702 | 2668.57 | 23.51 | 2699 | 2658.27 | 22.05 | 2632 | 2574.47 | 38.59 | 2537 | 2396.93 | 60.72 |
| | | 2op | 2700 | 2674.43 | 15.84 | 2701 | 2664.1 | 21.3 | 2679 | 2587.97 | 40.4 | 2515 | 2384.97 | 58.2 |
| | 50 | rnd | 2702 | 2680.37 | 13.37 | 2703 | 2674.83 | 15.58 | 2671 | 2627.97 | 24.35 | 2561 | 2470.87 | 47.87 |
| | | 2op | 2704 | 2690.17 | 8.11 | 2700 | 2683.5 | 10.86 | 2691 | 2631 | 30.78 | 2552 | 2450.3 | 53.24 |
| 51 | 20 | rnd | 2704 | 2673.8 | 17.58 | 2701 | 2675.83 | 15.7 | 2699 | 2649.03 | 27.64 | 2634 | 2549.9 | 42.96 |
| | | 2op | 2701 | 2681.83 | 21.38 | 2704 | 2687.5 | 11.54 | 2694 | 2651.73 | 26.45 | 2633 | 2567.43 | 32.58 |
| | 50 | rnd | 2699 | 2677.9 | 15.16 | 2707 | 2684.2 | 13.82 | 2707 | 2678.3 | 15.29 | 2677 | 2596.47 | 47.68 |
| | | 2op | 2703 | 2689.6 | 8.64 | 2701 | 2688.47 | 10.71 | 2706 | 2684.8 | 14.21 | 2682 | 2597.03 | 40.97 |

Table A.1773: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2629 | 2584.97 | 26.9 | 2620 | 2565.33 | 35.29 | 2537 | 2419 | 61.4 | 1987 | 1859.77 | 75.69 |
| | | 2op | 2635 | 2592.93 | 28.07 | 2618 | 2570.8 | 30.9 | 2523 | 2430.07 | 52.35 | 2057 | 1879.37 | 72 |
| | 50 | rnd | 2624 | 2592.8 | 23.32 | 2622 | 2556.13 | 29.43 | 2491 | 2408 | 41.44 | 2216 | 1966.67 | 105.87 |
| | | 2op | 2632 | 2593.37 | 19.65 | 2631 | 2560.5 | 36.39 | 2527 | 2430.7 | 47.14 | 2142 | 1973.93 | 89.85 |
| 51 | 20 | rnd | 2705 | 2671.87 | 20.81 | 2702 | 2677.67 | 13.33 | 2673 | 2595.63 | 47.6 | 2414 | 2267.1 | 88.97 |
| | | 2op | 2701 | 2681.3 | 12.3 | 2701 | 2682.3 | 10.39 | 2685 | 2601.9 | 39.04 | 2411 | 2299.73 | 73.03 |
| | 50 | rnd | 2694 | 2648.83 | 19.21 | 2676 | 2629.6 | 23.73 | 2606 | 2546.83 | 36.73 | 2464 | 2341.37 | 50.3 |
| | | 2op | 2702 | 2659.33 | 20.73 | 2698 | 2647.9 | 22.91 | 2604 | 2553.07 | 28.15 | 2459 | 2347.37 | 49.19 |

Table A.1774: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2705 | 2676.93 | 12.83 | 2708 | 2670.87 | 20.24 | 2666 | 2580.47 | 40.65 | 2409 | 2279.93 | 80.02 |
| | | 2op | 2701 | 2692.47 | 6.96 | 2704 | 2682.2 | 14.01 | 2661 | 2570.9 | 49.93 | 2555 | 2255.77 | 96.9 |
| | 50 | rnd | 2702 | 2682.87 | 10.87 | 2702 | 2681.23 | 14.74 | 2668 | 2594.1 | 40.37 | 2567 | 2386.93 | 82.35 |
| | | 2op | 2700 | 2693.13 | 4.81 | 2699 | 2685.57 | 11.71 | 2688 | 2611.23 | 44.84 | 2543 | 2411.03 | 56.76 |
| 51 | 20 | rnd | 2702 | 2678.7 | 13.84 | 2703 | 2676.63 | 16.86 | 2693 | 2651.17 | 21.86 | 2611 | 2506.53 | 58.99 |
| | | 2op | 2700 | 2693.3 | 5.86 | 2706 | 2692.97 | 5.55 | 2700 | 2646.47 | 38.04 | 2604 | 2506.2 | 52.82 |
| | 50 | rnd | 2699 | 2684.83 | 11 | 2707 | 2683.77 | 14.47 | 2700 | 2657.83 | 26.41 | 2663 | 2549.77 | 56.79 |
| | | 2op | 2696 | 2695.13 | 0.35 | 2700 | 2687.1 | 13.11 | 2700 | 2642.27 | 33.25 | 2651 | 2562.57 | 35.95 |

Table A.1775: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16422 | 16187.07 | 134.67 | 15885 | 15429.97 | 229.03 | 13301 | 12536.83 | 367.54 | 11110 | 10515.73 | 198.73 |
| | | 2op | 16530 | 16228.4 | 116.11 | 15750 | 15446.03 | 203.32 | 13413 | 12624.07 | 381.94 | 11006 | 10503.1 | 217.72 |
| | 50 | rnd | 16427 | 16200.77 | 118.11 | 16123 | 15744.4 | 206.13 | 14534 | 13852.5 | 381.04 | 11331 | 10783.93 | 324.17 |
| | | 2op | 16529 | 16234.67 | 145.35 | 16132 | 15809.8 | 161.87 | 14572 | 13880.77 | 365.47 | 11306 | 10810.07 | 263.65 |
| 51 | 20 | rnd | 16755 | 16426.13 | 147.86 | 16585 | 16309.03 | 135.82 | 15671 | 15064.8 | 293.73 | 13256 | 12405.2 | 321.21 |
| | | 2op | 16656 | 16489.6 | 103.54 | 16634 | 16324.13 | 151.5 | 15444 | 14930.47 | 345.66 | 13017 | 12396.03 | 290.92 |
| | 50 | rnd | 16809 | 16481.53 | 130.78 | 16605 | 16366.63 | 112.67 | 15951 | 15584.4 | 185.26 | 13783 | 12962.1 | 379.52 |
| | | 2op | 16662 | 16469.2 | 134.02 | 16654 | 16458.93 | 114.36 | 16077 | 15697.17 | 225.04 | 13734 | 13042.07 | 378.56 |

Table A.1776: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17814 | 17668.9 | 76.51 | 17710 | 17512.2 | 104.1 | 17249 | 16949.07 | 192.03 | 15629 | 14940.77 | 450.98 |
| | | 2op | 17836 | 17724.67 | 71.31 | 17702 | 17520.57 | 105.89 | 17321 | 16923.43 | 221.97 | 15641 | 14923.13 | 465.03 |
| | 50 | rnd | 17852 | 17722.73 | 52.93 | 17754 | 17565.27 | 103.74 | 17506 | 17256.23 | 137.48 | 16490 | 15973.27 | 310.67 |
| | | 2op | 17832 | 17761.07 | 49.74 | 17781 | 17603.47 | 96.92 | 17563 | 17269.13 | 182.61 | 16700 | 16043.37 | 383.39 |
| 51 | 20 | rnd | 17806 | 17704.97 | 68.6 | 17727 | 17569.97 | 94.42 | 17680 | 17433.8 | 129.51 | 17053 | 16575.67 | 274.87 |
| | | 2op | 17822 | 17721.23 | 59.81 | 17772 | 17626.77 | 79.88 | 17676 | 17511.43 | 104.81 | 17262 | 16665.17 | 301.22 |
| | 50 | rnd | 17833 | 17736.57 | 62.19 | 17767 | 17616.43 | 86.81 | 17711 | 17535.3 | 133.49 | 17238 | 16915.37 | 225.09 |
| | | 2op | 17845 | 17750.3 | 59.84 | 17789 | 17662.27 | 73.45 | 17741 | 17589.77 | 84.03 | 17349 | 17029.43 | 215.02 |

Table A.1777: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16443 | 16232.43 | 110.27 | 15857 | 15434.1 | 233.9 | 13254 | 12518.43 | 431.97 | 10919 | 10528.43 | 200.88 |
| | | 2op | 16463 | 16184.87 | 133.96 | 15913 | 15468.93 | 229.45 | 13164 | 12518.3 | 496.66 | 10959 | 10503.77 | 208.28 |
| | 50 | rnd | 16418 | 16159.97 | 168.06 | 16107 | 15716.93 | 203.48 | 14241 | 13606.3 | 445.74 | 11159 | 10679.87 | 262.83 |
| | | 2op | 16379 | 16198.7 | 123.85 | 16024 | 15771.07 | 146.14 | 14294 | 13716.7 | 412.65 | 11130 | 10714.8 | 240.59 |
| 51 | 20 | rnd | 16693 | 16467.5 | 138.11 | 16539 | 16322.17 | 109.54 | 15612 | 15048.97 | 325.15 | 13160 | 12373.8 | 234.9 |
| | | 2op | 16615 | 16424.43 | 118.04 | 16610 | 16331.9 | 129.57 | 15654 | 15090.2 | 295.43 | 12854 | 12350.77 | 253.04 |
| | 50 | rnd | 16646 | 16443.4 | 114.9 | 16815 | 16420.63 | 140.71 | 15941 | 15613.73 | 252.45 | 13648 | 13041.93 | 358.12 |
| | | 2op | 16750 | 16466.13 | 124.69 | 16578 | 16437.23 | 105.77 | 16073 | 15653.9 | 182.07 | 13548 | 12932.7 | 380.15 |

Table A.1778: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17839 | 17665.27 | 82.64 | 17736 | 17536.87 | 89.99 | 17320 | 16957.1 | 197.82 | 15789 | 15019.87 | 453.26 |
| | | 2op | 17828 | 17699.53 | 72.16 | 17686 | 17522.93 | 93.23 | 17395 | 16942.6 | 262.17 | 15764 | 14866.53 | 434.27 |
| | 50 | rnd | 17819 | 17699.73 | 64.55 | 17723 | 17562.3 | 81.1 | 17558 | 17252.6 | 139.66 | 16607 | 15942.23 | 362.9 |
| | | 2op | 17895 | 17740.43 | 58.6 | 17740 | 17537.07 | 92.32 | 17525 | 17277.03 | 134.99 | 16802 | 15831.33 | 379.83 |
| 51 | 20 | rnd | 17820 | 17701.4 | 65.94 | 17733 | 17563.27 | 80.76 | 17679 | 17443.4 | 143.67 | 16951 | 16641.33 | 222.38 |
| | | 2op | 17864 | 17726.33 | 81.23 | 17755 | 17592.3 | 77.43 | 17622 | 17459.5 | 95.61 | 17274 | 16692.7 | 247.38 |
| | 50 | rnd | 17872 | 17732.2 | 68.47 | 17857 | 17625.13 | 100.8 | 17736 | 17544.57 | 95.24 | 17378 | 17004.77 | 222.85 |
| | | 2op | 17838 | 17760.37 | 44.84 | 17796 | 17659.33 | 80.17 | 17686 | 17536.97 | 83.64 | 17391 | 17037.17 | 205.29 |

Table A.1779: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16808 | 16548.03 | 131.49 | 16683 | 16522.1 | 108.48 | 14483 | 13616.93 | 374.13 | 10948 | 10635.27 | 174.51 |
| | | 2op | 16945 | 16594.53 | 131.09 | 16724 | 16501.03 | 124.17 | 14568 | 13456.17 | 456.66 | 11000 | 10594.93 | 239.63 |
| | 50 | rnd | 16591 | 16348.27 | 134.14 | 16569 | 16351.27 | 116.3 | 14589 | 13839.07 | 452.35 | 11211 | 10579.1 | 246.55 |
| | | 2op | 16680 | 16423.97 | 124.6 | 16545 | 16348.93 | 123.88 | 14531 | 13809.07 | 456.37 | 11117 | 10560.13 | 247.63 |
| 51 | 20 | rnd | 17243 | 17006.87 | 142 | 17189 | 16990.23 | 123.22 | 16574 | 15954.23 | 342.07 | 12920 | 12144 | 285.1 |
| | | 2op | 17288 | 17017.43 | 121.88 | 17288 | 17049.73 | 115.67 | 16490 | 15949.83 | 328.4 | 12793 | 12138.77 | 267.42 |
| | 50 | rnd | 16952 | 16742.27 | 128.31 | 16947 | 16735.43 | 132.38 | 16490 | 15996.77 | 188.15 | 13267 | 12696.8 | 432.28 |
| | | 2op | 17066 | 16802.63 | 124.17 | 17066 | 16779.43 | 123.06 | 16403 | 15996.6 | 245.55 | 13432 | 12801.67 | 398.17 |

Table A.1780: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17810 | 17697.53 | 60.54 | 17710 | 17602.07 | 78.03 | 17286 | 16976.8 | 168.38 | 15099 | 14637.2 | 314.42 |
| | | 2op | 17837 | 17735.87 | 56.38 | 17782 | 17646.93 | 66.94 | 17309 | 16978.97 | 201.77 | 15248 | 14595.5 | 382.95 |
| | 50 | rnd | 17831 | 17750.07 | 50.22 | 17834 | 17714.63 | 70.44 | 17565 | 17276.4 | 167.23 | 16313 | 15525.23 | 328.02 |
| | | 2op | 17822 | 17765.77 | 41.45 | 17823 | 17710.8 | 65.94 | 17642 | 17320.33 | 199.96 | 16134 | 15608.33 | 311.89 |
| 51 | 20 | rnd | 17834 | 17734.33 | 43.45 | 17834 | 17698.23 | 51.34 | 17681 | 17503.23 | 105.62 | 16681 | 16107.53 | 231.81 |
| | | 2op | 17861 | 17756.27 | 45.94 | 17842 | 17736.27 | 51.67 | 17759 | 17561.1 | 102.68 | 16699 | 16097.97 | 233.78 |
| | 50 | rnd | 17883 | 17776.63 | 55.54 | 17821 | 17714.8 | 44.94 | 17763 | 17583.33 | 76.85 | 16918 | 16555.7 | 254.8 |
| | | 2op | 17859 | 17787.53 | 42.1 | 17812 | 17741.13 | 42.59 | 17703 | 17594.63 | 65.28 | 17292 | 16608.17 | 304.73 |

Table A.1781: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 20267 | 19992.9 | 133.59 | 19178 | 18723.63 | 249.6 | 15920 | 15016.03 | 483.65 | 13251 | 12771.9 | 249.46 |
| | | 2op | 20215 | 20004.4 | 121.7 | 19389 | 18782.07 | 313.72 | 15864 | 15012.97 | 478.49 | 13397 | 12795.23 | 290.95 |
| | 50 | rnd | 20211 | 19947.13 | 128.25 | 19764 | 19378.43 | 208.08 | 17450 | 16444.13 | 577.4 | 14049 | 13146.33 | 365.6 |
| | | 2op | 20281 | 19969.37 | 141.58 | 19667 | 19277.7 | 213.55 | 17353 | 16648.63 | 452.75 | 13610 | 13066.97 | 298.14 |
| 51 | 20 | rnd | 20533 | 20286.23 | 131.51 | 20305 | 19952.9 | 183.62 | 19131 | 18158.87 | 427.21 | 15422 | 14952.37 | 246.47 |
| | | 2op | 20557 | 20275.73 | 129.2 | 20515 | 20032.17 | 217.93 | 18968 | 18134.1 | 482.75 | 15831 | 15044.17 | 307.67 |
| | 50 | rnd | 20556 | 20291.57 | 144.22 | 20455 | 20101.97 | 155.2 | 19502 | 18952.73 | 378.46 | 16344 | 15546.43 | 414.92 |
| | | 2op | 20718 | 20295.43 | 178.33 | 20468 | 20148.1 | 157.48 | 19676 | 19027.83 | 290.94 | 16296 | 15523.37 | 396.69 |

Table A.1782: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22110 | 21898.5 | 80.85 | 21783 | 21650.03 | 87.07 | 21558 | 20934.13 | 280.16 | 19828 | 18358.93 | 543.06 |
| | | 2op | 22096 | 21966.03 | 82.22 | 21933 | 21667.03 | 148.38 | 21545 | 21013.4 | 229.02 | 19227 | 18463.07 | 433.05 |
| | 50 | rnd | 22095 | 21941.17 | 70.4 | 21953 | 21774.63 | 141.1 | 21652 | 21360.1 | 174.59 | 20361 | 19723.23 | 456.34 |
| | | 2op | 22085 | 21988.27 | 61.12 | 22009 | 21805.8 | 109.13 | 21695 | 21451.13 | 176.27 | 20290 | 19676.43 | 354.58 |
| 51 | 20 | rnd | 22138 | 21892.6 | 104.6 | 21991 | 21798.73 | 116.8 | 21958 | 21613.23 | 143.07 | 21058 | 20463.07 | 364.68 |
| | | 2op | 22150 | 21993.13 | 86.78 | 22019 | 21818.6 | 118.39 | 21983 | 21713.3 | 135.25 | 21172 | 20589.2 | 358.59 |
| | 50 | rnd | 22121 | 21993.07 | 65.79 | 22023 | 21836.77 | 89.64 | 21942 | 21682.17 | 117.77 | 21557 | 20948.73 | 337.45 |
| | | 2op | 22139 | 22034.87 | 57.47 | 22114 | 21907.9 | 109.16 | 22029 | 21825.87 | 98.95 | 21606 | 21085.9 | 229.51 |

Table A.1783: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 20267 | 19943.53 | 159.97 | 19402 | 18804.97 | 363.36 | 16174 | 15000.67 | 573.66 | 13567 | 12774.67 | 383.28 |
| | | 2op | 20310 | 19967.97 | 145.56 | 19305 | 18816.73 | 320.35 | 15874 | 14921.07 | 426.68 | 13350 | 12763.5 | 305.06 |
| | 50 | rnd | 20327 | 20010.6 | 147.76 | 19584 | 19289.7 | 216.98 | 17137 | 16320.4 | 450.51 | 13490 | 12957.13 | 289.39 |
| | | 2op | 20364 | 20011.07 | 147.09 | 19735 | 19288.1 | 232.68 | 17163 | 16378.53 | 424.72 | 13564 | 12969.9 | 309.88 |
| 51 | 20 | rnd | 20564 | 20238.73 | 158.72 | 20377 | 20042.9 | 194.12 | 18776 | 18174.13 | 322.98 | 15830 | 14805.57 | 420.7 |
| | | 2op | 20503 | 20216.2 | 147.43 | 20250 | 19933.07 | 138.09 | 18740 | 18136.97 | 393.52 | 15756 | 14853.37 | 439.41 |
| | 50 | rnd | 20536 | 20221.37 | 159.17 | 20454 | 20094.03 | 173.09 | 19553 | 19061.67 | 336.49 | 16197 | 15503.6 | 522.77 |
| | | 2op | 20585 | 20236.97 | 159.17 | 20315 | 20137 | 111.18 | 19441 | 19082.7 | 321.45 | 16422 | 15649.57 | 432.71 |

Table A.1784: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22060 | 21899.37 | 96.63 | 21899 | 21660.17 | 144.85 | 21352 | 20845.73 | 274.63 | 19108 | 18414.03 | 405.46 |
| | | 2op | 22068 | 21960.27 | 76.11 | 21896 | 21683.77 | 131.19 | 21495 | 20908.4 | 289.63 | 19287 | 18331.37 | 468.87 |
| | 50 | rnd | 22075 | 21935.37 | 65.49 | 21931 | 21695.4 | 130.45 | 21581 | 21277.43 | 258.88 | 20130 | 19445 | 351.71 |
| | | 2op | 22114 | 21966.3 | 81.23 | 22005 | 21803.07 | 129.83 | 21640 | 21317.73 | 200.4 | 20009 | 19325.07 | 415.63 |
| 51 | 20 | rnd | 22063 | 21940.03 | 71.34 | 22016 | 21776.87 | 120.76 | 21819 | 21530.07 | 129.12 | 20919 | 20546 | 227.13 |
| | | 2op | 22141 | 21961.67 | 89.41 | 22073 | 21859.17 | 111.52 | 21954 | 21620.47 | 168.84 | 21288 | 20508.7 | 341.84 |
| | 50 | rnd | 22085 | 21982.5 | 60.16 | 22068 | 21855.97 | 77.79 | 21984 | 21718.63 | 119.18 | 21483 | 20981 | 222.09 |
| | | 2op | 22172 | 22028.57 | 69.63 | 22065 | 21914.87 | 90.66 | 21966 | 21792.27 | 110.48 | 21397 | 20965.13 | 238.15 |

Table A.1785: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 20632 | 20357.17 | 160.73 | 20648 | 20242.83 | 176.66 | 17043 | 16145.77 | 499.13 | 13541 | 12793.2 | 359.88 |
| | | 2op | 20530 | 20361.83 | 103.19 | 20476 | 20228.73 | 149.86 | 17101 | 16186.33 | 469.81 | 13540 | 12821.23 | 259.91 |
| | 50 | rnd | 20454 | 20206.7 | 123.7 | 20308 | 20081.8 | 138.51 | 17741 | 16719.4 | 476.73 | 13274 | 12913.23 | 219.55 |
| | | 2op | 20484 | 20184.23 | 149.8 | 20329 | 20115.1 | 140 | 17478 | 16767.9 | 588.78 | 13697 | 12895.1 | 334.85 |
| 51 | 20 | rnd | 21382 | 20933.97 | 180.42 | 21382 | 20930.27 | 179.41 | 20257 | 19299.43 | 422.67 | 15232 | 14625.13 | 312.31 |
| | | 2op | 21212 | 20889.77 | 155.87 | 21155 | 20882.8 | 171.74 | 19947 | 19484.17 | 311.42 | 15385 | 14618.8 | 348 |
| | 50 | rnd | 20763 | 20544.83 | 118.73 | 20811 | 20548.97 | 128.08 | 19928 | 19513.2 | 217.85 | 15848 | 15231.5 | 362.73 |
| | | 2op | 20808 | 20588.1 | 119.25 | 20788 | 20562.97 | 134.77 | 20018 | 19503.27 | 297.23 | 15930 | 15254.37 | 328.47 |

Table A.1786: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22078 | 21914.03 | 81.68 | 21981 | 21836.9 | 87.42 | 21265 | 20872.3 | 278 | 18589 | 17798.5 | 387.75 |
| | | 2op | 22079 | 21984.2 | 86.71 | 22115 | 21901 | 97.25 | 21321 | 20930.67 | 228.24 | 18845 | 17966.3 | 482.85 |
| | 50 | rnd | 22084 | 21984.4 | 53.09 | 22052 | 21902.17 | 77.97 | 21621 | 21319.3 | 147.06 | 19875 | 19167.73 | 340.05 |
| | | 2op | 22154 | 22045.17 | 65.98 | 22102 | 21983.53 | 73.95 | 21801 | 21452.3 | 155.23 | 19740 | 19153.03 | 399.42 |
| 51 | 20 | rnd | 22079 | 21960.5 | 76.73 | 22073 | 21936.87 | 68.63 | 21907 | 21653.33 | 126.55 | 20615 | 19602.83 | 370.85 |
| | | 2op | 22110 | 22009.83 | 67.95 | 22122 | 21990.2 | 63.28 | 21856 | 21726.5 | 91.85 | 20643 | 19565.27 | 446.28 |
| | 50 | rnd | 22080 | 21999.97 | 64.16 | 22072 | 21963.03 | 60.71 | 21911 | 21751 | 99.83 | 20951 | 20116 | 494.78 |
| | | 2op | 22152 | 22079.57 | 40.92 | 22128 | 22027.47 | 52.56 | 22002 | 21821.63 | 95.53 | 20963 | 20217.43 | 460.84 |

Table A.1787: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22398 | 22134.77 | 142.02 | 21173 | 20590.67 | 291.92 | 17043 | 16168.97 | 545.35 | 14862 | 14004.2 | 300.56 |
| | | 2op | 22439 | 22148.27 | 131.97 | 21464 | 20679.57 | 315.12 | 17544 | 16519.73 | 479.24 | 14567 | 14100.63 | 285.3 |
| | 50 | rnd | 22487 | 22188.33 | 176.65 | 21712 | 21253.63 | 229.45 | 19003 | 17949.27 | 533.44 | 14919 | 14285.77 | 309.57 |
| | | 2op | 22622 | 22200.7 | 174.52 | 21945 | 21271.57 | 325.59 | 19184 | 18007.03 | 583.35 | 14867 | 14364.23 | 297.89 |
| 51 | 20 | rnd | 22777 | 22483.83 | 190.76 | 22663 | 22141.8 | 194.65 | 20641 | 19926.37 | 420.91 | 16940 | 16254.07 | 313.67 |
| | | 2op | 22646 | 22442.17 | 106.44 | 22468 | 22130.9 | 158.02 | 20581 | 19869.53 | 393.24 | 16880 | 16269.53 | 319.06 |
| | 50 | rnd | 22856 | 22468.27 | 151.93 | 22568 | 22241.83 | 185.72 | 21755 | 20896.6 | 365.03 | 17722 | 16968.47 | 344.95 |
| | | 2op | 22877 | 22499.67 | 156.15 | 22576 | 22328.37 | 144.81 | 21296 | 20842.33 | 354.4 | 18197 | 17044.97 | 466.84 |

Table A.1788: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24614 | 24406.7 | 102.36 | 24428 | 24100.6 | 148.72 | 23641 | 23205.4 | 274.9 | 21488 | 20365.57 | 497.78 |
| | | 2op | 24694 | 24474.7 | 116.4 | 24410 | 24133.37 | 129.76 | 23720 | 23223.17 | 227.27 | 21487 | 20134.77 | 589.76 |
| | 50 | rnd | 24656 | 24484.57 | 93.28 | 24476 | 24256.6 | 131.97 | 24230 | 23868.23 | 210.79 | 22482 | 21668.27 | 597.83 |
| | | 2op | 24629 | 24514.37 | 71.04 | 24523 | 24340.03 | 123.57 | 24196 | 23764.87 | 262.98 | 22478 | 21639 | 486.64 |
| 51 | 20 | rnd | 24591 | 24433.3 | 89.23 | 24531 | 24299.43 | 128.65 | 24339 | 24085 | 155.16 | 23139 | 22665.13 | 270.59 |
| | | 2op | 24698 | 24499.17 | 100.29 | 24566 | 24290.13 | 163.52 | 24336 | 24054.13 | 184.59 | 23330 | 22745.03 | 371.85 |
| | 50 | rnd | 24671 | 24516.7 | 90.55 | 24573 | 24401.43 | 108.23 | 24422 | 24198.5 | 112.44 | 23740 | 23199.6 | 337.61 |
| | | 2op | 24689 | 24548.13 | 75.76 | 24593 | 24402.5 | 111.47 | 24491 | 24248.93 | 153.95 | 23731 | 23334.17 | 245.55 |

Table A.1789: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22405 | 22156.57 | 143.32 | 21180 | 20596.53 | 315.21 | 17782 | 16541.47 | 510.6 | 14531 | 13865.37 | 252.89 |
| | | 2op | 22473 | 22136.87 | 139.34 | 21411 | 20491.97 | 364.65 | 17229 | 16458.7 | 396.42 | 14333 | 13949.13 | 210.7 |
| | 50 | rnd | 22528 | 22147.1 | 130.25 | 21709 | 21174.03 | 339.83 | 18724 | 17844.57 | 618.57 | 15192 | 14314.1 | 383.17 |
| | | 2op | 22389 | 22157.5 | 121.98 | 21822 | 21269.2 | 235 | 18647 | 17757.3 | 507.75 | 14834 | 14202.3 | 300.24 |
| 51 | 20 | rnd | 22862 | 22416.83 | 179.22 | 22552 | 22112.7 | 214.31 | 20354 | 19898 | 353.39 | 16848 | 16329.83 | 380.1 |
| | | 2op | 22781 | 22467.67 | 157.74 | 22422 | 22123.8 | 152.57 | 20560 | 19759.03 | 456.38 | 16824 | 16107.23 | 421.65 |
| | 50 | rnd | 22794 | 22501.13 | 174.16 | 22832 | 22321.8 | 182.64 | 21435 | 20827.03 | 484.98 | 17636 | 16913.83 | 433.86 |
| | | 2op | 22745 | 22484.07 | 142.83 | 22563 | 22263.7 | 187.15 | 21683 | 20919.33 | 379.96 | 18099 | 17115.97 | 460.78 |

Table A.1790: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24646 | 24437.37 | 106.54 | 24368 | 24052.2 | 187.33 | 23547 | 23174.73 | 254.09 | 21118 | 20295.53 | 410.14 |
| | | 2op | 24648 | 24426.03 | 114.83 | 24439 | 24152.1 | 177.74 | 23762 | 23183.57 | 252.57 | 21073 | 20316.47 | 460.41 |
| | 50 | rnd | 24601 | 24491.33 | 63.77 | 24469 | 24266.13 | 123.61 | 24104 | 23694 | 219.92 | 22296 | 21515.93 | 337.15 |
| | | 2op | 24620 | 24488.23 | 86.66 | 24504 | 24288.77 | 118.64 | 24043 | 23685.33 | 266.14 | 22446 | 21564 | 436.06 |
| 51 | 20 | rnd | 24614 | 24434.73 | 121.85 | 24491 | 24304.8 | 102.83 | 24399 | 24016.23 | 228.92 | 23349 | 22666.03 | 321.74 |
| | | 2op | 24647 | 24448.93 | 72.73 | 24506 | 24318.97 | 105.4 | 24329 | 24064.37 | 148.47 | 23247 | 22744.8 | 330.24 |
| | 50 | rnd | 24656 | 24522.07 | 83.46 | 24595 | 24389.73 | 129.55 | 24469 | 24208.67 | 126.46 | 23814 | 23223.93 | 266.88 |
| | | 2op | 24650 | 24564.93 | 68.94 | 24618 | 24400.07 | 78.86 | 24428 | 24198.63 | 153.34 | 23723 | 23325.33 | 270.26 |

Table A.1791: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22846 | 22511.57 | 138.1 | 22776 | 22412.83 | 183.93 | 18868 | 17628.63 | 627.57 | 14873 | 14122.9 | 274.56 |
| | | 2op | 22736 | 22548.83 | 116.37 | 22610 | 22357.4 | 126.88 | 18857 | 17604.8 | 433.95 | 14902 | 14100.67 | 358.7 |
| | 50 | rnd | 22721 | 22358.27 | 123.39 | 22564 | 22273.3 | 142.73 | 19584 | 18297.53 | 493.21 | 15122 | 14146.63 | 317.05 |
| | | 2op | 22568 | 22338.4 | 112.27 | 22547 | 22281.33 | 121.56 | 18956 | 18088.03 | 625.72 | 14635 | 14202.57 | 249.07 |
| 51 | 20 | rnd | 23654 | 23049.1 | 185.65 | 23654 | 23049.1 | 185.65 | 21592 | 21115.5 | 351.09 | 16731 | 16072.1 | 366.44 |
| | | 2op | 23399 | 23036.7 | 169.74 | 23399 | 23036.7 | 169.74 | 21796 | 21044.27 | 501.45 | 16779 | 16074.1 | 399.16 |
| | 50 | rnd | 23080 | 22739.83 | 144.48 | 23080 | 22739.83 | 144.48 | 22120 | 21295.2 | 356.38 | 17534 | 16894.7 | 378.74 |
| | | 2op | 23003 | 22768.47 | 152.71 | 23003 | 22768.37 | 152.78 | 21759 | 21300.7 | 331.3 | 17537 | 16892.83 | 349.34 |

Table A.1792: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24588 | 24457.87 | 76.46 | 24602 | 24346.47 | 123.85 | 23609 | 23150.87 | 296.44 | 20281 | 19546.7 | 473.08 |
| | | 2op | 24611 | 24457.67 | 90.52 | 24577 | 24385.53 | 97.85 | 23505 | 23176.13 | 240.35 | 20627 | 19621.97 | 472.06 |
| | 50 | rnd | 24620 | 24529.77 | 72.69 | 24670 | 24437.2 | 90.46 | 24175 | 23656.73 | 213.18 | 22015 | 21112.97 | 367.91 |
| | | 2op | 24691 | 24566.93 | 63.49 | 24633 | 24441.9 | 103.99 | 24106 | 23683.03 | 290.12 | 21759 | 21070.03 | 445.18 |
| 51 | 20 | rnd | 24686 | 24512.23 | 80.38 | 24649 | 24472.87 | 113.13 | 24344 | 24095.27 | 161.09 | 22651 | 21528.13 | 525.51 |
| | | 2op | 24642 | 24495.17 | 74.69 | 24604 | 24486.37 | 88.46 | 24388 | 24122.37 | 133.23 | 22496 | 21635.83 | 507.15 |
| | 50 | rnd | 24700 | 24561.27 | 68.26 | 24636 | 24521.87 | 65 | 24420 | 24224.9 | 111.47 | 23290 | 22262.4 | 673.59 |
| | | 2op | 24751 | 24611.5 | 52.39 | 24684 | 24527.7 | 87.87 | 24431 | 24300 | 97.15 | 23280 | 22266 | 645.92 |

Table A.1793: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 42176 | 41705.17 | 217.59 | 39882 | 37796.87 | 904.93 | 30833 | 29719.87 | 694.07 | 27570 | 26821.07 | 366.14 |
| | | 2op | 42185 | 41754.13 | 212.92 | 39060 | 37828.77 | 825.09 | 31007 | 29683.13 | 561.74 | 27838 | 26848.17 | 395.4 |
| | 50 | rnd | 42910 | 42433.9 | 219.68 | 40781 | 39828.97 | 590.12 | 32796 | 31457.8 | 618.82 | 27838 | 26999.53 | 385 |
| | | 2op | 42885 | 42440.67 | 213.99 | 40685 | 39816.97 | 746.54 | 33383 | 31971.9 | 930.51 | 28223 | 27124.13 | 440.52 |
| 51 | 20 | rnd | 42679 | 42240.6 | 226.22 | 42430 | 41760.63 | 398.49 | 37171 | 35439 | 1115.44 | 30873 | 29899.8 | 542.86 |
| | | 2op | 42816 | 42271.63 | 227.85 | 42653 | 41780.63 | 431.71 | 37145 | 35642.3 | 1000.69 | 30832 | 29915.87 | 559.2 |
| | 50 | rnd | 43541 | 42924.67 | 272.15 | 43080 | 42438.2 | 300.1 | 39783 | 38217.07 | 851.32 | 32133 | 31004.3 | 598.54 |
| | | 2op | 43423 | 42986.5 | 183.42 | 42845 | 42398.03 | 244.35 | 39902 | 38454.9 | 693.12 | 31872 | 30751.13 | 533.55 |

Table A.1794: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47539 | 47310.5 | 163.47 | 47096 | 46846.6 | 207.37 | 46137 | 44836.3 | 589.12 | 40752 | 39131.9 | 860.97 |
| | | 2op | 47541 | 47331.47 | 155.75 | 47326 | 46816.83 | 307.65 | 46182 | 45087.6 | 480.88 | 41309 | 39169.9 | 1118.93 |
| | 50 | rnd | 47804 | 47494.2 | 142.39 | 47504 | 47143.33 | 185.59 | 46427 | 46060 | 266.62 | 43574 | 41479.27 | 1106.36 |
| | | 2op | 47774 | 47529.83 | 135.8 | 47485 | 47175.77 | 173.76 | 46814 | 46208.3 | 323.69 | 43491 | 42051.4 | 890.27 |
| 51 | 20 | rnd | 47625 | 47322.37 | 154.29 | 47613 | 47186.6 | 179.54 | 47121 | 46661.3 | 208.07 | 45088 | 43735.1 | 597.53 |
| | | 2op | 47832 | 47419.77 | 145.92 | 47549 | 47249.57 | 171.31 | 47109 | 46681.27 | 262.31 | 44863 | 44016.87 | 503.29 |
| | 50 | rnd | 47837 | 47533.17 | 121.86 | 47651 | 47320.83 | 148.43 | 47309 | 46959.23 | 228.59 | 45854 | 45060.37 | 442.43 |
| | | 2op | 47801 | 47573.43 | 90.64 | 47684 | 47400.37 | 145.38 | 47497 | 47107.5 | 208.07 | 46108 | 45053.5 | 562.65 |

Table A.1795: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 42091 | 41619.57 | 234.4 | 38922 | 37897.83 | 653.52 | 30743 | 29332.7 | 544.12 | 27527 | 26579.17 | 382.04 |
| | | 2op | 42153 | 41719.33 | 250.51 | 39457 | 37753.57 | 747.23 | 30979 | 29637.23 | 612.28 | 27400 | 26729.6 | 457.29 |
| | 50 | rnd | 42775 | 42269.07 | 206.78 | 41121 | 39566.67 | 621.54 | 32785 | 31390.03 | 845.71 | 28055 | 26729.83 | 434.83 |
| | | 2op | 42672 | 42262.23 | 177.42 | 40653 | 39685.03 | 593.2 | 32957 | 31341.03 | 945.38 | 27535 | 26968.87 | 312.83 |
| 51 | 20 | rnd | 42737 | 42253.63 | 225.51 | 42282 | 41579.2 | 389.23 | 37374 | 35570.6 | 790.39 | 30755 | 29760.97 | 518.32 |
| | | 2op | 42602 | 42244.17 | 213.45 | 42821 | 41867.97 | 418.41 | 36590 | 35377.27 | 812.05 | 30796 | 29740.97 | 553.97 |
| | 50 | rnd | 43371 | 42935.33 | 235.01 | 43024 | 42394.03 | 306.79 | 39691 | 38011.17 | 954.75 | 32493 | 30714.37 | 499.7 |
| | | 2op | 43224 | 42870.13 | 178.18 | 42939 | 42443.97 | 245.53 | 39828 | 38270.43 | 605.55 | 32335 | 30911.43 | 604.79 |

Table A.1796: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47601 | 47309.87 | 149.32 | 47200 | 46823.43 | 238.16 | 45765 | 44778.1 | 568.55 | 40521 | 39020.23 | 967.21 |
| | | 2op | 47683 | 47328.07 | 157.29 | 47303 | 46860.07 | 230.29 | 45801 | 44886.9 | 639.24 | 39990 | 38676.1 | 893.56 |
| | 50 | rnd | 47855 | 47442.4 | 171.03 | 47684 | 47065.73 | 256.81 | 46878 | 45856.97 | 375.13 | 42808 | 41384.97 | 843.29 |
| | | 2op | 47801 | 47490.13 | 114.04 | 47403 | 47136.8 | 159.02 | 46576 | 46031.47 | 324.55 | 42651 | 41392.23 | 851.65 |
| 51 | 20 | rnd | 47680 | 47370 | 172.42 | 47569 | 47151.93 | 201.77 | 47076 | 46631.37 | 264.75 | 45294 | 43782.7 | 700.53 |
| | | 2op | 47695 | 47412.8 | 182.78 | 47598 | 47256.1 | 175.06 | 47110 | 46712.9 | 273.18 | 45018 | 44053.87 | 658.85 |
| | 50 | rnd | 47975 | 47518 | 155.35 | 47576 | 47267.37 | 192.67 | 47305 | 47034.13 | 157.1 | 45729 | 44852.77 | 561.71 |
| | | 2op | 47801 | 47607.23 | 119.21 | 47735 | 47368.23 | 177.13 | 47444 | 47011.17 | 169.5 | 45848 | 45096.53 | 503.02 |

Table A.1797: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 42671 | 42064.63 | 201.31 | 42671 | 42064.63 | 201.31 | 33487 | 32085.3 | 652.2 | 27597 | 26671.93 | 355.89 |
| | | 2op | 42492 | 42172.13 | 171.63 | 42492 | 42172.13 | 171.63 | 33649 | 31769.07 | 1196.31 | 27707 | 26840.4 | 488.56 |
| | 50 | rnd | 42637 | 42300.93 | 208.71 | 42637 | 42300.93 | 208.71 | 35269 | 32280.43 | 1318.55 | 28113 | 26929.3 | 526.54 |
| | | 2op | 42829 | 42355.57 | 211.06 | 42829 | 42355.57 | 211.06 | 34655 | 32607.07 | 977.08 | 28045 | 26926.93 | 424.93 |
| 51 | 20 | rnd | 43418 | 42823 | 218.06 | 43418 | 42823 | 218.06 | 39818 | 38180.57 | 800.09 | 31373 | 29949.67 | 695.85 |
| | | 2op | 43403 | 42886.1 | 231.9 | 43403 | 42886.1 | 231.9 | 39754 | 38307.9 | 730.99 | 31124 | 29713.07 | 587.04 |
| | 50 | rnd | 42868 | 42257.07 | 280.39 | 42868 | 42257.07 | 280.39 | 41320 | 39641.53 | 601.16 | 31906 | 30954.6 | 578.07 |
| | | 2op | 42943 | 42364.13 | 239.21 | 42943 | 42364.13 | 239.21 | 40826 | 39777.87 | 745.48 | 32457 | 30932.07 | 688.03 |

Table A.1798: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47589 | 47333.73 | 148.34 | 47398 | 47240.17 | 124.66 | 45590 | 44779.5 | 344.38 | 39790 | 38298.43 | 630.99 |
| | | 2op | 47737 | 47419.93 | 153.78 | 47564 | 47293.07 | 143.3 | 45850 | 44878.03 | 416.69 | 39532 | 37881.97 | 822.85 |
| | 50 | rnd | 47765 | 47558.43 | 103.44 | 47777 | 47364.67 | 161.09 | 46566 | 45922 | 401.65 | 42474 | 40949.37 | 629.83 |
| | | 2op | 47740 | 47582.5 | 88.29 | 47580 | 47343 | 136.36 | 46735 | 46002.97 | 336.15 | 42160 | 40988.6 | 589.15 |
| 51 | 20 | rnd | 47679 | 47445.23 | 129.36 | 47678 | 47415.57 | 141.56 | 47224 | 46729.73 | 269.54 | 42760 | 39787.17 | 1313.83 |
| | | 2op | 47774 | 47537.2 | 131.54 | 47827 | 47492.97 | 144.23 | 47242 | 46817.63 | 232.13 | 43046 | 40001.17 | 1252.59 |
| | 50 | rnd | 47828 | 47610.93 | 131.8 | 47737 | 47507.3 | 111.5 | 47433 | 47101.87 | 193.97 | 44915 | 41617.03 | 1696.12 |
| | | 2op | 47845 | 47663.9 | 100.55 | 47766 | 47583.77 | 102.58 | 47506 | 47086.2 | 158.26 | 45031 | 41587.03 | 1817.29 |

Table A.1799: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48580 | 48126.63 | 245.32 | 45052 | 43521.4 | 931.66 | 35355 | 34172.3 | 663.26 | 31914 | 31052.8 | 410.94 |
| | | 2op | 48806 | 48158.7 | 303.51 | 45014 | 43120.5 | 1063.58 | 35928 | 34462 | 633.21 | 31975 | 31207.9 | 417.66 |
| | 50 | rnd | 49835 | 49251.1 | 226.65 | 47130 | 46090.07 | 639.34 | 39244 | 36642.93 | 1056.91 | 32133 | 31352.8 | 410.52 |
| | | 2op | 49516 | 49215 | 188.38 | 46909 | 45993.1 | 759.11 | 37795 | 36179.7 | 1064.82 | 32384 | 31391.2 | 499.11 |
| 51 | 20 | rnd | 49206 | 48635.43 | 243.81 | 49113 | 48414.53 | 393.09 | 43143 | 40781.97 | 1127.79 | 35641 | 34504.7 | 479.68 |
| | | 2op | 49238 | 48818.3 | 237.52 | 49176 | 48531.07 | 481.94 | 42536 | 40618.27 | 1009.1 | 35324 | 34493.57 | 458.72 |
| | 50 | rnd | 50267 | 49830.6 | 215.38 | 49998 | 49391.57 | 361.48 | 45232 | 43916.17 | 849.96 | 36765 | 35571.03 | 583.33 |
| | | 2op | 50361 | 49859.73 | 258.75 | 49991 | 49429.93 | 342.47 | 45482 | 44009.4 | 1048.61 | 37291 | 35685.47 | 717.39 |

Table A.1800: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55579 | 55218.37 | 184.11 | 55144 | 54744.1 | 194.51 | 53441 | 52525.4 | 573.48 | 46964 | 45583 | 831.84 |
| | | 2op | 55604 | 55303.27 | 152.7 | 55372 | 54754.53 | 283.06 | 53596 | 52452.17 | 463.76 | 46770 | 45231.77 | 995.68 |
| | 50 | rnd | 55697 | 55448.77 | 175.4 | 55292 | 55037.3 | 180.13 | 54608 | 53927.2 | 343.96 | 50194 | 48587.87 | 888.97 |
| | | 2op | 55760 | 55439.7 | 181.27 | 55502 | 55085 | 215.48 | 54676 | 53983.73 | 416.68 | 50217 | 49177.37 | 751.49 |
| 51 | 20 | rnd | 55565 | 55310.43 | 173.35 | 55656 | 55155.3 | 224.69 | 55062 | 54478.47 | 327.35 | 52644 | 51349.53 | 545.43 |
| | | 2op | 55759 | 55351.37 | 203.88 | 55454 | 55085.47 | 210.58 | 55032 | 54596.7 | 227.45 | 52272 | 51193 | 739.41 |
| | 50 | rnd | 55764 | 55527.27 | 125.32 | 55708 | 55307.83 | 161 | 55318 | 54930.27 | 239.7 | 53630 | 52772.9 | 501.58 |
| | | 2op | 55866 | 55513.07 | 139.07 | 55571 | 55302.23 | 139.09 | 55422 | 54965.3 | 227.8 | 53661 | 52643.9 | 671.25 |

Table A.1801: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48492 | 48060.33 | 250.11 | 44580 | 43497.43 | 691.25 | 35114 | 33933.5 | 584.37 | 31707 | 31012.57 | 363.47 |
| | | 2op | 48304 | 47996.2 | 196.97 | 44819 | 43516.57 | 725.94 | 35541 | 34193.9 | 630.29 | 31929 | 30862.8 | 405.33 |
| | 50 | rnd | 49409 | 49045.17 | 166.71 | 46673 | 45733.33 | 704.66 | 37633 | 36018.87 | 835.31 | 32272 | 31303.67 | 449.56 |
| | | 2op | 49713 | 49120.87 | 253.41 | 47023 | 45757.43 | 787.1 | 38292 | 36301.87 | 872.77 | 32270 | 31120.07 | 395.35 |
| 51 | 20 | rnd | 49117 | 48678.4 | 250.98 | 48925 | 48298.93 | 385.97 | 42302 | 40746.93 | 870.75 | 35293 | 34344.47 | 445.74 |
| | | 2op | 49176 | 48716.7 | 259.57 | 49157 | 48398.07 | 482.17 | 42939 | 41172 | 968.3 | 35178 | 34400.9 | 486.58 |
| | 50 | rnd | 50295 | 49760.6 | 277.25 | 50040 | 49262.83 | 377.24 | 45419 | 44296.9 | 806.76 | 36963 | 35574.63 | 621.12 |
| | | 2op | 50323 | 49848.03 | 227.67 | 50217 | 49414.67 | 401.17 | 45342 | 44047.3 | 947.49 | 36813 | 35614.1 | 717.33 |

Table A.1802: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55723 | 55223.47 | 230.26 | 55174 | 54750.9 | 231.37 | 53471 | 52300.23 | 622.6 | 46851 | 45150.4 | 1168.81 |
| | | 2op | 55607 | 55301.23 | 143.12 | 55264 | 54799.13 | 193.02 | 53152 | 52336.77 | 507.54 | 47089 | 45298.9 | 948.68 |
| | 50 | rnd | 55745 | 55437.7 | 170.93 | 55381 | 54916.7 | 234.39 | 54127 | 53500.4 | 447.63 | 49760 | 48508.57 | 786.63 |
| | | 2op | 55704 | 55407.5 | 170.51 | 55656 | 55031.5 | 217.24 | 54428 | 53729.13 | 370.15 | 49617 | 48484.67 | 758.64 |
| 51 | 20 | rnd | 55736 | 55335.17 | 208.82 | 55458 | 55020.63 | 229.25 | 55043 | 54443.47 | 319.33 | 52112 | 51344.13 | 432.92 |
| | | 2op | 55825 | 55415.87 | 185.46 | 55474 | 55096.97 | 225.4 | 54939 | 54548.33 | 269.35 | 52603 | 51408.6 | 756.57 |
| | 50 | rnd | 55780 | 55572.9 | 131.42 | 55410 | 55231.87 | 139.66 | 55374 | 54929.73 | 259.38 | 53554 | 52376.37 | 575.36 |
| | | 2op | 55816 | 55557.83 | 159.44 | 55597 | 55299.43 | 200.22 | 55450 | 54969.33 | 247.43 | 53673 | 52613.37 | 698.89 |

Table A.1803: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48803 | 48355.33 | 213.82 | 48803 | 48355.33 | 213.82 | 38728 | 36993.57 | 757.97 | 31893 | 31245.13 | 421.06 |
| | | 2op | 48696 | 48357.3 | 198.26 | 48696 | 48357.3 | 198.26 | 38099 | 36953.43 | 609.56 | 32135 | 31264.87 | 458.02 |
| | 50 | rnd | 49259 | 48686.13 | 235.06 | 49259 | 48686.13 | 235.06 | 39575 | 37101.37 | 1483.22 | 31985 | 31189.2 | 370.68 |
| | | 2op | 49043 | 48724.27 | 208.76 | 49043 | 48724.27 | 208.76 | 39696 | 37542.53 | 1087.94 | 32466 | 31329 | 555.45 |
| 51 | 20 | rnd | 49747 | 49150.2 | 215.52 | 49747 | 49150.2 | 215.52 | 45683 | 44076.6 | 957.17 | 36209 | 34656.17 | 748.35 |
| | | 2op | 49961 | 49247.37 | 301.7 | 49961 | 49247.37 | 301.7 | 45465 | 44152.87 | 841.55 | 36235 | 34441.4 | 832.18 |
| | 50 | rnd | 48949 | 48440.23 | 223.04 | 48949 | 48440.23 | 223.04 | 46729 | 45570.57 | 758.34 | 36661 | 35736.37 | 407.47 |
| | | 2op | 49188 | 48664.6 | 282.8 | 49188 | 48664.6 | 282.8 | 47209 | 45851 | 913.36 | 37210 | 35694.9 | 798.64 |

Table A.1804: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55665 | 55336.03 | 183.25 | 55544 | 55156.33 | 222.89 | 53280 | 52561.43 | 428.23 | 46264 | 44427.63 | 876.78 |
| | | 2op | 55588 | 55322.87 | 145.91 | 55485 | 55191.57 | 139.78 | 53247 | 52396 | 527.59 | 45843 | 44267.7 | 677.71 |
| | 50 | rnd | 55757 | 55497.27 | 147.07 | 55705 | 55323.37 | 204.23 | 54470 | 53546.3 | 460.29 | 49170 | 47826.1 | 815.9 |
| | | 2op | 55836 | 55562.87 | 148.33 | 55712 | 55393.3 | 185.09 | 54395 | 53730.87 | 443.7 | 49137 | 48093.9 | 764.42 |
| 51 | 20 | rnd | 55615 | 55376.07 | 174.38 | 55614 | 55344.3 | 195.51 | 55078 | 54564.9 | 270.21 | 50133 | 45791.13 | 1577.54 |
| | | 2op | 55577 | 55400.13 | 136.41 | 55811 | 55377.03 | 166.68 | 55153 | 54673.43 | 295.43 | 50637 | 45995.23 | 1576.3 |
| | 50 | rnd | 55823 | 55575.73 | 131.48 | 55849 | 55491.47 | 136.7 | 55335 | 54962.03 | 194.15 | 52059 | 47703.3 | 1923.03 |
| | | 2op | 55838 | 55585.03 | 120.21 | 55788 | 55561 | 121.36 | 55490 | 54945.27 | 234.66 | 52721 | 48049.47 | 1888.35 |

Table A.1805: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

**Results With No Post Optimization and Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47286 | 47054.33 | 124.55 | 47270 | 47048.3 | 111.16 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47238 | 47043 | 117.89 | 47269 | 47055.97 | 111.47 | 47274 | 47272.03 | 10.77 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47333 | 47143.93 | 103.26 | 47339 | 47150.37 | 103.67 | 47392 | 47139.23 | 123.14 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47262 | 47118.77 | 97.81 | 47278 | 47119.33 | 113.72 | 47356 | 47144.17 | 126.42 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.1806: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47380 | 47258.03 | 64.55 | 47343 | 47218.9 | 61.62 | 47394 | 47211.87 | 80.39 | 47344 | 47225.17 | 77.3 |
| | | 2op | 47382 | 47314.07 | 34.11 | 47359 | 47280.23 | 21.13 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47382 | 47274.3 | 69.99 | 47443 | 47314.23 | 68.07 | 47336 | 47213.43 | 76.41 | 47321 | 47177.3 | 66.83 |
| | | 2op | 47432 | 47345.03 | 35.44 | 47369 | 47313.93 | 36.31 | 47325 | 47275.7 | 9.31 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47367 | 47267.07 | 67.89 | 47458 | 47345.7 | 54.14 | 47338 | 47211.03 | 64.15 | 47341 | 47208.73 | 87.12 |
| | | 2op | 47398 | 47328.23 | 38.4 | 47412 | 47344.67 | 40.63 | 47365 | 47279.37 | 20.61 | 47274 | 47274 | 0 |
| | 50 | rnd | 47396 | 47276.63 | 62.28 | 47444 | 47366.63 | 55.21 | 47386 | 47261.57 | 74.87 | 47359 | 47243.27 | 86.58 |
| | | 2op | 47401 | 47333.93 | 31.58 | 47437 | 47379.37 | 25.37 | 47344 | 47276.33 | 12.78 | 47274 | 47274 | 0 |

Table A.1807: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47270 | 47088.13 | 102.88 | 47284 | 47078.87 | 131.36 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47354 | 47059.07 | 131.45 | 47271 | 47086.77 | 126.83 | 47274 | 47253.6 | 67.1 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47332 | 47124.53 | 85.24 | 47332 | 47125.33 | 87.53 | 47292 | 47149.57 | 78.18 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47278 | 47089.7 | 112.54 | 47286 | 47099.7 | 111.08 | 47358 | 47115.27 | 124.75 | 47274 | 47271.8 | 12.05 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.1808: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47359 | 47246.37 | 69.21 | 47347 | 47248.17 | 66.1 | 47365 | 47205.9 | 76.91 | 47429 | 47206.93 | 96.41 |
| | | 2op | 47413 | 47331.4 | 40.2 | 47360 | 47283.57 | 22.98 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47448 | 47258.33 | 58.15 | 47434 | 47298.4 | 76.63 | 47345 | 47176.87 | 89.41 | 47310 | 47174.8 | 86.64 |
| | | 2op | 47398 | 47345.8 | 30.02 | 47398 | 47319.27 | 41.07 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47360 | 47280.37 | 64.52 | 47421 | 47340.7 | 47.36 | 47340 | 47205.4 | 71.64 | 47356 | 47180.4 | 112.18 |
| | | 2op | 47396 | 47312.2 | 38.6 | 47431 | 47352.6 | 38.95 | 47357 | 47276.77 | 15.15 | 47274 | 47274 | 0 |
| | 50 | rnd | 47415 | 47284.2 | 62.5 | 47419 | 47368.47 | 38.27 | 47402 | 47266.67 | 69.19 | 47409 | 47242 | 77.51 |
| | | 2op | 47410 | 47335.17 | 40.82 | 47467 | 47391.1 | 26.6 | 47359 | 47283.93 | 22.75 | 47274 | 47274 | 0 |

Table A.1809: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47303 | 47125.57 | 96.27 | 47310 | 47121.5 | 96.85 | 47274 | 47265.97 | 44 | 47274 | 47274 | 0 |
| | | 2op | 47348 | 47276.47 | 13.51 | 47348 | 47276.47 | 13.51 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47369 | 47181.3 | 109.36 | 47369 | 47180.73 | 106.9 | 47274 | 47252.83 | 55.15 | 47274 | 47274 | 0 |
| | | 2op | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47360 | 47257.47 | 65.9 | 47384 | 47258.37 | 67.92 | 47419 | 47229.07 | 92.89 | 47274 | 47274 | 0 |
| | | 2op | 47378 | 47308.3 | 37.32 | 47378 | 47308.3 | 37.32 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47438 | 47296.57 | 68.82 | 47420 | 47297.53 | 64.18 | 47367 | 47186.63 | 76.51 | 47274 | 47274 | 0 |
| | | 2op | 47436 | 47310.7 | 50.32 | 47436 | 47310.07 | 50.36 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |

Table A.1810: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47345 | 47258.6 | 53.38 | 47355 | 47244.57 | 55.09 | 47354 | 47209.63 | 74.77 | 47362 | 47197.83 | 71.68 |
| | | 2op | 47429 | 47342.57 | 36.93 | 47403 | 47308.57 | 39.41 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47393 | 47288.57 | 51.83 | 47383 | 47269.37 | 56.34 | 47328 | 47223.47 | 65.37 | 47330 | 47211.03 | 88.71 |
| | | 2op | 47433 | 47350.87 | 34.15 | 47401 | 47325.33 | 38.03 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47407 | 47277.17 | 64.38 | 47447 | 47287.3 | 73.33 | 47320 | 47200.27 | 59.56 | 47399 | 47213.5 | 87.51 |
| | | 2op | 47388 | 47344.97 | 25.92 | 47388 | 47345.5 | 27.15 | 47313 | 47275.3 | 7.12 | 47274 | 47274 | 0 |
| | 50 | rnd | 47386 | 47317.87 | 37.65 | 47406 | 47294.33 | 66.56 | 47416 | 47250.8 | 73.46 | 47304 | 47183.93 | 91.43 |
| | | 2op | 47404 | 47360.27 | 19.76 | 47440 | 47325.57 | 39.86 | 47290 | 47274.53 | 2.92 | 47274 | 47274 | 0 |

Table A.1811: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151224 | 150900.67 | 352 | 151256 | 151153.53 | 19.35 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151210 | 150940.8 | 284.93 | 151249 | 151037.9 | 283.29 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151244 | 150961.13 | 315.84 | 151249 | 150890.43 | 369.07 | 151150 | 151147.2 | 15.34 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151059.1 | 231.88 | 151295 | 151061.53 | 238.86 | 151227 | 151117.5 | 117.12 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1812: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151322 | 151152.63 | 125.35 | 151271 | 151147.33 | 116.02 | 151231 | 151110.33 | 160.91 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151169.1 | 51.02 | 151291 | 151166.2 | 60.73 | 151255 | 151124.43 | 146.59 | 151171 | 151150.7 | 3.83 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151279 | 151120.77 | 125.61 | 151216 | 151149.03 | 53.11 | 151291 | 151149.17 | 112.13 | 151228 | 151151.3 | 21.59 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151249 | 151138.93 | 45.97 | 151229 | 151160.2 | 48.91 | 151279 | 151161.67 | 53.54 | 151215 | 151086.2 | 177.9 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1813: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151275 | 151065.8 | 202.88 | 151245 | 151128.6 | 108.42 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151220 | 150989.1 | 280.14 | 151267 | 151039.07 | 309.08 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151280 | 151023.7 | 289.64 | 151306 | 151071 | 235.96 | 151170 | 151129.17 | 117.94 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151233 | 151026.97 | 219.88 | 151237 | 151033.77 | 277.53 | 151172 | 151046.43 | 256.19 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1814: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151288 | 151139.57 | 118.36 | 151260 | 151139.43 | 113.88 | 151220 | 151145.6 | 28.64 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151272 | 151151.3 | 47.2 | 151237 | 151156.8 | 51.07 | 151226 | 151121.77 | 149.72 | 151150 | 151149.8 | 1.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151262 | 151142.3 | 117.27 | 151293 | 151153.13 | 64.68 | 151229 | 151087.33 | 184.83 | 151259 | 151153 | 34.39 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151236 | 151140.43 | 47.58 | 151249 | 151160.63 | 43.71 | 151273 | 151173.67 | 47.23 | 151223 | 151125.5 | 110.01 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1815: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151265 | 151105.13 | 188.01 | 151255 | 151095.3 | 202.53 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151068.93 | 288.32 | 151227 | 150968.7 | 306.24 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151290 | 151109.23 | 210.85 | 151290 | 151112.23 | 210.97 | 151249 | 151105.17 | 170.81 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151228 | 151081.07 | 207.51 | 151235 | 151076.93 | 207.62 | 151266 | 151093.37 | 218.88 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1816: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151241 | 151159.63 | 44.85 | 151263 | 151159.03 | 49.54 | 151228 | 151133.9 | 107.77 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151165.7 | 46.99 | 151217 | 151126.1 | 104.71 | 151297 | 151119.27 | 178.83 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151240 | 151146.23 | 49.16 | 151245 | 151157.07 | 45.82 | 151256 | 151169.07 | 57.18 | 151150 | 151149.27 | 4.02 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151299 | 151167.47 | 51.98 | 151259 | 151159.23 | 58.32 | 151222 | 151151.7 | 43.52 | 151295 | 151147.47 | 38.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.1817: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167083 | 166465.67 | 294.78 | 166879 | 166513.23 | 271.97 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166980 | 166376 | 300.81 | 166903 | 166410.9 | 325.13 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167096 | 166520.43 | 344.98 | 166930 | 166509.13 | 287.68 | 166880 | 166536.73 | 153.41 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166921 | 166497.47 | 320.52 | 166768 | 166518.6 | 227.41 | 166911 | 166501.33 | 291.39 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1818: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167325 | 166955.17 | 205.51 | 167284 | 166868.83 | 248.66 | 167320 | 166836.37 | 259.86 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167309 | 166972 | 168.51 | 167416 | 167042.27 | 237.21 | 167304 | 166918.57 | 180.5 | 167256 | 166586.87 | 187.24 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167332 | 166960.43 | 228.42 | 167331 | 167031.3 | 182.67 | 167335 | 166817.03 | 263.63 | 167127 | 166653.47 | 228.62 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167363 | 166965.77 | 172.33 | 167351 | 167124.5 | 175.11 | 167282 | 166869.1 | 247.93 | 167235 | 166857.63 | 212.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1819: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166930 | 166544.23 | 300.66 | 166749 | 166470.63 | 256.37 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166976 | 166466.13 | 344.2 | 166876 | 166408 | 317.92 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 166952 | 166532.33 | 267.19 | 166967 | 166482.87 | 267.92 | 166751 | 166491.67 | 152.46 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166964 | 166578.67 | 336.85 | 167015 | 166527.3 | 314.2 | 166894 | 166541.67 | 217.32 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1820: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167387 | 166917.97 | 218.43 | 167216 | 166874.57 | 199.53 | 167287 | 166731.03 | 229.52 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167403 | 166940.03 | 232.47 | 167337 | 166942.97 | 216.17 | 167350 | 166823.83 | 198.99 | 167018 | 166578.4 | 143.63 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167395 | 166992.37 | 185.38 | 167318 | 167002.63 | 203.72 | 167292 | 166878.47 | 208.76 | 167126 | 166740 | 227.78 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167314 | 166955.27 | 193.81 | 167404 | 167183.33 | 141.43 | 167284 | 166907.6 | 217.01 | 167156 | 166867.97 | 194.35 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1821: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166934 | 166528.37 | 295.43 | 166921 | 166517.4 | 318.91 | 166773 | 166526.6 | 49.18 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167029 | 166545.23 | 326.64 | 166862 | 166544.97 | 217.39 | 166929 | 166544.03 | 81.85 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167068 | 166723.37 | 199.72 | 167124 | 166727.47 | 199.16 | 167149 | 166739.63 | 193.94 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167016 | 166713.73 | 187.05 | 167016 | 166715.1 | 187.35 | 166922 | 166696.03 | 179.51 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1822: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167318 | 167006.8 | 203.65 | 167301 | 166973.4 | 193.54 | 167368 | 166960.43 | 219.45 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167360 | 167025 | 183.2 | 167395 | 167012.03 | 227 | 167321 | 166876.83 | 170.75 | 166815 | 166529.83 | 53.86 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167330 | 167008.57 | 155.69 | 167315 | 167009.43 | 169.14 | 167234 | 166925.63 | 200.5 | 166974 | 166549.3 | 111.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167373 | 167032.73 | 199.07 | 167413 | 167015.2 | 192.34 | 167363 | 166940.4 | 227.5 | 167245 | 166841.43 | 222.73 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.1823: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163097 | 162964.47 | 81.77 | 163080 | 162929.63 | 89.01 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163171 | 162939.33 | 118.26 | 163114 | 162934.1 | 84.08 | 163089 | 162980.57 | 50.75 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163106 | 162983.1 | 75.81 | 163120 | 162955.2 | 111.5 | 163086 | 162917.43 | 101.17 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163129 | 162970.5 | 111.37 | 163141 | 162953.2 | 108.07 | 163177 | 162928.1 | 105.23 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1824: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163162 | 162964 | 82.69 | 163168 | 162983 | 90.22 | 163195 | 162993.23 | 89.87 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163191 | 162980.97 | 85.15 | 163085 | 162956.7 | 69.52 | 163112 | 162984.5 | 79.44 | 163118 | 162973.13 | 71.26 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163151 | 162984.43 | 88.72 | 163150 | 163015.8 | 69.48 | 163093 | 162972.6 | 73.01 | 163182 | 162988.37 | 71.15 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163078 | 162971.73 | 65.78 | 163073 | 162981.23 | 66.59 | 163126 | 162949.43 | 92.28 | 163120 | 162980.43 | 70.72 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1825: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163070 | 162932.63 | 94.57 | 163100 | 162920.9 | 117.33 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163067 | 162925.13 | 113.67 | 163068 | 162937.23 | 102.08 | 163082 | 162960.2 | 81.58 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163120 | 162971.23 | 65.97 | 163085 | 162952.1 | 71.66 | 163092 | 162950.57 | 71.54 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162945.23 | 109.16 | 163167 | 162943.3 | 86.03 | 163075 | 162940.57 | 108.62 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1826: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163148 | 162965.5 | 68.67 | 163119 | 162971.9 | 75.51 | 163068 | 162973.47 | 45.34 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163098 | 162965.7 | 64.09 | 163095 | 162948 | 70.81 | 163100 | 162993.53 | 71.77 | 163083 | 162990.17 | 29.74 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163099 | 162990.73 | 76.52 | 163182 | 162995.73 | 73.74 | 163133 | 162968.67 | 70.55 | 163083 | 162969.97 | 56.31 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163155 | 162973.47 | 112.53 | 163103 | 162966.57 | 94.87 | 163093 | 162941.97 | 80.95 | 163116 | 162976.83 | 80.34 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1827: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163047 | 162938.13 | 99.39 | 163116 | 162950.73 | 91.84 | 163056 | 162912.03 | 86.1 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163075 | 162970.9 | 64.49 | 163101 | 162944.57 | 78.29 | 163081 | 162948.13 | 78.24 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163043 | 162914.07 | 85.06 | 163043 | 162914.07 | 85.06 | 163047 | 162929.43 | 100.07 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163150 | 162967.63 | 89 | 163150 | 162967.63 | 89 | 163144 | 162920.8 | 93.27 | 162995 | 162986.37 | 10.35 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1828: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163134 | 162978.3 | 80.52 | 163117 | 162984.67 | 79.61 | 163118 | 162947.5 | 78.29 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162973.1 | 87.98 | 163093 | 162997.8 | 56.61 | 163144 | 162984.17 | 77.96 | 163065 | 162961.67 | 114.09 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163161 | 162984.13 | 75.67 | 163133 | 162975.77 | 66.1 | 163154 | 162991.3 | 82.11 | 163104 | 162981.7 | 36.81 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163118 | 162985.87 | 71.3 | 163108 | 162979.93 | 91.08 | 163143 | 162997.37 | 64.08 | 163177 | 162976.97 | 111.1 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.1829: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179812 | 179677.5 | 88.01 | 179815 | 179690.97 | 76.49 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179878 | 179699.8 | 92.46 | 179860 | 179671.17 | 101.55 | 179839 | 179625.2 | 78.25 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179922 | 179737.67 | 99.98 | 179841 | 179684.13 | 97.48 | 179856 | 179686.1 | 79.61 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179874 | 179707.1 | 86.07 | 179970 | 179709.27 | 120.48 | 179901 | 179686.87 | 90.38 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1830: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179884 | 179702.27 | 91.18 | 179868 | 179681.67 | 88.27 | 179865 | 179629.23 | 78.58 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179973 | 179737.87 | 97.25 | 179892 | 179717.17 | 94.65 | 179862 | 179682.43 | 102.86 | 179822 | 179620.43 | 44.13 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179881 | 179721.77 | 85.33 | 179893 | 179678.23 | 111.08 | 179921 | 179699.43 | 100.01 | 179866 | 179653 | 86.12 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179846 | 179703.67 | 74.2 | 179961 | 179702.6 | 121.55 | 179869 | 179711.2 | 73.49 | 179975 | 179703.97 | 96.23 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1831: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179843 | 179698.07 | 83.7 | 179907 | 179688.4 | 91.56 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179870 | 179732.7 | 74.4 | 179892 | 179698.73 | 85 | 179872 | 179655.6 | 71.1 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179927 | 179724.2 | 85.27 | 179900 | 179686.1 | 111.9 | 179888 | 179681.8 | 86.82 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179833 | 179681.07 | 92.49 | 179848 | 179702.13 | 84.07 | 179920 | 179682.33 | 85.62 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1832: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179865 | 179702.3 | 101.36 | 179891 | 179687.47 | 96.02 | 179937 | 179673.83 | 102.83 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179885 | 179702.5 | 87.81 | 179920 | 179702.07 | 87.97 | 179898 | 179707.27 | 87.84 | 179734 | 179615.7 | 53.58 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179913 | 179738.73 | 87.62 | 179952 | 179730.4 | 92.83 | 180023 | 179712.1 | 102.42 | 179785 | 179645.03 | 55.96 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179949 | 179706.1 | 104.97 | 179836 | 179674.03 | 89.98 | 179931 | 179711.4 | 82.88 | 179932 | 179705.83 | 98.77 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1833: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179816 | 179685.17 | 86.78 | 179882 | 179677.47 | 89.57 | 179828 | 179676.57 | 87.56 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179901 | 179693.7 | 103.67 | 179958 | 179710.83 | 110.59 | 179872 | 179665.33 | 94.3 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179879 | 179695.03 | 85.52 | 179879 | 179695.03 | 85.52 | 179858 | 179678.13 | 98.57 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179916 | 179710.17 | 93.31 | 179916 | 179710.17 | 93.31 | 179827 | 179686.13 | 90.2 | 179642 | 179609.13 | 8.16 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1834: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179831 | 179719 | 80.84 | 179996 | 179707.37 | 90.83 | 179910 | 179710.17 | 85.27 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179854 | 179739.67 | 62.47 | 179911 | 179696.83 | 124.46 | 179854 | 179703.67 | 89.17 | 179759 | 179612.07 | 27.75 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179843 | 179709.4 | 89.13 | 179841 | 179686.77 | 81.47 | 179959 | 179708.97 | 82.57 | 179733 | 179613.83 | 26.73 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179845 | 179687.6 | 85.28 | 179877 | 179694.7 | 102.34 | 179952 | 179712.87 | 103.4 | 179879 | 179657.97 | 76.54 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.1835: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343090 | 342627.93 | 408.14 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343130 | 342584.93 | 446.18 | 342835 | 342694.9 | 241.36 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343107 | 342631.63 | 402.65 | 343032 | 342629.67 | 374.91 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342996 | 342643.97 | 288.44 | 343092 | 342626.77 | 384.89 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1836: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343123 | 342867.97 | 134.26 | 343158 | 342851.93 | 215.75 | 343012 | 342805.37 | 114.07 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343171 | 342878.6 | 134.05 | 343131 | 342833.07 | 243.58 | 343099 | 342755.8 | 290.48 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343011 | 342846 | 122.13 | 343203 | 342882.63 | 168.5 | 343022 | 342814.7 | 173.26 | 342915 | 342771.93 | 34.32 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343120 | 342896.7 | 96.94 | 343118 | 342872.3 | 137.17 | 343084 | 342881.3 | 179.5 | 343110 | 342726.5 | 234.13 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1837: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343093 | 342585.37 | 392.07 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343091 | 342580.7 | 393.26 | 342861 | 342717.93 | 190.04 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343064 | 342596.8 | 428.76 | 343168 | 342543.17 | 452.8 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343111 | 342806 | 235.38 | 343034 | 342764.27 | 252.67 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1838: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343109 | 342870 | 117.2 | 343163 | 342796.17 | 306.15 | 343051 | 342799.57 | 106.84 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343100 | 342903.2 | 107.83 | 343049 | 342828.03 | 216.63 | 343173 | 342797.07 | 225.63 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343049 | 342871.6 | 102.32 | 343156 | 342873.77 | 154.27 | 343126 | 342818.87 | 208.11 | 343007 | 342786.9 | 66 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343181 | 342884.13 | 133.46 | 343066 | 342787.4 | 276.02 | 343136 | 342845.23 | 256.17 | 343090 | 342820 | 223.44 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1839: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343140 | 342504.6 | 458.31 | 343140 | 342511.6 | 464.4 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342994 | 342546.4 | 432.62 | 342994 | 342524.03 | 428.31 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343079 | 342748.17 | 305.22 | 343079 | 342748.17 | 305.22 | 343067 | 342714.33 | 229.44 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343074 | 342683 | 321.63 | 343074 | 342683 | 321.63 | 343073 | 342567.6 | 373.35 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1840: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343125 | 342898.8 | 104.66 | 343129 | 342886.23 | 152.23 | 343091 | 342732.27 | 283.51 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343147 | 342945.97 | 91.11 | 343169 | 342926.93 | 94.31 | 343118 | 342760.43 | 244.79 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343118 | 342905 | 141.81 | 343092 | 342881.43 | 154.54 | 343208 | 342836.2 | 264.59 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343114 | 342874.8 | 108.34 | 343126 | 342884.17 | 100.63 | 343089 | 342893.83 | 133.37 | 342936 | 342760.27 | 70.6 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.1841: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226996 | 225497.37 | 835.16 | 226232 | 225417.97 | 617.72 | 226732 | 225243.57 | 791.22 | 226468 | 225211 | 738.34 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227264 | 225345.53 | 793.51 | 226685 | 225411.77 | 681.01 | 226798 | 225190.73 | 780.58 | 227269 | 225514.2 | 941.39 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226415 | 225618.3 | 500.43 | 226633 | 225497.7 | 739.51 | 226681 | 225059.1 | 878.83 | 226622 | 225269.9 | 790.65 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226770 | 225514.73 | 617.17 | 227096 | 225392.13 | 817.39 | 226665 | 225187.33 | 666.87 | 226606 | 225125.97 | 887.35 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |

Table A.1842: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226579 | 225654.83 | 664.96 | 226756 | 225336.4 | 896.69 | 226217 | 224996.4 | 643.26 | 226451 | 225242.47 | 790.03 |
| | | 2op | 226596 | 225920.1 | 351.73 | 226713 | 225738.7 | 376.68 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226939 | 225536.83 | 705.04 | 226534 | 225436.2 | 696.08 | 226616 | 225305.93 | 666.34 | 227086 | 225248.2 | 898.4 |
| | | 2op | 226888 | 226008.5 | 378.2 | 226891 | 225937.63 | 451.59 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226991 | 225365.27 | 835.09 | 227045 | 225688.33 | 623.15 | 226649 | 225205.33 | 760.43 | 226476 | 225048.53 | 676.18 |
| | | 2op | 226739 | 225949.93 | 368.15 | 226849 | 226241.17 | 358.45 | 226370 | 225636.17 | 271.28 | 225517 | 225517 | 0 |
| | 50 | rnd | 227069 | 225452.07 | 848.62 | 227555 | 226198.33 | 563.33 | 226510 | 225415.2 | 812.2 | 226693 | 225005.33 | 850.79 |
| | | 2op | 226824 | 226112.47 | 453.72 | 226888 | 226394.33 | 226.89 | 226537 | 225697.43 | 323.26 | 225517 | 225517 | 0 |

Table A.1843: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226800 | 225637.37 | 683.45 | 226883 | 225426.57 | 684.01 | 226884 | 225486.57 | 681.11 | 226456 | 225038.6 | 690.35 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226436 | 225362.17 | 671.57 | 226792 | 225280.23 | 848.65 | 226874 | 225221.33 | 865.92 | 226134 | 225097.23 | 671.09 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226995 | 225515.9 | 767.23 | 226910 | 225464.63 | 742.02 | 227383 | 225321.47 | 647.89 | 226387 | 224877.07 | 969.09 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226858 | 225455.57 | 728.53 | 226335 | 225388.67 | 572.2 | 226785 | 225252.7 | 838.63 | 226633 | 225154.33 | 873.97 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |

Table A.1844: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226793 | 225515.1 | 694.08 | 226537 | 225264.83 | 841.26 | 227010 | 225286.23 | 869.92 | 226654 | 225032 | 824.1 |
| | | 2op | 226795 | 226131.27 | 336.15 | 226691 | 225790.2 | 363 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227016 | 225601.1 | 615.22 | 226733 | 225423.97 | 681.48 | 227570 | 225494.2 | 831.67 | 226312 | 224948.63 | 929.61 |
| | | 2op | 226844 | 226051.97 | 332.28 | 226879 | 225935.17 | 403.95 | 226233 | 225540.87 | 130.72 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226863 | 225564.03 | 817.17 | 226812 | 225758.5 | 651.14 | 227135 | 225136.27 | 749.4 | 226609 | 224999.33 | 851.49 |
| | | 2op | 226660 | 226098.7 | 376.7 | 226711 | 226201.97 | 294.97 | 226840 | 225565.07 | 241.63 | 225517 | 225517 | 0 |
| | 50 | rnd | 226903 | 225503.8 | 801.58 | 227362 | 226101.33 | 659.96 | 226733 | 225399.07 | 800.88 | 226723 | 225197.03 | 752.23 |
| | | 2op | 226613 | 225967.07 | 300.65 | 226723 | 226289.63 | 180.11 | 226789 | 225783.9 | 381.35 | 225517 | 225517 | 0 |

Table A.1845: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226411 | 225509.9 | 611.81 | 227184 | 225360.33 | 701.71 | 226376 | 225252.13 | 637.37 | 226380 | 225086.17 | 767.64 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226950 | 225330.77 | 803.07 | 226046 | 225025.4 | 598.59 | 226885 | 225224.7 | 760.07 | 226501 | 225059.43 | 923.67 |
| | | 2op | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 227217 | 225642.63 | 847.37 | 226851 | 225600.7 | 821.85 | 226836 | 225393.53 | 683.59 | 226772 | 225165.97 | 702.34 |
| | | 2op | 227080 | 225890.7 | 484.62 | 227080 | 225890.7 | 484.62 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227024 | 225665.87 | 769.26 | 227150 | 225667.7 | 825.87 | 226708 | 225196.6 | 763.07 | 226709 | 225336.23 | 651.35 |
| | | 2op | 226586 | 225680.97 | 324.57 | 226586 | 225680.97 | 324.57 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |

Table A.1846: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226710 | 225608.03 | 784.46 | 226739 | 225484.93 | 851.96 | 226664 | 225134.2 | 705.25 | 226698 | 224937.13 | 928.79 |
| | | 2op | 226766 | 226189.3 | 340.29 | 226717 | 226030.9 | 382.47 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226916 | 225709.57 | 741.09 | 227110 | 225557.1 | 899.15 | 226991 | 225203.4 | 759.85 | 226308 | 225023.83 | 788.33 |
| | | 2op | 226794 | 226142.73 | 341.75 | 226862 | 226200.43 | 303.5 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 227120 | 225606.67 | 867.53 | 226821 | 225854 | 627.38 | 226759 | 225357.9 | 763.01 | 226480 | 225165.97 | 649.12 |
| | | 2op | 226899 | 226226.63 | 319.5 | 226887 | 226286.27 | 264.99 | 226671 | 225716.97 | 376.51 | 225517 | 225517 | 0 |
| | 50 | rnd | 227384 | 225916.7 | 595.02 | 226651 | 225640.3 | 743.02 | 226547 | 225183.3 | 866.82 | 226531 | 225310.23 | 714.46 |
| | | 2op | 226913 | 226287.1 | 243.03 | 226871 | 226196.03 | 269.74 | 226758 | 225719.23 | 335.74 | 225517 | 225517 | 0 |

Table A.1847: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441145 | 438926.53 | 1276.86 | 440158 | 438691.07 | 1047.55 | 440394 | 438436.23 | 1329.59 | 440646 | 438355.07 | 1545.38 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 442381 | 439450.37 | 1290.37 | 440344 | 438574.67 | 1034.78 | 440614 | 438473.77 | 1252.12 | 440874 | 438311.43 | 1338.47 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440865 | 438524.87 | 1238.74 | 440406 | 438849.27 | 1044.33 | 440790 | 438350.3 | 1011.71 | 440361 | 438273.67 | 1262.72 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440822 | 438747.67 | 1114.99 | 441795 | 439248.7 | 1163.72 | 440309 | 438738.37 | 1125.23 | 440197 | 438220.8 | 1002.45 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.1848: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 442164 | 439265.97 | 1491.13 | 441469 | 438811.43 | 1301.8 | 442079 | 438477.23 | 1231.64 | 441312 | 438675.77 | 1234.51 |
| | | 2op | 439048 | 438018.3 | 538.87 | 438642 | 437497 | 284.6 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441264 | 438848 | 1211.65 | 440748 | 438721.5 | 1220.65 | 440555 | 438831.67 | 1175.19 | 440145 | 438339.8 | 1030.8 |
| | | 2op | 438887 | 437903.53 | 474.24 | 438278 | 437560.6 | 288.92 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440920 | 438880.77 | 1267.65 | 440807 | 438528.9 | 1229.48 | 440297 | 438593.13 | 1278.88 | 440544 | 438110.77 | 1305.49 |
| | | 2op | 439246 | 437878.73 | 484.3 | 438735 | 437604.47 | 363.02 | 437775 | 437410.57 | 68.83 | 437398 | 437398 | 0 |
| | 50 | rnd | 441296 | 438778.17 | 1213.85 | 442269 | 439356.27 | 1269.81 | 440917 | 438792.7 | 1107.02 | 441191 | 438825.5 | 1259.97 |
| | | 2op | 438970 | 438079.97 | 404.04 | 439889 | 438000.2 | 559.8 | 438297 | 437455.4 | 218.67 | 437398 | 437398 | 0 |

Table A.1849: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441097 | 438985.7 | 1086.28 | 440595 | 438590.1 | 1274.51 | 440863 | 438490.27 | 1225.79 | 440676 | 438381.8 | 1197.4 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440779 | 438685.47 | 1240.31 | 441734 | 438654.8 | 1232 | 440772 | 438543.47 | 1177.38 | 440469 | 438434.07 | 989.61 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440729 | 438986.47 | 1084.19 | 441130 | 438775.23 | 1305.78 | 441451 | 438822.17 | 1403.64 | 440889 | 438600.53 | 1244.5 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441958 | 439020.67 | 1078.66 | 441393 | 439279.3 | 1106.29 | 441119 | 438669.53 | 1252.27 | 440396 | 438418.2 | 1077.26 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.1850: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441770 | 439198.1 | 1192.25 | 440984 | 438530.43 | 1345.62 | 440118 | 437911.5 | 1366.12 | 440021 | 438344.5 | 1234.66 |
| | | 2op | 439105 | 438102.73 | 540.18 | 438417 | 437454.47 | 219.59 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441369 | 439298.97 | 1025.76 | 441680 | 438927.73 | 1076.38 | 441063 | 438393.83 | 1376.42 | 440051 | 437912.63 | 1163.38 |
| | | 2op | 439662 | 438204.3 | 550.13 | 438971 | 437554.67 | 387.13 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 442115 | 439011.4 | 1326.28 | 441144 | 438807.8 | 1451.82 | 440377 | 438167 | 1117.34 | 440247 | 437981.77 | 1429.8 |
| | | 2op | 438919 | 437838.47 | 470.44 | 439548 | 437752.67 | 587.72 | 438357 | 437429.97 | 175.09 | 437398 | 437398 | 0 |
| | 50 | rnd | 441926 | 439196.93 | 1134.17 | 442078 | 438950.53 | 1503.35 | 441200 | 438805.7 | 1131.83 | 439938 | 437871.27 | 1325.81 |
| | | 2op | 439040 | 438082.47 | 435.92 | 438527 | 437672.07 | 382.13 | 437825 | 437412.23 | 77.96 | 437398 | 437398 | 0 |

Table A.1851: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441453 | 439012.43 | 1283.58 | 441181 | 439192.07 | 1288.63 | 441532 | 438532.9 | 1635.93 | 441010 | 438329.03 | 1551.12 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441049 | 438757.53 | 1158.59 | 441049 | 438776.97 | 1087.1 | 440169 | 438402.27 | 1285.38 | 440042 | 438236.13 | 1041.71 |
| | | 2op | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440953 | 439232.97 | 952.69 | 440953 | 439232.97 | 952.69 | 441367 | 438379.4 | 1543.8 | 440312 | 438623.57 | 1300.69 |
| | | 2op | 439393 | 437565.6 | 517.83 | 439393 | 437551.2 | 479.58 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441453 | 439129.57 | 1316.46 | 441453 | 439135.5 | 1311.86 | 441712 | 439081.93 | 1128.11 | 440590 | 438385.07 | 1244.08 |
| | | 2op | 439642 | 437609 | 645.91 | 439642 | 437609 | 645.91 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |

Table A.1852: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440746 | 438867.97 | 1301.33 | 440840 | 439018.83 | 1018.53 | 441978 | 438503.93 | 1117.13 | 440304 | 437982.37 | 1291.64 |
| | | 2op | 439073 | 438077.83 | 440.57 | 438880 | 437859.33 | 463 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441262 | 439237.67 | 1194.97 | 441532 | 438940.6 | 1701.11 | 441365 | 438503.73 | 1436.87 | 441129 | 438344.37 | 1304.22 |
| | | 2op | 439515 | 438255.73 | 430.01 | 438533 | 437996.13 | 375.73 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441626 | 439373.5 | 1255.63 | 441626 | 439483.53 | 1246.81 | 440925 | 438663.17 | 1334.47 | 440166 | 438301.8 | 929.55 |
| | | 2op | 439298 | 438160.37 | 446.56 | 438871 | 438019.5 | 356.86 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441146 | 439291.83 | 1180.87 | 442356 | 439312.2 | 1252.44 | 441429 | 438728.43 | 1388.88 | 440472 | 438328.1 | 1180.34 |
| | | 2op | 439101 | 438179.47 | 333.7 | 439600 | 438177.93 | 481.53 | 438193 | 437440 | 165.61 | 437398 | 437398 | 0 |

Table A.1853: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115741 | 114802.93 | 434.43 | 115993 | 114811.83 | 506.51 | 115744 | 114827.03 | 664.09 | 115808 | 114876.57 | 555.67 |
| | | 2op | 115851 | 115525.23 | 61.53 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115994 | 115026.07 | 562.12 | 115873 | 115188.57 | 458.97 | 116177 | 114914.37 | 609.54 | 115754 | 114670.17 | 543.26 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115833 | 114958.93 | 501.25 | 115851 | 114896.1 | 414.29 | 115725 | 114907.03 | 580.6 | 115753 | 114843.43 | 563.73 |
| | | 2op | 115917 | 115544.7 | 96.21 | 115782 | 115522.93 | 48.93 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115952 | 114948.67 | 541.85 | 116124 | 114938.4 | 570.57 | 115735 | 114860.03 | 496.8 | 115490 | 114664.33 | 445.38 |
| | | 2op | 115514 | 115513.97 | 0.18 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |

Table A.1854: *j*02459_7: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 116017 | 115155.63 | 442.87 | 115820 | 114859.47 | 490.41 | 116248 | 114811.33 | 564.26 | 115420 | 114584.37 | 517.36 |
| | | 2op | 116365 | 115668.37 | 247.26 | 115922 | 115529.4 | 183.78 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115821 | 115035.97 | 462.06 | 115872 | 114999.67 | 476.83 | 115768 | 114972.43 | 480.4 | 115601 | 114849.4 | 560.44 |
| | | 2op | 115987 | 115565.17 | 223.54 | 116071 | 115608.77 | 206.91 | 115547 | 115501.8 | 72.39 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116242 | 114986.67 | 667.04 | 116434 | 115413.63 | 396.86 | 115619 | 114781.63 | 453.06 | 115930 | 114819.53 | 502.83 |
| | | 2op | 115990 | 115543.13 | 190.85 | 115991 | 115687.67 | 170.18 | 115653 | 115430.97 | 154.08 | 115514 | 115514 | 0 |
| | 50 | rnd | 116066 | 115119.6 | 471.17 | 116299 | 115389 | 572.8 | 116243 | 115078.1 | 573.53 | 115717 | 114705.07 | 560.4 |
| | | 2op | 115921 | 115572.4 | 189.34 | 116428 | 115812.17 | 202.83 | 115858 | 115522.13 | 156 | 115514 | 115514 | 0 |

Table A.1855: *j*02459_7: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115817 | 115065.97 | 514.33 | 115626 | 114797.73 | 527.07 | 115976 | 114843.4 | 494.71 | 115737 | 114668.2 | 426.4 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115839 | 115173.83 | 459.92 | 115614 | 114912.83 | 433.06 | 115983 | 114694.33 | 569.27 | 115778 | 114784.53 | 549.5 |
| | | 2op | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116009 | 115007.27 | 459.63 | 116323 | 114945.27 | 614.95 | 115956 | 115033.4 | 587.18 | 115713 | 114743.93 | 547.53 |
| | | 2op | 115651 | 115518.57 | 25.01 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116139 | 114971.3 | 547.39 | 116308 | 115073.63 | 551.94 | 116026 | 115037.17 | 433.96 | 115847 | 114729.2 | 467.54 |
| | | 2op | 115864 | 115525.67 | 63.9 | 115514 | 115514 | 0 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |

Table A.1856: *j*02459_7: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 116006 | 115092.7 | 475.8 | 116087 | 115200.57 | 540.09 | 115774 | 114999.83 | 392.1 | 115283 | 114585.63 | 557.15 |
| | | 2op | 115970 | 115627.9 | 150.15 | 115998 | 115521.53 | 153.79 | 115514 | 115510.53 | 18.99 | 115514 | 115514 | 0 |
| | 50 | rnd | 115872 | 115043.9 | 483.68 | 115712 | 115220.23 | 378.52 | 115742 | 114704.2 | 528.3 | 115724 | 114705.97 | 525.73 |
| | | 2op | 116123 | 115599.5 | 240.74 | 116065 | 115609.83 | 245.35 | 115670 | 115509.27 | 79.91 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116017 | 115136.43 | 571.5 | 116047 | 115289.37 | 500.7 | 115740 | 114863 | 484.69 | 116175 | 114743.03 | 640.99 |
| | | 2op | 116082 | 115616.6 | 224.95 | 116448 | 115804 | 260.64 | 115888 | 115514.5 | 137.05 | 115514 | 115514 | 0 |
| | 50 | rnd | 116044 | 115151.23 | 525.99 | 116296 | 115595.97 | 388.16 | 116080 | 115046.37 | 535.27 | 115851 | 114823.7 | 513.33 |
| | | 2op | 116327 | 115626.7 | 258.47 | 116454 | 115845.23 | 132.71 | 116023 | 115516.77 | 165.15 | 115514 | 115514 | 0 |

Table A.1857: *j*02459_7: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115844 | 114944.93 | 508.51 | 116131 | 115072.57 | 533.08 | 115682 | 114727.33 | 433.13 | 115682 | 114816.4 | 533.12 |
| | | 2op | 116239 | 115635.93 | 266.59 | 116114 | 115609.7 | 215.92 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115914 | 114884.93 | 488.41 | 115777 | 114892.6 | 504.56 | 115645 | 114961.23 | 392.1 | 115617 | 114781.03 | 453.88 |
| | | 2op | 116121 | 115525.2 | 163.4 | 115940 | 115504.57 | 118.76 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116241 | 115363.1 | 479.46 | 116241 | 115322.57 | 437.13 | 115990 | 115012.53 | 501.07 | 115913 | 114669.37 | 709.08 |
| | | 2op | 116383 | 115601.03 | 315.1 | 116383 | 115594.63 | 321.14 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116147 | 115478.1 | 391.75 | 116662 | 115601.07 | 409.23 | 116207 | 115136.37 | 599.75 | 116174 | 114855.43 | 727.06 |
| | | 2op | 116442 | 115859.37 | 328.02 | 116442 | 115852.57 | 334.08 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |

Table A.1858: *j*02459_7: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115930 | 115111.73 | 395.23 | 116164 | 115122.13 | 521.87 | 115381 | 114658.13 | 463.67 | 115460 | 114632.77 | 620.94 |
| | | 2op | 116352 | 115637.87 | 266.33 | 116000 | 115602.8 | 208.92 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115846 | 115141.03 | 401.37 | 116094 | 114940.33 | 528.72 | 115831 | 114763.43 | 480.57 | 115837 | 114792.47 | 608.15 |
| | | 2op | 116018 | 115626.93 | 234.79 | 116213 | 115603.43 | 257.22 | 115514 | 115510.93 | 11.72 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116116 | 115195.97 | 524.34 | 116223 | 115345.77 | 516.56 | 115529 | 114858.47 | 453.21 | 115856 | 114623.7 | 539.41 |
| | | 2op | 116038 | 115609.9 | 223.01 | 116406 | 115678.7 | 266.25 | 116077 | 115499.3 | 208.18 | 115514 | 115514 | 0 |
| | 50 | rnd | 116171 | 115112.43 | 551.37 | 115915 | 115208.67 | 527.96 | 115665 | 114905.9 | 472.85 | 115604 | 114842.9 | 548.75 |
| | | 2op | 116091 | 115686.87 | 210.99 | 116039 | 115600.87 | 226.11 | 115795 | 115502.4 | 102.22 | 115514 | 115514 | 0 |

Table A.1859: *j*02459_7: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38534 | 38280.97 | 159 | 38522 | 38256.27 | 153.44 | 38593 | 38210 | 160.23 | 38526 | 38147.33 | 234.82 |
| | | 2op | 38408 | 38236.07 | 45.93 | 38389 | 38229.5 | 30.12 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 38578 | 38297.57 | 167.63 | 38618 | 38260.77 | 230.09 | 38548 | 38232.3 | 196.14 | 38534 | 38166.03 | 215.66 |
| | | 2op | 38415 | 38237.8 | 44.39 | 38414 | 38232.2 | 35.82 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38548 | 38234.77 | 226.42 | 38617 | 38312.97 | 167.02 | 38591 | 38270 | 204.43 | 38586 | 38250.1 | 226.13 |
| | | 2op | 38432 | 38278.6 | 85.69 | 38519 | 38345.77 | 89.96 | 38417 | 38230.43 | 35.24 | 38224 | 38224 | 0 |
| | 50 | rnd | 38567 | 38282.07 | 197.8 | 38623 | 38310.5 | 178.5 | 38613 | 38320.07 | 175.33 | 38638 | 38231.23 | 194.55 |
| | | 2op | 38440 | 38315.8 | 90.67 | 38437 | 38346.07 | 86.13 | 38407 | 38235.13 | 42.58 | 38224 | 38224 | 0 |

Table A.1860: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38562 | 38301.57 | 173.93 | 38639 | 38429.17 | 138.89 | 38581 | 38280.3 | 230.59 | 38531 | 38211.8 | 225.03 |
| | | 2op | 38414 | 38362.77 | 69.61 | 38437 | 38413.57 | 11.13 | 38557 | 38305.23 | 109.24 | 38224 | 38224 | 0 |
| | 50 | rnd | 38665 | 38293.2 | 211.3 | 38636 | 38410.17 | 170.67 | 38668 | 38292.03 | 230.51 | 38588 | 38197.73 | 176.85 |
| | | 2op | 38414 | 38390.3 | 45.51 | 38442 | 38427.37 | 14.51 | 38524 | 38408.23 | 31.36 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38566 | 38326.07 | 158.72 | 38694 | 38419.03 | 139.31 | 38650 | 38403.9 | 109.69 | 38580 | 38151.07 | 275.96 |
| | | 2op | 38437 | 38390.27 | 51.62 | 38442 | 38430.43 | 13.02 | 38418 | 38405.3 | 9.96 | 38409 | 38259.93 | 73.25 |
| | 50 | rnd | 38681 | 38313.03 | 203.92 | 38690 | 38444.5 | 159.88 | 38690 | 38390.47 | 175.05 | 38542 | 38238 | 206.59 |
| | | 2op | 38432 | 38387.57 | 50.46 | 38442 | 38438.2 | 9 | 38529 | 38418.5 | 24.86 | 38519 | 38324.87 | 92.83 |

Table A.1861: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38584 | 38249.13 | 199.44 | 38570 | 38262.9 | 191.95 | 38664 | 38205.2 | 221.54 | 38537 | 38174.77 | 228.22 |
| | | 2op | 38224 | 38224 | 0 | 38224 | 38224 | 0 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 38432 | 38164.63 | 185.73 | 38580 | 38264.8 | 208.7 | 38527 | 38260.43 | 181.29 | 38518 | 38177.9 | 242.61 |
| | | 2op | 38224 | 38224 | 0 | 38445 | 38231.37 | 40.35 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38612 | 38286.43 | 189.73 | 38567 | 38310.8 | 183.47 | 38462 | 38174.57 | 204.65 | 38546 | 38122.67 | 249.77 |
| | | 2op | 38424 | 38315.37 | 86.32 | 38436 | 38338.13 | 83.99 | 38419 | 38230.5 | 35.6 | 38224 | 38224 | 0 |
| | 50 | rnd | 38567 | 38291.5 | 149.4 | 38546 | 38310.27 | 163.36 | 38590 | 38216.5 | 186.08 | 38492 | 38210.7 | 199.32 |
| | | 2op | 38445 | 38287.1 | 88.31 | 38504 | 38360.33 | 74.25 | 38417 | 38244.07 | 54.19 | 38224 | 38224 | 0 |

Table A.1862: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38663 | 38370.53 | 183.17 | 38688 | 38449.33 | 146.81 | 38567 | 38136.13 | 281.51 | 38686 | 38216.17 | 224.51 |
| | | 2op | 38437 | 38378.57 | 66.02 | 38442 | 38417.33 | 14.97 | 38441 | 38271.2 | 80.57 | 38224 | 38224 | 0 |
| | 50 | rnd | 38509 | 38278.1 | 154.26 | 38681 | 38424.5 | 181.48 | 38563 | 38281.97 | 212.13 | 38619 | 38200.03 | 248.5 |
| | | 2op | 38414 | 38376.3 | 62.74 | 38442 | 38421.87 | 14.16 | 38557 | 38414.3 | 44.85 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38635 | 38350.6 | 170.02 | 38634 | 38453.33 | 109.95 | 38609 | 38345.47 | 177.26 | 38486 | 38199.9 | 182.12 |
| | | 2op | 38441 | 38396.23 | 47.55 | 38442 | 38426.5 | 13.82 | 38437 | 38411.83 | 13.72 | 38411 | 38253.03 | 66.24 |
| | 50 | rnd | 38662 | 38307.9 | 195.03 | 38635 | 38445.43 | 120.59 | 38644 | 38421.6 | 140.37 | 38633 | 38182 | 226.91 |
| | | 2op | 38414 | 38384.3 | 55.19 | 38442 | 38434.17 | 11.16 | 38437 | 38418.77 | 14.66 | 38530 | 38312.9 | 101.16 |

Table A.1863: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38642 | 38381.47 | 136.74 | 38575 | 38353.5 | 157.08 | 38663 | 38206.67 | 240.09 | 38655 | 38185.2 | 221.33 |
| | | 2op | 38442 | 38375.1 | 73.06 | 38441 | 38366.53 | 77.03 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| | 50 | rnd | 38629 | 38330.37 | 159.01 | 38612 | 38394.33 | 160.15 | 38626 | 38201.47 | 211.23 | 38626 | 38210.33 | 195.38 |
| | | 2op | 38437 | 38363.67 | 82.33 | 38437 | 38353.3 | 86.15 | 38224 | 38224 | 0 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38604 | 38357.5 | 153.02 | 38664 | 38352.87 | 168.32 | 38652 | 38253.73 | 179.48 | 38573 | 38214.4 | 188.94 |
| | | 2op | 38442 | 38424.6 | 13.82 | 38442 | 38441.67 | 1.27 | 38451 | 38331.73 | 91.07 | 38224 | 38224 | 0 |
| | 50 | rnd | 38572 | 38370.5 | 173.5 | 38651 | 38402.17 | 146.72 | 38515 | 38250.43 | 211.52 | 38491 | 38106.53 | 239.65 |
| | | 2op | 38442 | 38435.37 | 10.64 | 38442 | 38439.7 | 3.95 | 38418 | 38312.43 | 90.26 | 38224 | 38224 | 0 |

Table A.1864: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38683 | 38351.67 | 161.01 | 38661 | 38325.07 | 216.74 | 38634 | 38164.57 | 209.57 | 38612 | 38185.97 | 238.01 |
| | | 2op | 38414 | 38406.23 | 6.38 | 38418 | 38405.6 | 8.02 | 38436 | 38296.5 | 90.8 | 38224 | 38224 | 0 |
| | 50 | rnd | 38695 | 38393.23 | 156.29 | 38681 | 38375.73 | 188.54 | 38535 | 38210.73 | 184.82 | 38571 | 38214.37 | 238.86 |
| | | 2op | 38432 | 38410.9 | 5.97 | 38432 | 38409.93 | 5.62 | 38427 | 38333.67 | 85.76 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38636 | 38372.23 | 146.63 | 38614 | 38397 | 150.09 | 38690 | 38327.8 | 223.17 | 38553 | 38152.83 | 229.71 |
| | | 2op | 38437 | 38414.27 | 11.36 | 38442 | 38417.27 | 12.74 | 38437 | 38402.27 | 21.69 | 38224 | 38224 | 0 |
| | 50 | rnd | 38652 | 38400.07 | 122.41 | 38619 | 38454.7 | 115.36 | 38566 | 38239 | 201.35 | 38687 | 38171.97 | 260.43 |
| | | 2op | 38437 | 38411.47 | 6.59 | 38437 | 38409.53 | 6.4 | 38432 | 38389.17 | 47.01 | 38432 | 38247.33 | 61.02 |

Table A.1865: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47921 | 47597.23 | 222.05 | 47846 | 47537.33 | 229.16 | 47961 | 47547.23 | 337.94 | 47899 | 47546.2 | 261.82 |
| | | 2op | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 48034 | 47613.93 | 270.9 | 47894 | 47522.63 | 265.52 | 47917 | 47464 | 316.18 | 47862 | 47600.7 | 190.43 |
| | | 2op | 47742 | 47387.57 | 117.69 | 47705 | 47360.87 | 65 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47870 | 47585.3 | 220.5 | 47843 | 47546.53 | 290.98 | 47905 | 47584.07 | 210.88 | 48023 | 47503.47 | 271.02 |
| | | 2op | 47830 | 47517.1 | 191.54 | 47830 | 47535.47 | 186.62 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47948 | 47612.33 | 190.72 | 47897 | 47622.27 | 185.14 | 47998 | 47554.73 | 238.16 | 47849 | 47528.27 | 252.6 |
| | | 2op | 47758 | 47421.27 | 160.61 | 47814 | 47617 | 170.73 | 47738 | 47361.97 | 71.02 | 47349 | 47349 | 0 |

Table A.1866: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47887 | 47634.7 | 201.76 | 47961 | 47598.37 | 242.98 | 47899 | 47577.83 | 284.19 | 47846 | 47431.87 | 287.17 |
| | | 2op | 47758 | 47560.4 | 175.67 | 47758 | 47740.57 | 50.44 | 47742 | 47373.5 | 93.48 | 47349 | 47349 | 0 |
| | 50 | rnd | 48052 | 47583.2 | 266.79 | 47976 | 47679.03 | 219.24 | 47855 | 47557.7 | 224.18 | 47939 | 47515.83 | 257.85 |
| | | 2op | 47758 | 47531.4 | 181.21 | 47758 | 47756.97 | 3.05 | 47758 | 47436.47 | 149.75 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47934 | 47579.13 | 253.99 | 47977 | 47729.47 | 172.11 | 47953 | 47594.07 | 303.22 | 47939 | 47512.67 | 305.14 |
| | | 2op | 47758 | 47569.9 | 180.1 | 47758 | 47757.4 | 1.22 | 47758 | 47701.33 | 114.56 | 47349 | 47349 | 0 |
| | 50 | rnd | 47864 | 47498.3 | 244.8 | 47943 | 47608.87 | 242.41 | 47978 | 47612.03 | 232.9 | 47833 | 47486 | 232 |
| | | 2op | 47758 | 47519.23 | 163.37 | 47758 | 47756.8 | 1.49 | 47758 | 47748.1 | 9.55 | 47742 | 47362.1 | 71.75 |

Table A.1867: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48021 | 47635.27 | 187.35 | 47909 | 47630.5 | 225.44 | 47862 | 47579.8 | 254.74 | 47943 | 47560.4 | 313.84 |
| | | 2op | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47934 | 47542.97 | 253.67 | 47961 | 47605.63 | 234.32 | 48002 | 47575.93 | 260.72 | 48027 | 47545.97 | 262.63 |
| | | 2op | 47416 | 47351.23 | 12.23 | 47414 | 47351.17 | 11.87 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47933 | 47560.23 | 245.43 | 47868 | 47559.67 | 205.52 | 47923 | 47611.33 | 235.31 | 47866 | 47553.37 | 174.66 |
| | | 2op | 47758 | 47463.3 | 167.64 | 47758 | 47454.97 | 163.03 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 48043 | 47648.77 | 240.31 | 47897 | 47544.87 | 266.43 | 47915 | 47577.23 | 225.94 | 47972 | 47509.57 | 274.39 |
| | | 2op | 47758 | 47474.5 | 168.8 | 47758 | 47552.27 | 175.25 | 47458 | 47352.63 | 19.9 | 47349 | 47349 | 0 |

Table A.1868: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47923 | 47606.9 | 228.35 | 48030 | 47640.4 | 238.01 | 47864 | 47484.77 | 252.36 | 47925 | 47482.5 | 256.88 |
| | | 2op | 47758 | 47616.63 | 166.66 | 47758 | 47741 | 53.47 | 47758 | 47376.27 | 103.77 | 47349 | 47349 | 0 |
| | 50 | rnd | 47830 | 47514.73 | 281.53 | 47923 | 47634.33 | 235.57 | 47914 | 47520.23 | 269.74 | 47916 | 47568.33 | 236.33 |
| | | 2op | 47758 | 47542.57 | 182.33 | 47758 | 47755.93 | 4.64 | 47758 | 47463.33 | 175.76 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 48052 | 47612.5 | 260.85 | 47978 | 47723.43 | 191.86 | 47968 | 47656.3 | 173.46 | 47839 | 47510.6 | 228.83 |
| | | 2op | 47758 | 47512.27 | 168.74 | 47758 | 47757.4 | 1.22 | 47758 | 47613.87 | 169.85 | 47349 | 47349 | 0 |
| | 50 | rnd | 47877 | 47521 | 236.2 | 47864 | 47611.53 | 192.33 | 48050 | 47631.1 | 272.82 | 47916 | 47589.27 | 229.59 |
| | | 2op | 47758 | 47556.63 | 172.46 | 47758 | 47757.2 | 1.35 | 47758 | 47725.5 | 80.04 | 47738 | 47373.37 | 92.94 |

Table A.1869: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47668.43 | 179.28 | 47961 | 47647.5 | 194.33 | 47967 | 47606.47 | 197.48 | 48027 | 47525.53 | 293.73 |
| | | 2op | 47814 | 47635.97 | 162.84 | 47814 | 47618.37 | 168.93 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 48034 | 47702.27 | 197.28 | 48032 | 47604.37 | 243.09 | 47933 | 47567.07 | 217.95 | 47836 | 47558.2 | 261.46 |
| | | 2op | 47758 | 47635.83 | 163.78 | 47758 | 47630 | 170.96 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47972 | 47592.1 | 275.32 | 48052 | 47737.17 | 174.18 | 47952 | 47521.4 | 377.02 | 48043 | 47548.93 | 314.69 |
| | | 2op | 47758 | 47751.67 | 7.45 | 47758 | 47756.53 | 4.08 | 47758 | 47438.23 | 165.18 | 47349 | 47349 | 0 |
| | 50 | rnd | 47879 | 47632.07 | 205.85 | 47978 | 47638.33 | 214.15 | 47974 | 47628.07 | 230.92 | 47862 | 47546.23 | 215.16 |
| | | 2op | 47758 | 47753.87 | 7.21 | 47758 | 47753.17 | 9.58 | 47758 | 47573.33 | 188.45 | 47349 | 47349 | 0 |

Table A.1870: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48036 | 47561.9 | 305.73 | 47949 | 47583.7 | 229.28 | 48032 | 47596.57 | 236 | 47910 | 47539.4 | 262.32 |
| | | 2op | 47758 | 47596.7 | 170.5 | 47758 | 47634.67 | 157.67 | 47758 | 47402.5 | 138.77 | 47349 | 47349 | 0 |
| | 50 | rnd | 47973 | 47630.17 | 227.19 | 47977 | 47678 | 198.1 | 47944 | 47483.83 | 312.28 | 47943 | 47457.27 | 280.78 |
| | | 2op | 47758 | 47698.13 | 127.58 | 47758 | 47709.27 | 116.37 | 47758 | 47377.83 | 102.4 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47961 | 47642.77 | 269.05 | 48032 | 47605.7 | 260.7 | 47924 | 47611.53 | 277.57 | 47848 | 47578.77 | 181.18 |
| | | 2op | 47758 | 47741.87 | 61.61 | 47758 | 47755.67 | 5.5 | 47758 | 47579.57 | 192.97 | 47349 | 47349 | 0 |
| | 50 | rnd | 48052 | 47631.8 | 192.62 | 47923 | 47612.7 | 232.86 | 47973 | 47568.17 | 290.19 | 47898 | 47502.57 | 241.79 |
| | | 2op | 47758 | 47741.23 | 61.51 | 47758 | 47744.77 | 32.06 | 47758 | 47472.83 | 162.48 | 47349 | 47349 | 0 |

Table A.1871: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54876 | 54399.93 | 310.77 | 54998 | 54335.17 | 287.61 | 54876 | 54344.57 | 374.8 | 54921 | 54336.9 | 344.49 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 55093 | 54383.13 | 327.88 | 55024 | 54416.37 | 330.3 | 54985 | 54380 | 243.85 | 55100 | 54313.33 | 364.19 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54898 | 54295.1 | 430.67 | 54909 | 54414.27 | 341.58 | 54752 | 54290.43 | 372.14 | 54955 | 54322.97 | 270.66 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54903 | 54403.1 | 314.85 | 55078 | 54597.97 | 222.49 | 54960 | 54393.73 | 372.39 | 54951 | 54349.9 | 337.73 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |

Table A.1872: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54793 | 54295.93 | 273.53 | 55042 | 54617 | 281.13 | 54960 | 54386.57 | 293.82 | 54880 | 54300.37 | 341.91 |
| | | 2op | 54753 | 54729.6 | 19.87 | 54959 | 54742 | 43.65 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54895 | 54401.7 | 349.47 | 55036 | 54616.77 | 284.17 | 54884 | 54368.53 | 424.05 | 54827 | 54397.83 | 274.96 |
| | | 2op | 54753 | 54733.93 | 17.78 | 54756 | 54747.7 | 4.22 | 54745 | 54707.53 | 9.66 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 55010 | 54416.93 | 318.3 | 55020 | 54702.4 | 221.66 | 55030 | 54411.2 | 278.39 | 54895 | 54301.27 | 325.7 |
| | | 2op | 54754 | 54731.7 | 19.26 | 54771 | 54751.9 | 6.09 | 54747 | 54724.8 | 17.88 | 54741 | 54706.2 | 6.57 |
| | 50 | rnd | 54961 | 54531.8 | 238.89 | 55033 | 54729.57 | 224.56 | 55010 | 54442.87 | 377.26 | 54787 | 54312.47 | 299.41 |
| | | 2op | 54754 | 54740.5 | 13.14 | 54754 | 54752.2 | 4.22 | 54959 | 54744.03 | 43.8 | 54705 | 54705 | 0 |

Table A.1873: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55112 | 54443.47 | 335.24 | 55014 | 54381.13 | 405.03 | 55084 | 54432.3 | 355.28 | 55018 | 54299.83 | 353.09 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54837 | 54331.9 | 369.22 | 54866 | 54304.77 | 334.66 | 54902 | 54405.9 | 333.46 | 54912 | 54335.63 | 378.13 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 55096 | 54459.77 | 285.42 | 54773 | 54346.07 | 315.41 | 54927 | 54311.13 | 315.53 | 54801 | 54293 | 354.18 |
| | | 2op | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54951 | 54479.5 | 307.32 | 54931 | 54552.3 | 305.06 | 55046 | 54433.57 | 295.44 | 54924 | 54427.27 | 352.54 |
| | | 2op | 54745 | 54707.53 | 9.66 | 54710 | 54705.17 | 0.91 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |

Table A.1874: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54901 | 54400.77 | 319.38 | 55017 | 54643.03 | 251.92 | 54827 | 54341.97 | 352.12 | 54872 | 54356.33 | 359.93 |
| | | 2op | 54959 | 54740.03 | 44.92 | 54754 | 54735.17 | 15.2 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54901 | 54418.63 | 369.46 | 55044 | 54652.27 | 263.2 | 54880 | 54249 | 333.86 | 54788 | 54203.73 | 333.19 |
| | | 2op | 54754 | 54734.13 | 18.79 | 54756 | 54747.2 | 4.27 | 54745 | 54706.5 | 7.33 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54934 | 54441.47 | 294.08 | 55017 | 54653.27 | 241.31 | 55050 | 54398.23 | 320.94 | 54853 | 54379.4 | 243.98 |
| | | 2op | 54754 | 54732.47 | 18.76 | 54756 | 54749.93 | 4.63 | 54747 | 54726.5 | 20.52 | 54705 | 54705 | 0 |
| | 50 | rnd | 54974 | 54478.87 | 314.79 | 55133 | 54705 | 289.19 | 55075 | 54520.8 | 310.71 | 54805 | 54323.33 | 325.92 |
| | | 2op | 54754 | 54735.8 | 17.05 | 54771 | 54753.67 | 4.27 | 54959 | 54740.3 | 44.98 | 54705 | 54705 | 0 |

Table A.1875: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55039 | 54504.57 | 370.09 | 54864 | 54485.6 | 277.31 | 54921 | 54370.57 | 321.8 | 54842 | 54340.5 | 374.99 |
| | | 2op | 54754 | 54713.5 | 16.55 | 54754 | 54712.63 | 16.5 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 55135 | 54525.7 | 316.76 | 54882 | 54361.77 | 332.7 | 54866 | 54278.97 | 393.39 | 54899 | 54383.23 | 348.37 |
| | | 2op | 54754 | 54711.53 | 15.99 | 54754 | 54710.9 | 15.07 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54981 | 54605.4 | 307.96 | 55036 | 54761.87 | 205.64 | 55037 | 54481.4 | 340.66 | 54942 | 54183.1 | 423.38 |
| | | 2op | 54754 | 54741.33 | 14.81 | 54769 | 54748.8 | 6.08 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 55168 | 54752.33 | 221.71 | 55146 | 54653 | 315.35 | 54834 | 54346.83 | 325.27 | 54913 | 54309.4 | 397.13 |
| | | 2op | 54754 | 54748.17 | 5.57 | 54769 | 54745.37 | 11.98 | 54733 | 54705.93 | 5.11 | 54705 | 54705 | 0 |

Table A.1876: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54916 | 54462.3 | 417.34 | 54898 | 54534.97 | 295.39 | 54939 | 54354.97 | 361.88 | 54834 | 54348.53 | 281.78 |
| | | 2op | 54754 | 54740.73 | 14.42 | 54959 | 54747.63 | 42.45 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54962 | 54596.3 | 251.39 | 55008 | 54646.6 | 232.74 | 54937 | 54307.93 | 324.83 | 54945 | 54355.3 | 334.98 |
| | | 2op | 54754 | 54743.93 | 7.55 | 54754 | 54740.2 | 12.92 | 54741 | 54706.7 | 7.03 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 55119 | 54496.13 | 299.05 | 55034 | 54497.4 | 333.76 | 54871 | 54491.6 | 327.01 | 55031 | 54326.07 | 372.7 |
| | | 2op | 54756 | 54747.9 | 4.49 | 54756 | 54746.93 | 4.08 | 54747 | 54719.97 | 19.1 | 54705 | 54705 | 0 |
| | 50 | rnd | 54964 | 54584.7 | 245.25 | 55001 | 54623 | 249.28 | 54898 | 54395.33 | 447.39 | 54856 | 54238.9 | 380.1 |
| | | 2op | 54754 | 54746.8 | 3.66 | 54754 | 54740.5 | 11.94 | 54754 | 54715.93 | 19.32 | 54705 | 54705 | 0 |

Table A.1877: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11237.07 | 132.28 | 11478 | 11288.27 | 124.89 | 11394 | 11239.67 | 115.93 | 11478 | 11207.7 | 116.54 |
| | | 2op | 11109 | 11020.4 | 35.83 | 11394 | 11256.57 | 87.55 | 11109 | 11013.33 | 26.68 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11280 | 148.03 | 11478 | 11306.23 | 117.68 | 11478 | 11283.97 | 136.2 | 11478 | 11187.67 | 162.23 |
| | | 2op | 11305 | 11049.03 | 80.26 | 11373 | 11288.37 | 50.97 | 11373 | 11091.87 | 100.01 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 11478 | 11187.8 | 159.42 | 11478 | 11262.57 | 129.55 | 11478 | 11271.4 | 138.81 | 11478 | 11210.13 | 155.47 |
| | | 2op | 11109 | 11019.4 | 25.14 | 11285 | 11129.57 | 53.53 | 11305 | 11222.3 | 83.5 | 11109 | 11055.73 | 50.06 |
| | 50 | rnd | 11478 | 11228.27 | 136.19 | 11478 | 11328.2 | 111.72 | 11478 | 11335.17 | 111.36 | 11478 | 11214.73 | 152.09 |
| | | 2op | 11109 | 11069.73 | 45.01 | 11373 | 11240.73 | 81.74 | 11373 | 11289.37 | 48.7 | 11109 | 11032.87 | 42.13 |

Table A.1878: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11372 | 11163.17 | 185.28 | 11478 | 11283.67 | 97.36 | 11478 | 11292.17 | 159.33 | 11478 | 11235.47 | 155.04 |
| | | 2op | 11109 | 11026.73 | 36.79 | 11305 | 11143.9 | 71.29 | 11109 | 11109 | 0 | 11017 | 11003.93 | 3.55 |
| | 50 | rnd | 11413 | 11173.3 | 146.44 | 11478 | 11235.73 | 141.51 | 11478 | 11248.5 | 156.46 | 11478 | 11240.73 | 140.18 |
| | | 2op | 11109 | 11027.67 | 35.09 | 11285 | 11160.9 | 75.06 | 11285 | 11131.5 | 58.53 | 11109 | 11058.07 | 48.67 |
| 51 | 20 | rnd | 11411 | 11151.93 | 148.78 | 11478 | 11335.13 | 101.16 | 11478 | 11270.83 | 166.61 | 11478 | 11257.53 | 136.21 |
| | | 2op | 11109 | 11021.07 | 29.05 | 11109 | 11109 | 0 | 11285 | 11151.1 | 71.39 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11104.83 | 180.46 | 11478 | 11289.93 | 123.35 | 11478 | 11242.43 | 169.44 | 11478 | 11277.6 | 136.2 |
| | | 2op | 11109 | 11020.6 | 30.71 | 11109 | 11109 | 0 | 11305 | 11170.4 | 83.29 | 11109 | 11109 | 0 |

Table A.1879: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11230.13 | 170.13 | 11478 | 11320.5 | 111.25 | 11478 | 11225.67 | 137.73 | 11478 | 11175.8 | 158.56 |
| | | 2op | 11285 | 11026.67 | 63.08 | 11394 | 11279.3 | 57.75 | 11151 | 11023.47 | 43.5 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11218.07 | 135.86 | 11478 | 11293 | 144.26 | 11478 | 11255.73 | 114.37 | 11478 | 11217.8 | 134.3 |
| | | 2op | 11213 | 11022.93 | 48.02 | 11394 | 11297.97 | 42.04 | 11305 | 11091.07 | 94.05 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 11478 | 11213.67 | 148.09 | 11478 | 11230.6 | 124.76 | 11478 | 11261.6 | 105.37 | 11478 | 11190.27 | 175.77 |
| | | 2op | 11109 | 11038.6 | 40.66 | 11305 | 11141.6 | 68.5 | 11305 | 11201.43 | 89.68 | 11109 | 11072.47 | 49.02 |
| | 50 | rnd | 11478 | 11230.9 | 169.15 | 11478 | 11318.57 | 119.31 | 11478 | 11349.47 | 93.22 | 11478 | 11285.03 | 161.63 |
| | | 2op | 11305 | 11059.2 | 66.6 | 11373 | 11272.63 | 74.59 | 11373 | 11291.7 | 46.57 | 11305 | 11034.47 | 64.12 |

Table A.1880: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11413 | 11186.03 | 169.57 | 11478 | 11302.2 | 102.8 | 11478 | 11236.43 | 139.97 | 11478 | 11180.3 | 167.06 |
| | | 2op | 11109 | 11017.53 | 25.78 | 11285 | 11140.33 | 64.04 | 11305 | 11115.53 | 35.78 | 11017 | 11003.47 | 2.56 |
| | 50 | rnd | 11343 | 11113.1 | 200.56 | 11478 | 11256.97 | 140.15 | 11413 | 11238.03 | 138.98 | 11478 | 11263.2 | 117.05 |
| | | 2op | 11109 | 11020.6 | 29.23 | 11305 | 11168.77 | 81.01 | 11256 | 11113.9 | 26.84 | 11109 | 11032.87 | 42.13 |
| 51 | 20 | rnd | 11411 | 11154.5 | 186.11 | 11413 | 11263.07 | 132.91 | 11478 | 11322.17 | 104.69 | 11478 | 11268.4 | 120.47 |
| | | 2op | 11109 | 11022 | 28.67 | 11109 | 11109 | 0 | 11305 | 11132.17 | 60.42 | 11109 | 11109 | 0 |
| | 50 | rnd | 11413 | 11230.27 | 109.03 | 11478 | 11262.4 | 136.1 | 11478 | 11290.77 | 137.27 | 11478 | 11296.7 | 129.29 |
| | | 2op | 11109 | 11022.73 | 33.75 | 11109 | 11109 | 0 | 11285 | 11155.03 | 71.83 | 11109 | 11109 | 0 |

Table A.1881: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11237.8 | 147.52 | 11478 | 11332.23 | 107.05 | 11478 | 11205 | 188.23 | 11394 | 11182.2 | 159.84 |
| | | 2op | 11109 | 11069.87 | 48.95 | 11411 | 11304 | 37.99 | 11109 | 11011.47 | 26.85 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11223.17 | 146.8 | 11478 | 11309.63 | 120.12 | 11478 | 11209.87 | 141.88 | 11478 | 11169.17 | 167.18 |
| | | 2op | 11256 | 11088.13 | 62.92 | 11394 | 11276.17 | 71.69 | 11109 | 11015.47 | 32.07 | 11003 | 11003 | 0 |
| 51 | 20 | rnd | 11478 | 11244.43 | 134.22 | 11478 | 11324.77 | 121.66 | 11478 | 11257.57 | 126.35 | 11478 | 11221.63 | 147.46 |
| | | 2op | 11109 | 11084.47 | 41.38 | 11305 | 11132.83 | 62.25 | 11151 | 11079.73 | 45.75 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11258.67 | 127.41 | 11478 | 11291 | 124.43 | 11478 | 11205.6 | 154.43 | 11413 | 11178.03 | 172.84 |
| | | 2op | 11305 | 11114.3 | 51.23 | 11305 | 11205.2 | 84.17 | 11305 | 11050.67 | 65.17 | 11017 | 11004.4 | 4.27 |

Table A.1882: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11413 | 11201.83 | 181.96 | 11413 | 11219.5 | 153.54 | 11478 | 11212.13 | 168.07 | 11394 | 11133.73 | 171.11 |
| | | 2op | 11109 | 11044.6 | 42.88 | 11109 | 11108.07 | 3.55 | 11109 | 11009.8 | 19.67 | 11003 | 11003 | 0 |
| | 50 | rnd | 11394 | 11210.1 | 131.37 | 11478 | 11231.77 | 157.9 | 11478 | 11241.53 | 124.6 | 11411 | 11150.9 | 162.94 |
| | | 2op | 11109 | 11063 | 46.79 | 11305 | 11120.43 | 43.98 | 11109 | 11032.4 | 41.33 | 11095 | 11006.07 | 16.8 |
| 51 | 20 | rnd | 11413 | 11192.23 | 168.93 | 11478 | 11248.73 | 88.83 | 11478 | 11214.47 | 195.39 | 11411 | 11139.2 | 190.44 |
| | | 2op | 11109 | 11084.47 | 41.38 | 11151 | 11110.4 | 7.67 | 11151 | 11076.67 | 48.58 | 11017 | 11004.4 | 4.27 |
| | 50 | rnd | 11413 | 11214.83 | 154.25 | 11478 | 11262.07 | 135.99 | 11478 | 11268.13 | 107 | 11478 | 11169.77 | 169 |
| | | 2op | 11109 | 11084.47 | 41.38 | 11109 | 11105.47 | 16.9 | 11151 | 11103.33 | 25 | 11109 | 11008.4 | 19.6 |

Table A.1883: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13871.53 | 142.99 | 14161 | 13975.1 | 116.01 | 14123 | 13841.97 | 133.14 | 14133 | 13847.53 | 163 |
| | | 2op | 14001 | 13848.3 | 119.97 | 14157 | 14014.4 | 43.46 | 13995 | 13744.63 | 73.03 | 13721 | 13721 | 0 |
| | 50 | rnd | 14157 | 13863.53 | 190.48 | 14137 | 13950.5 | 126.5 | 14161 | 13883.1 | 164.59 | 14133 | 13767.93 | 206.85 |
| | | 2op | 14133 | 13874.5 | 124.56 | 14157 | 14040.7 | 56.61 | 14001 | 13810.57 | 104.26 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14133 | 13872 | 183.56 | 14137 | 13953.77 | 91.57 | 14161 | 13952.93 | 141.52 | 14133 | 13875.13 | 153.45 |
| | | 2op | 14038 | 13870.4 | 94.46 | 14157 | 14021.3 | 64.59 | 14038 | 13993.43 | 31.03 | 13867 | 13725.87 | 26.66 |
| | 50 | rnd | 14071 | 13875.23 | 158.06 | 14161 | 13988.2 | 121 | 14161 | 13986.77 | 126.72 | 14161 | 13832.97 | 168.16 |
| | | 2op | 14038 | 13908.07 | 87.86 | 14157 | 14022.6 | 57.46 | 14157 | 14011.33 | 46.88 | 13827 | 13724.53 | 19.35 |

Table A.1884: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13863.17 | 157.25 | 14157 | 13984.07 | 152.54 | 14157 | 13916.77 | 169.64 | 14157 | 13832.93 | 194.87 |
| | | 2op | 13938 | 13770.63 | 61.03 | 14064 | 13981.43 | 29.5 | 14038 | 13950.93 | 66.4 | 13721 | 13721 | 0 |
| | 50 | rnd | 14133 | 13866.87 | 179.76 | 14137 | 13948.57 | 127.39 | 14161 | 13997.83 | 121.63 | 14133 | 13899.3 | 171.63 |
| | | 2op | 13938 | 13791.8 | 64.6 | 14157 | 14016.93 | 67.66 | 14038 | 13978.1 | 17.07 | 13922 | 13737.77 | 46.44 |
| 51 | 20 | rnd | 14161 | 13888.5 | 142.32 | 14161 | 13922.1 | 180.06 | 14161 | 13982.17 | 137.48 | 14161 | 13948.63 | 139.72 |
| | | 2op | 13938 | 13803.1 | 78.63 | 14133 | 13989.27 | 40.11 | 14157 | 13978.63 | 35.57 | 13995 | 13810.4 | 101.21 |
| | 50 | rnd | 14161 | 13883.53 | 165.87 | 14161 | 13948.7 | 159.84 | 14161 | 13994.43 | 129.84 | 14161 | 13913.63 | 166.23 |
| | | 2op | 13827 | 13752.8 | 49.41 | 14038 | 13963.3 | 26.88 | 14157 | 14004.3 | 45.77 | 13995 | 13844.87 | 93.93 |

Table A.1885: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13848.63 | 176.87 | 14139 | 13960.7 | 133.13 | 14139 | 13844.87 | 178.23 | 14105 | 13745.6 | 187.53 |
| | | 2op | 14038 | 13879.5 | 122.4 | 14157 | 14023.67 | 57.18 | 13995 | 13738.33 | 66.07 | 13721 | 13721 | 0 |
| | 50 | rnd | 14139 | 13876.3 | 134.02 | 14157 | 13993.57 | 137.36 | 14157 | 13888.27 | 163.44 | 14137 | 13836.5 | 201.54 |
| | | 2op | 14038 | 13887.9 | 119.86 | 14157 | 14021.8 | 44.65 | 14038 | 13801.8 | 117.56 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14137 | 13870.57 | 149.93 | 14137 | 13925.4 | 98.89 | 14161 | 13933.4 | 162.71 | 14139 | 13907.77 | 189.39 |
| | | 2op | 14038 | 13852.8 | 100.79 | 14157 | 14000 | 36.16 | 14064 | 13994.53 | 23.28 | 13932 | 13734.73 | 52.28 |
| | 50 | rnd | 14139 | 13902.93 | 166.91 | 14161 | 14001.17 | 107.2 | 14161 | 14008.03 | 132.43 | 14137 | 13768.83 | 186.91 |
| | | 2op | 14038 | 13912.9 | 99.36 | 14157 | 14033.43 | 62.35 | 14157 | 14035.2 | 52.56 | 14038 | 13734.57 | 59.62 |

Table A.1886: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14137 | 13878.37 | 161.37 | 14161 | 14023.97 | 118.29 | 14161 | 13922.97 | 162.82 | 14094 | 13812.57 | 143.47 |
| | | 2op | 13938 | 13774.33 | 67.58 | 14157 | 13982.67 | 46.51 | 13995 | 13916.6 | 77.32 | 13721 | 13721 | 0 |
| | 50 | rnd | 14133 | 13858.27 | 172.71 | 14161 | 13942.77 | 137.44 | 14157 | 13983.23 | 114.58 | 14066 | 13880.43 | 124.19 |
| | | 2op | 13938 | 13780.67 | 66.37 | 14157 | 14000.3 | 59.79 | 13995 | 13972.67 | 18.8 | 13827 | 13724.53 | 19.35 |
| 51 | 20 | rnd | 14127 | 13852.37 | 196.11 | 14161 | 13956.43 | 160.07 | 14157 | 13945.7 | 151.4 | 14157 | 13927.87 | 140.94 |
| | | 2op | 13932 | 13773.97 | 60.58 | 14157 | 13996.17 | 52.13 | 14157 | 13983.43 | 42.7 | 13995 | 13816 | 94.87 |
| | 50 | rnd | 14103 | 13899.23 | 134.03 | 14161 | 13939.17 | 172.31 | 14161 | 13965.33 | 142.15 | 14161 | 13966 | 132.08 |
| | | 2op | 13827 | 13774 | 53.91 | 14064 | 13968.03 | 47.98 | 14157 | 13997.43 | 53 | 14038 | 13820.9 | 92.31 |

Table A.1887: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13894.77 | 138.71 | 14161 | 13995.17 | 103.98 | 14161 | 13807.97 | 177.13 | 14139 | 13842.1 | 171.19 |
| | | 2op | 14038 | 13934.1 | 74.75 | 14157 | 14051.37 | 66.15 | 13995 | 13737.17 | 62.08 | 13721 | 13721 | 0 |
| | 50 | rnd | 14161 | 13886.2 | 168.28 | 14161 | 13982.37 | 138.17 | 14062 | 13771.5 | 148.98 | 14064 | 13800.23 | 157.74 |
| | | 2op | 14038 | 13975.77 | 74.52 | 14157 | 14039.43 | 67.56 | 14004 | 13755.53 | 89.85 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14137 | 13903.27 | 145.27 | 14161 | 13934.97 | 124.11 | 14157 | 13903.87 | 173.99 | 14127 | 13814.5 | 177.43 |
| | | 2op | 14038 | 13957.23 | 64.88 | 14038 | 14000.9 | 27.21 | 14038 | 13839.77 | 106.55 | 13721 | 13721 | 0 |
| | 50 | rnd | 14137 | 13903.77 | 117.75 | 14161 | 13952.43 | 132.75 | 14161 | 13930.73 | 161.42 | 14161 | 13818.63 | 154.95 |
| | | 2op | 14038 | 13973.77 | 44.61 | 14157 | 14009.43 | 51.22 | 13962 | 13791.17 | 94.58 | 13721 | 13721 | 0 |

Table A.1888: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13921.3 | 169.36 | 14161 | 13977.1 | 165.17 | 14133 | 13880.77 | 163.31 | 14099 | 13778.4 | 189.13 |
| | | 2op | 13948 | 13826.57 | 67.89 | 13995 | 13906.9 | 67.58 | 13827 | 13731.07 | 30.81 | 13721 | 13721 | 0 |
| | 50 | rnd | 14139 | 13948.6 | 187.77 | 14161 | 13929.07 | 180.92 | 14139 | 13861 | 179.45 | 14123 | 13835.73 | 146.61 |
| | | 2op | 13995 | 13831.1 | 58.92 | 14038 | 13962.87 | 37.54 | 13827 | 13731.6 | 32.34 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14161 | 13953.43 | 129.72 | 14161 | 13924.77 | 140.61 | 14161 | 13933.6 | 152.83 | 14101 | 13901.1 | 125.92 |
| | | 2op | 13995 | 13842 | 66.98 | 13995 | 13926.67 | 54.87 | 14038 | 13803.5 | 95.59 | 13721 | 13721 | 0 |
| | 50 | rnd | 14139 | 13976.7 | 115.81 | 14137 | 13901.93 | 120.17 | 14139 | 13950.4 | 126.67 | 14133 | 13800.73 | 170.04 |
| | | 2op | 13995 | 13848.2 | 49.23 | 14038 | 13924.6 | 56.51 | 13995 | 13795.9 | 75.5 | 13721 | 13721 | 0 |

Table A.1889: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18093 | 17878.13 | 161.36 | 18301 | 17995.8 | 150.08 | 18301 | 17902.7 | 212.55 | 18261 | 17880.73 | 193.21 |
| | | 2op | 18017 | 18003.2 | 11.46 | 18017 | 18001.67 | 11.03 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 18175 | 17865.5 | 200.33 | 18184 | 18016.87 | 154.97 | 18172 | 17886.5 | 222.54 | 18301 | 17895.5 | 196.63 |
| | | 2op | 18017 | 18003.97 | 11.59 | 18017 | 18015.2 | 5.94 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18184 | 17894.53 | 160.17 | 18171 | 18015.77 | 120.99 | 18301 | 17922.37 | 180.34 | 18176 | 17881.67 | 208.26 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18000.9 | 10.72 | 17994 | 17994 | 0 |
| | 50 | rnd | 18114 | 17892.73 | 190.9 | 18132 | 17963.73 | 137.53 | 18156 | 17934.97 | 130.16 | 18172 | 17865.93 | 184.48 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18017 | 0 | 18017 | 18012.4 | 9.36 | 17994 | 17994 | 0 |

Table A.1890: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18143 | 17896.5 | 143.75 | 18216 | 17968.4 | 150.46 | 18175 | 17899.57 | 168.16 | 18172 | 17775.6 | 173.04 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18014.7 | 7.02 | 17994 | 17994 | 0 |
| | 50 | rnd | 18156 | 17898.47 | 119.35 | 18301 | 18043.23 | 133.01 | 18301 | 17913.8 | 205.57 | 18184 | 17861.8 | 174.5 |
| | | 2op | 18017 | 18006.27 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17994.77 | 4.2 |
| 51 | 20 | rnd | 18184 | 17894.9 | 185.83 | 18301 | 17905.57 | 175.7 | 18301 | 17955.8 | 164.02 | 18171 | 17908.5 | 166.84 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |
| | 50 | rnd | 18184 | 17927.93 | 186.42 | 18176 | 17897 | 153.5 | 18216 | 17984.5 | 158.08 | 18172 | 17944.6 | 145.68 |
| | | 2op | 18017 | 18004.73 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |

Table A.1891: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17871.5 | 236.83 | 18171 | 17942.6 | 161.49 | 18159 | 17883.8 | 179.23 | 18171 | 17863.13 | 185.53 |
| | | 2op | 18017 | 17997.07 | 7.95 | 18017 | 18003.2 | 11.46 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 18109 | 17910.27 | 122.16 | 18301 | 18003.7 | 155.81 | 18172 | 17879.77 | 166.3 | 18172 | 17908.8 | 188.91 |
| | | 2op | 18017 | 18001.67 | 11.03 | 18017 | 18016.23 | 4.2 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18275 | 17945.23 | 137.44 | 18165 | 18016.23 | 119.84 | 18275 | 17981.63 | 153.66 | 18084 | 17803.43 | 172.73 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18001.67 | 11.03 | 17994 | 17994 | 0 |
| | 50 | rnd | 18301 | 17981.63 | 144.69 | 18301 | 18015 | 122.82 | 18301 | 17949.83 | 156.97 | 18134 | 17899.43 | 121.66 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18016.23 | 4.2 | 17994 | 17994 | 0 |

Table A.1892: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17904.53 | 169.43 | 18171 | 17997.93 | 162.82 | 18292 | 17917.37 | 165.15 | 18184 | 17817.83 | 235.51 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18017 | 0 | 18017 | 18009.33 | 11.03 | 17994 | 17994 | 0 |
| | 50 | rnd | 18172 | 17864.03 | 189.11 | 18301 | 18009.77 | 132.25 | 18172 | 17970.23 | 163.25 | 18142 | 17892.33 | 170.5 |
| | | 2op | 18017 | 18003.97 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18175 | 17891.53 | 162.61 | 18186 | 17932.93 | 140.09 | 18301 | 18002.5 | 155.75 | 18109 | 17862.07 | 187.73 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17999.37 | 9.89 |
| | 50 | rnd | 18142 | 17867.37 | 160.8 | 18301 | 17941.1 | 185.16 | 18165 | 18001.77 | 111.52 | 18301 | 17892.67 | 214.65 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18002.43 | 11.27 |

Table A.1893: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17960.13 | 158.52 | 18216 | 18036.9 | 120.84 | 18152 | 17877.5 | 144.8 | 18301 | 17900.93 | 151.42 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| | 50 | rnd | 18152 | 17926.37 | 139.43 | 18301 | 18044.43 | 120.66 | 18156 | 17901.23 | 172.8 | 18152 | 17889.67 | 166.8 |
| | | 2op | 18017 | 18015.47 | 5.84 | 18017 | 18016.23 | 4.2 | 17994 | 17994 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18181 | 17970.87 | 186.39 | 18165 | 17989.37 | 129.82 | 18152 | 17917.2 | 164.06 | 18260 | 17856.6 | 205.15 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18008.57 | 11.27 | 17994 | 17994 | 0 |
| | 50 | rnd | 18176 | 18044.17 | 80.51 | 18172 | 17995.47 | 101.17 | 18176 | 17979.5 | 114.46 | 18216 | 17903.23 | 126.59 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18001.67 | 11.03 | 17994 | 17994 | 0 |

Table A.1894: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18156 | 17917.57 | 188.89 | 18151 | 17958.27 | 124.03 | 18301 | 17914.5 | 215.26 | 18275 | 17901.4 | 192.21 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17997.07 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18184 | 17919.23 | 122.16 | 18301 | 17986.4 | 133.83 | 18184 | 17915.57 | 183.71 | 18044 | 17793.5 | 187.15 |
| | | 2op | 18017 | 18016.23 | 4.2 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18184 | 17961.5 | 156.15 | 18184 | 17959.37 | 164.85 | 18301 | 17990.73 | 121.92 | 18119 | 17832.63 | 156.75 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.63 | 9.89 | 17994 | 17994 | 0 |
| | 50 | rnd | 18142 | 17938.87 | 147.49 | 18184 | 17910.1 | 161.73 | 18184 | 17908.07 | 187.22 | 18172 | 17883.47 | 169.04 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.63 | 9.89 | 17994 | 17994 | 0 |

Table A.1895: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21184 | 20874.67 | 189.25 | 21176 | 20948 | 174.25 | 21153 | 20863.37 | 246.93 | 21150 | 20869.97 | 195.18 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20855.17 | 78.95 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21170 | 20836.03 | 241.79 | 21190 | 20967.97 | 151.1 | 21271 | 20873.13 | 198.81 | 21196 | 20867.57 | 230.28 |
| | | 2op | 21008 | 20839.43 | 40.14 | 21210 | 20976.33 | 142.69 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21203 | 20894.8 | 178.63 | 21196 | 20967.17 | 169.18 | 21187 | 20950.17 | 159.89 | 21192 | 20810.37 | 249.79 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20946.9 | 119.15 | 21052 | 20836.43 | 40.71 | 20829 | 20829 | 0 |
| | 50 | rnd | 21245 | 20899.53 | 229.42 | 21196 | 20987.1 | 143.24 | 21206 | 20942.07 | 153.5 | 21172 | 20870.3 | 216.24 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20968.43 | 102.69 | 21193 | 20849.13 | 68.16 | 20829 | 20829 | 0 |

Table A.1896: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21209 | 20913.73 | 152.21 | 21172 | 20924.13 | 204.91 | 21149 | 20858.6 | 182.71 | 21212 | 20894.73 | 184.47 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21212 | 20888.13 | 194.31 | 21212 | 20915.07 | 187.34 | 21177 | 20909.13 | 197.56 | 21206 | 20854.6 | 219.15 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21162 | 20905.77 | 167.61 | 21212 | 21001.63 | 131.62 | 21173 | 20943.27 | 148.93 | 21181 | 20932.43 | 155.19 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21209 | 20928.57 | 180.12 | 21206 | 20917.43 | 214.95 | 21181 | 20994.13 | 113.41 | 21212 | 20897.33 | 212.19 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.1897: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20933.83 | 192.27 | 21135 | 20923.17 | 170.92 | 21166 | 20807.47 | 217.94 | 21233 | 20848.9 | 212.81 |
| | | 2op | 21193 | 20846.73 | 72.23 | 21139 | 20846.53 | 63.26 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21235 | 20895.73 | 204.47 | 21212 | 21008.97 | 129.26 | 21113 | 20733.87 | 236.41 | 21157 | 20846 | 178.94 |
| | | 2op | 21077 | 20844.87 | 60.44 | 21193 | 20881.53 | 101.34 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21190 | 20863.67 | 219.27 | 21161 | 20961.13 | 153.27 | 21197 | 20847.43 | 255.11 | 21212 | 20854.97 | 187.9 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20935.27 | 118.67 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21180 | 20923.8 | 156.9 | 21196 | 21010 | 154.74 | 21233 | 20996.9 | 126.88 | 21168 | 20856.17 | 172.32 |
| | | 2op | 21042 | 20841.37 | 47.61 | 21135 | 20993.53 | 94.19 | 21187 | 20848.03 | 74.89 | 20829 | 20829 | 0 |

Table A.1898: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21210 | 20835.87 | 175.46 | 21212 | 20982.8 | 141.47 | 21212 | 20919.03 | 219.94 | 21132 | 20857.67 | 213.98 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21198 | 20910.93 | 184.47 | 21218 | 20990.93 | 131.04 | 21184 | 20887.73 | 211.35 | 21162 | 20832.6 | 183.47 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21163 | 20933.67 | 154.93 | 21190 | 20936.3 | 190.81 | 21186 | 20902.9 | 179.38 | 21160 | 20893.47 | 170.35 |
| | | 2op | 20829 | 20829 | 0 | 20991 | 20834.4 | 29.58 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21182 | 20885.63 | 202.88 | 21165 | 20910.03 | 181.92 | 21227 | 20981.93 | 156.73 | 21195 | 20917.4 | 186.39 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.1899: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21215 | 20898.1 | 173.55 | 21271 | 20993.43 | 141.23 | 21169 | 20869.83 | 205.33 | 21246 | 20852.7 | 204.59 |
| | | 2op | 20829 | 20829 | 0 | 21210 | 20912.03 | 111.33 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21271 | 20962.9 | 160.22 | 21233 | 21012.97 | 131.6 | 21190 | 20808.07 | 181.92 | 21160 | 20817.83 | 187.75 |
| | | 2op | 21008 | 20838.77 | 35.08 | 21193 | 20900.73 | 114.68 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21203 | 20932.83 | 168.95 | 21203 | 20998.97 | 142.28 | 21132 | 20896.5 | 211.71 | 21224 | 20819 | 223.81 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20924.97 | 116.71 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21196 | 20953.27 | 154.7 | 21212 | 20940.5 | 172.73 | 21212 | 20889.37 | 235.14 | 21178 | 20849.07 | 189.47 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21193 | 20996 | 131.45 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |

Table A.1900: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21215 | 20946.77 | 175.52 | 21165 | 20893.93 | 173.97 | 21160 | 20802.77 | 235.61 | 21130 | 20761.17 | 192.23 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21218 | 20880.3 | 234.83 | 21164 | 20919.77 | 172.46 | 21268 | 20844.03 | 234.4 | 21087 | 20795.5 | 177.88 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21203 | 20889.43 | 213.15 | 21210 | 20951.67 | 168.38 | 21271 | 20954.1 | 177.98 | 21114 | 20830.47 | 199.72 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21203 | 20876.77 | 177.48 | 21182 | 20974.33 | 140.35 | 21208 | 20846.57 | 212.16 | 21186 | 20845.23 | 211.51 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |

Table A.1901: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.53 | 1.85 | 596 | 594.3 | 1.44 | 596 | 593.7 | 1.56 | 596 | 590.47 | 2.99 |
| | | 2op | 596 | 592.13 | 2.85 | 596 | 594.83 | 0.87 | 596 | 594.63 | 0.96 | 595 | 590.37 | 2.31 |
| | 50 | rnd | 596 | 592.3 | 2.84 | 596 | 594.83 | 1.18 | 596 | 594.93 | 1.01 | 595 | 590.8 | 2.96 |
| | | 2op | 596 | 592.73 | 2.39 | 596 | 594.9 | 0.66 | 596 | 595.03 | 0.61 | 595 | 590.67 | 2.23 |
| 51 | 20 | rnd | 595 | 591.77 | 2.19 | 596 | 594.13 | 1.55 | 596 | 594.53 | 1.25 | 596 | 593.53 | 1.94 |
| | | 2op | 596 | 593.4 | 1.96 | 596 | 595.07 | 0.45 | 596 | 595.33 | 0.48 | 595 | 594.87 | 0.43 |
| | 50 | rnd | 596 | 593 | 2.13 | 596 | 595.27 | 0.74 | 596 | 595.03 | 0.76 | 596 | 593.83 | 1.86 |
| | | 2op | 596 | 593.33 | 2.26 | 596 | 595.27 | 0.52 | 596 | 595.33 | 0.66 | 596 | 594.8 | 0.61 |

Table A.1902: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 590.67 | 3.3 | 596 | 593.57 | 1.74 | 596 | 593.33 | 2.35 | 596 | 591.8 | 2.92 |
| | | 2op | 594 | 590.6 | 2.33 | 595 | 594.97 | 0.18 | 595 | 594.33 | 0.55 | 594 | 593.8 | 0.81 |
| | 50 | rnd | 596 | 590.9 | 3.92 | 596 | 592.3 | 2.15 | 596 | 593.6 | 1.98 | 595 | 592.17 | 2.73 |
| | | 2op | 594 | 590.67 | 2.19 | 595 | 595 | 0 | 595 | 594.97 | 0.18 | 595 | 594.1 | 0.31 |
| 51 | 20 | rnd | 596 | 591.33 | 2.86 | 596 | 592.73 | 2.38 | 596 | 593.2 | 2.5 | 596 | 592.1 | 2.07 |
| | | 2op | 594 | 591.03 | 2.3 | 595 | 594.63 | 0.96 | 596 | 594.93 | 0.37 | 595 | 594.2 | 0.48 |
| | 50 | rnd | 596 | 591.63 | 2.83 | 596 | 591.83 | 2.59 | 596 | 593.2 | 2.54 | 596 | 592.03 | 2.43 |
| | | 2op | 594 | 591.13 | 2.34 | 595 | 594.73 | 0.45 | 595 | 595 | 0 | 595 | 594.37 | 0.56 |

Table A.1903: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 591.53 | 2.81 | 596 | 594.23 | 1.36 | 596 | 593.93 | 1.86 | 595 | 590.6 | 2.84 |
| | | 2op | 596 | 591.17 | 2.48 | 596 | 594.77 | 0.68 | 596 | 594.23 | 1.14 | 594 | 589.17 | 0.91 |
| | 50 | rnd | 596 | 591.77 | 2.86 | 596 | 594.8 | 0.89 | 596 | 594.63 | 1.07 | 595 | 591.27 | 2.75 |
| | | 2op | 596 | 593 | 2.59 | 596 | 595.23 | 0.9 | 596 | 594.87 | 0.94 | 595 | 589.93 | 2.13 |
| 51 | 20 | rnd | 596 | 592.2 | 2.98 | 596 | 594.33 | 1.3 | 596 | 595.3 | 0.75 | 595 | 593.33 | 1.49 |
| | | 2op | 595 | 592.97 | 2.27 | 596 | 595.03 | 0.49 | 596 | 595.33 | 0.48 | 596 | 595.1 | 0.31 |
| | 50 | rnd | 596 | 592.97 | 1.83 | 596 | 595.13 | 0.78 | 596 | 595.07 | 0.91 | 596 | 593.73 | 1.76 |
| | | 2op | 596 | 593.77 | 1.76 | 596 | 595.33 | 0.48 | 596 | 595.37 | 0.49 | 596 | 594.73 | 0.64 |

Table A.1904: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.2 | 3.23 | 596 | 593.3 | 2.48 | 595 | 592.5 | 2.27 | 596 | 592.2 | 2.68 |
| | | 2op | 594 | 591.13 | 2.18 | 595 | 594.9 | 0.4 | 595 | 594.27 | 0.45 | 594 | 593.5 | 1.14 |
| | 50 | rnd | 596 | 591.17 | 3.36 | 596 | 593.2 | 2.37 | 596 | 592.53 | 2.42 | 596 | 592 | 2.36 |
| | | 2op | 594 | 591.23 | 2.4 | 596 | 595.03 | 0.18 | 595 | 594.9 | 0.31 | 595 | 594 | 0.26 |
| 51 | 20 | rnd | 595 | 590.97 | 3.46 | 596 | 591.93 | 3.14 | 596 | 593.53 | 2.24 | 595 | 592.67 | 1.99 |
| | | 2op | 594 | 590.97 | 2.31 | 595 | 594.77 | 0.43 | 595 | 594.9 | 0.31 | 595 | 594.27 | 0.45 |
| | 50 | rnd | 596 | 591.43 | 3.29 | 596 | 591.67 | 2.96 | 596 | 592.3 | 2.37 | 596 | 592.47 | 3.01 |
| | | 2op | 594 | 591.17 | 2.41 | 595 | 594.47 | 0.51 | 595 | 595 | 0 | 595 | 594.17 | 0.46 |

Table A.1905: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 593.17 | 2 | 596 | 594.7 | 1.12 | 595 | 591.23 | 2.86 | 595 | 589.03 | 3.42 |
| | | 2op | 596 | 594.47 | 0.78 | 596 | 595.43 | 0.5 | 594 | 589.17 | 0.91 | 589 | 589 | 0 |
| | 50 | rnd | 595 | 592.53 | 1.78 | 596 | 594.47 | 1.14 | 595 | 591.03 | 3 | 595 | 588.7 | 3.65 |
| | | 2op | 596 | 594.07 | 1.55 | 596 | 595.13 | 0.43 | 594 | 589.6 | 1.5 | 589 | 589 | 0 |
| 51 | 20 | rnd | 596 | 593.3 | 1.93 | 596 | 594.57 | 1.19 | 596 | 593.57 | 1.94 | 596 | 592 | 2.15 |
| | | 2op | 595 | 594.2 | 0.41 | 596 | 595.1 | 0.31 | 595 | 594.67 | 0.48 | 595 | 591.83 | 2.44 |
| | 50 | rnd | 596 | 593 | 1.44 | 596 | 594.33 | 1.35 | 596 | 593 | 2.03 | 595 | 589.17 | 3.65 |
| | | 2op | 596 | 594.87 | 0.51 | 596 | 595.2 | 0.48 | 595 | 594 | 0.98 | 592 | 589.1 | 0.55 |

Table A.1906: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.17 | 2.78 | 596 | 592.67 | 1.97 | 596 | 591.1 | 2.93 | 595 | 589.97 | 4.09 |
| | | 2op | 594 | 593.07 | 1.8 | 595 | 594.1 | 0.31 | 594 | 590.4 | 2.03 | 589 | 589 | 0 |
| | 50 | rnd | 596 | 592.53 | 1.93 | 596 | 592.07 | 3.03 | 596 | 592.03 | 2.54 | 595 | 589.43 | 3.65 |
| | | 2op | 594 | 593.1 | 1.6 | 595 | 594.13 | 0.35 | 594 | 593.43 | 1.19 | 592 | 589.17 | 0.65 |
| 51 | 20 | rnd | 596 | 591.2 | 2.86 | 595 | 591 | 2.42 | 596 | 592.23 | 2.57 | 595 | 589.97 | 2.97 |
| | | 2op | 595 | 593.6 | 1.16 | 594 | 594 | 0 | 595 | 594.07 | 0.25 | 594 | 589.33 | 1.27 |
| | 50 | rnd | 596 | 592.57 | 2.5 | 596 | 592.13 | 2.43 | 596 | 591.9 | 2.86 | 595 | 589.37 | 4 |
| | | 2op | 595 | 593.53 | 1.36 | 594 | 594 | 0 | 595 | 594.13 | 0.35 | 594 | 589.6 | 1.45 |

Table A.1907: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 772.5 | 2.69 | 777 | 775.43 | 1.14 | 777 | 774.57 | 2.34 | 776 | 771.03 | 5.35 |
| | | 2op | 775 | 768.27 | 3.68 | 777 | 774.73 | 2.2 | 777 | 773.53 | 1.98 | 770 | 765.23 | 0.97 |
| | 50 | rnd | 777 | 773.23 | 2.6 | 777 | 775.63 | 1.16 | 777 | 775.63 | 1.35 | 777 | 771.13 | 3.28 |
| | | 2op | 775 | 770.47 | 3.68 | 777 | 775.67 | 1.47 | 777 | 776 | 1.36 | 770 | 766.57 | 2.01 |
| 51 | 20 | rnd | 777 | 772.93 | 3.34 | 777 | 774.23 | 2.27 | 777 | 774.93 | 1.2 | 777 | 773.47 | 2.57 |
| | | 2op | 775 | 768.27 | 2.53 | 777 | 773.53 | 1.94 | 777 | 773.93 | 1.51 | 775 | 772.23 | 1.72 |
| | 50 | rnd | 777 | 773.63 | 2.65 | 777 | 775.2 | 1.19 | 777 | 775.57 | 1.33 | 777 | 774.77 | 1.7 |
| | | 2op | 775 | 770.23 | 2.56 | 777 | 775.37 | 1.45 | 777 | 775.8 | 1.4 | 776 | 772.53 | 1.66 |

Table A.1908: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 767.6 | 7 | 777 | 774.27 | 2.18 | 777 | 773.63 | 2.16 | 777 | 770.93 | 5.52 |
| | | 2op | 770 | 766.8 | 2.17 | 777 | 770 | 1.46 | 770 | 769.7 | 0.47 | 774 | 769.9 | 0.88 |
| | 50 | rnd | 777 | 768.43 | 5.41 | 777 | 772.1 | 2.78 | 777 | 773.87 | 2.42 | 777 | 771.47 | 5.85 |
| | | 2op | 770 | 765.73 | 1.6 | 770 | 769.87 | 0.35 | 774 | 770 | 0.95 | 770 | 769.6 | 0.5 |
| 51 | 20 | rnd | 775 | 768.1 | 6.46 | 777 | 771.43 | 5.88 | 777 | 773.47 | 1.93 | 777 | 770.47 | 7.87 |
| | | 2op | 770 | 767.5 | 2.37 | 770 | 769.93 | 0.25 | 772 | 769.9 | 0.71 | 772 | 769.9 | 0.71 |
| | 50 | rnd | 775 | 769.9 | 4.82 | 777 | 772.1 | 3.45 | 777 | 772.2 | 3.11 | 777 | 773.03 | 3.19 |
| | | 2op | 770 | 766.3 | 2 | 770 | 769.73 | 0.45 | 770 | 769.73 | 0.45 | 770 | 769.73 | 0.45 |

Table A.1909: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.97 | 2.71 | 777 | 775.07 | 1.41 | 777 | 774.8 | 1.24 | 777 | 769.8 | 4.11 |
| | | 2op | 775 | 769.07 | 3.57 | 777 | 774.83 | 1.91 | 777 | 773.07 | 1.95 | 770 | 765.43 | 1.3 |
| | 50 | rnd | 777 | 772.97 | 2.74 | 777 | 775.37 | 1.27 | 777 | 775.1 | 1.24 | 775 | 771 | 3.11 |
| | | 2op | 777 | 770.27 | 3.39 | 777 | 775.73 | 1.34 | 777 | 775.63 | 1.25 | 770 | 765.87 | 1.61 |
| 51 | 20 | rnd | 777 | 772.27 | 2.96 | 777 | 774.6 | 1.63 | 777 | 775.2 | 1.06 | 777 | 774.17 | 2.1 |
| | | 2op | 775 | 768.53 | 2.37 | 777 | 773.67 | 1.58 | 777 | 774.3 | 1.58 | 776 | 772.67 | 1.42 |
| | 50 | rnd | 777 | 773.83 | 1.68 | 777 | 775.33 | 1.18 | 777 | 776.13 | 0.86 | 777 | 774.1 | 2.26 |
| | | 2op | 776 | 770.53 | 2.75 | 777 | 774.77 | 1.5 | 777 | 775.43 | 1.65 | 777 | 773.73 | 2.1 |

Table A.1910: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 767.57 | 7.21 | 777 | 773.67 | 2.77 | 777 | 773.1 | 2.22 | 777 | 772.5 | 3.09 |
| | | 2op | 770 | 766.33 | 2.19 | 770 | 769.63 | 0.96 | 774 | 769.9 | 0.88 | 770 | 769.6 | 0.81 |
| | 50 | rnd | 777 | 768.53 | 8.59 | 777 | 770.8 | 8.18 | 777 | 773.67 | 2.78 | 777 | 770.7 | 6.07 |
| | | 2op | 770 | 765.87 | 1.7 | 770 | 769.67 | 0.48 | 772 | 770 | 0.64 | 770 | 769.77 | 0.43 |
| 51 | 20 | rnd | 777 | 766.4 | 9.56 | 777 | 770.27 | 6.05 | 777 | 772.7 | 2.56 | 777 | 772.87 | 2.74 |
| | | 2op | 770 | 766.43 | 1.98 | 770 | 769.87 | 0.35 | 774 | 770 | 0.95 | 770 | 769.8 | 0.41 |
| | 50 | rnd | 775 | 768.57 | 5.65 | 777 | 770.2 | 5.99 | 777 | 772.4 | 3.35 | 777 | 773.47 | 3.44 |
| | | 2op | 770 | 766.3 | 1.99 | 770 | 769.7 | 0.47 | 770 | 769.7 | 0.47 | 770 | 769.77 | 0.43 |

Table A.1911: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 771 | 3.25 | 777 | 775.2 | 1 | 777 | 770.97 | 3.77 | 775 | 766.7 | 9.4 |
| | | 2op | 775 | 769.47 | 2.26 | 777 | 774.23 | 1.57 | 770 | 765.33 | 1.27 | 765 | 765 | 0 |
| | 50 | rnd | 777 | 772.67 | 2.51 | 777 | 775.73 | 0.94 | 777 | 770.97 | 4.19 | 776 | 767.27 | 6.55 |
| | | 2op | 777 | 771.6 | 2.76 | 777 | 774.63 | 1.65 | 775 | 766.03 | 2.31 | 765 | 765 | 0 |
| 51 | 20 | rnd | 777 | 772.47 | 2.4 | 777 | 774.13 | 2.1 | 777 | 773.4 | 2.3 | 777 | 771.37 | 3.21 |
| | | 2op | 772 | 769.57 | 1.17 | 776 | 772.67 | 1.18 | 774 | 771.63 | 1.54 | 770 | 767.67 | 2.17 |
| | 50 | rnd | 777 | 774.13 | 2.01 | 777 | 774.67 | 1.63 | 777 | 774.13 | 2.58 | 776 | 769.23 | 4.76 |
| | | 2op | 777 | 771.07 | 2.03 | 777 | 773.1 | 1.52 | 777 | 772.23 | 2.33 | 770 | 765.17 | 0.91 |

Table A.1912: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 770.5 | 4.8 | 777 | 771.7 | 3.45 | 777 | 771.4 | 3.35 | 777 | 769.13 | 5.63 |
| | | 2op | 770 | 768.07 | 1.98 | 770 | 769.83 | 0.38 | 772 | 767.17 | 2.36 | 765 | 765 | 0 |
| | 50 | rnd | 777 | 768.6 | 6.63 | 777 | 772.23 | 2.51 | 777 | 771.47 | 3.75 | 777 | 770.23 | 3.96 |
| | | 2op | 770 | 768.73 | 1.78 | 770 | 769.8 | 0.41 | 770 | 769.63 | 0.81 | 770 | 765.33 | 1.27 |
| 51 | 20 | rnd | 775 | 770.57 | 5.73 | 777 | 770.1 | 7.19 | 777 | 772.57 | 3.27 | 777 | 771.27 | 3.68 |
| | | 2op | 770 | 769.1 | 1.18 | 770 | 769.8 | 0.41 | 770 | 769.7 | 0.47 | 770 | 766.13 | 1.76 |
| | 50 | rnd | 775 | 767.87 | 8.27 | 777 | 771.73 | 2.8 | 777 | 771.53 | 3.09 | 777 | 771.27 | 4.46 |
| | | 2op | 770 | 769.43 | 0.5 | 770 | 769.8 | 0.61 | 770 | 769.87 | 0.35 | 770 | 766.1 | 1.9 |

Table A.1913: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.17 | 3.51 | 921 | 917.9 | 2.07 | 921 | 917.4 | 2.13 | 919 | 913.57 | 3.4 |
| | | 2op | 919 | 912.8 | 4.44 | 921 | 919 | 1.62 | 921 | 918.13 | 1.93 | 918 | 910 | 4.17 |
| | 50 | rnd | 921 | 916 | 2.57 | 921 | 918.57 | 1.76 | 921 | 918.87 | 1.76 | 921 | 913.87 | 3.52 |
| | | 2op | 921 | 914.37 | 3.99 | 921 | 919.2 | 1.65 | 921 | 919.23 | 1.76 | 919 | 913.73 | 3.82 |
| 51 | 20 | rnd | 921 | 914.73 | 3.28 | 921 | 917.13 | 2.53 | 921 | 918.3 | 2.23 | 921 | 916.6 | 2.91 |
| | | 2op | 916 | 913.93 | 2.65 | 921 | 917.77 | 1.81 | 921 | 918.3 | 1.68 | 918 | 916.13 | 0.78 |
| | 50 | rnd | 921 | 915.27 | 2.69 | 921 | 917.7 | 2 | 921 | 918.03 | 1.92 | 921 | 915.77 | 3.41 |
| | | 2op | 921 | 915.47 | 2.56 | 921 | 920.03 | 1.61 | 921 | 919.67 | 1.49 | 921 | 916.83 | 1.6 |

Table A.1914: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 915.3 | 2.56 | 921 | 915.3 | 3.2 | 921 | 916.23 | 3.02 | 921 | 916.43 | 1.96 |
| | | 2op | 916 | 911.83 | 3.82 | 918 | 915.93 | 0.83 | 918 | 916.07 | 0.37 | 916 | 915.9 | 0.55 |
| | 50 | rnd | 919 | 913.43 | 5.08 | 921 | 915.47 | 2.73 | 921 | 916 | 2.49 | 921 | 915.9 | 2.88 |
| | | 2op | 916 | 912.47 | 4.31 | 916 | 915.97 | 0.18 | 921 | 916.3 | 1.02 | 916 | 915.97 | 0.18 |
| 51 | 20 | rnd | 919 | 913.87 | 5.47 | 921 | 916.6 | 2.65 | 921 | 915.83 | 2.88 | 921 | 915.3 | 3.22 |
| | | 2op | 916 | 912.2 | 4.33 | 916 | 916 | 0 | 918 | 916.07 | 0.37 | 916 | 916 | 0 |
| | 50 | rnd | 921 | 914.63 | 3.49 | 919 | 915.13 | 2.62 | 921 | 915.27 | 2.57 | 921 | 916.4 | 2.62 |
| | | 2op | 916 | 912.67 | 3.88 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.1915: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.67 | 3.86 | 921 | 918.07 | 1.66 | 921 | 917.2 | 2.5 | 919 | 913.4 | 3 |
| | | 2op | 919 | 913.03 | 3.77 | 921 | 918.57 | 1.98 | 921 | 917.43 | 1.79 | 921 | 909.13 | 4.69 |
| | 50 | rnd | 921 | 914.77 | 2.88 | 921 | 917.93 | 2.08 | 921 | 918.7 | 1.91 | 919 | 915.5 | 3.18 |
| | | 2op | 921 | 915.07 | 3.9 | 921 | 919.2 | 1.67 | 921 | 919.27 | 1.7 | 921 | 912.13 | 5 |
| 51 | 20 | rnd | 919 | 914.93 | 2.2 | 921 | 917.17 | 2.38 | 921 | 917.63 | 1.97 | 921 | 917.17 | 2.65 |
| | | 2op | 918 | 914.7 | 2.83 | 921 | 917.5 | 1.76 | 921 | 919.1 | 1.83 | 921 | 917.03 | 1.59 |
| | 50 | rnd | 921 | 915.7 | 3.02 | 921 | 917.6 | 1.77 | 921 | 918.7 | 1.21 | 921 | 916.53 | 2.54 |
| | | 2op | 919 | 915.4 | 1.79 | 921 | 919.13 | 1.68 | 921 | 919.67 | 1.45 | 921 | 916.6 | 1.4 |

Table A.1916: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.93 | 3.36 | 921 | 916.23 | 2.92 | 921 | 916.53 | 2.43 | 919 | 915 | 2.83 |
| | | 2op | 916 | 911.93 | 4.16 | 918 | 916.13 | 0.51 | 918 | 916.13 | 0.51 | 916 | 916 | 0 |
| | 50 | rnd | 919 | 912.77 | 5.65 | 919 | 914.5 | 3.19 | 921 | 915.97 | 2.58 | 919 | 916.33 | 2.28 |
| | | 2op | 916 | 911.97 | 4.32 | 916 | 915.97 | 0.18 | 921 | 916.7 | 1.58 | 916 | 915.83 | 0.91 |
| 51 | 20 | rnd | 919 | 914.07 | 4.37 | 921 | 915.6 | 3.54 | 921 | 916.07 | 2.5 | 921 | 915.8 | 3.42 |
| | | 2op | 916 | 912.3 | 4.02 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |
| | 50 | rnd | 919 | 912.9 | 3.52 | 921 | 915.53 | 2.96 | 919 | 915.67 | 2.47 | 921 | 916.3 | 3.55 |
| | | 2op | 916 | 911.2 | 3.87 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.1917: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.93 | 3.32 | 921 | 918.23 | 1.96 | 921 | 911.93 | 2.92 | 918 | 910.83 | 4.74 |
| | | 2op | 919 | 915.53 | 1.78 | 921 | 918.53 | 1.93 | 918 | 908.77 | 4.18 | 906 | 906 | 0 |
| | 50 | rnd | 921 | 916.63 | 2.62 | 921 | 918.9 | 1.47 | 919 | 913.77 | 3.41 | 918 | 912.43 | 3.65 |
| | | 2op | 919 | 915.77 | 1.57 | 921 | 918.3 | 1.62 | 921 | 909.23 | 4.38 | 906 | 906 | 0 |
| 51 | 20 | rnd | 921 | 916.4 | 2.67 | 921 | 917.73 | 2.7 | 921 | 917.5 | 2.24 | 921 | 915 | 2.89 |
| | | 2op | 916 | 915.83 | 0.91 | 921 | 916.33 | 0.96 | 919 | 916.7 | 0.99 | 919 | 915.53 | 2.75 |
| | 50 | rnd | 921 | 917.23 | 3.47 | 921 | 917.67 | 2.12 | 921 | 916.5 | 2.46 | 921 | 913.67 | 3.29 |
| | | 2op | 916 | 915.97 | 0.18 | 921 | 916.83 | 1.49 | 919 | 916.5 | 1.31 | 919 | 907.67 | 3.98 |

Table A.1918: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915 | 3.13 | 921 | 916.1 | 2.58 | 921 | 915.1 | 3.09 | 921 | 913.03 | 3.93 |
| | | 2op | 916 | 915.67 | 1.27 | 916 | 916 | 0 | 919 | 916.37 | 1.75 | 919 | 907.23 | 3.07 |
| | 50 | rnd | 921 | 914.5 | 3.65 | 921 | 915.47 | 2.6 | 921 | 915.87 | 2.86 | 919 | 913.93 | 3.67 |
| | | 2op | 916 | 915.83 | 0.91 | 916 | 916 | 0 | 916 | 916 | 0 | 919 | 907.43 | 2.92 |
| 51 | 20 | rnd | 919 | 914.87 | 3.3 | 921 | 915.7 | 3.3 | 919 | 915.93 | 2.91 | 921 | 913.03 | 4.74 |
| | | 2op | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 | 919 | 912.63 | 4.65 |
| | 50 | rnd | 919 | 915.13 | 3.37 | 921 | 916.3 | 2.76 | 919 | 915.13 | 2.78 | 919 | 914.43 | 3.36 |
| | | 2op | 916 | 915.87 | 0.73 | 916 | 916 | 0 | 916 | 916 | 0 | 919 | 911.6 | 3.43 |

Table A.1919: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1577 | 1561.03 | 8.27 | 1572 | 1559.67 | 7.57 | 1572 | 1557.87 | 10.34 | 1573 | 1556.77 | 11.97 |
| | | 2op | 1553 | 1553 | 0 | 1553 | 1553 | 0 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1558.97 | 9.22 | 1574 | 1560.2 | 6.89 | 1575 | 1560.03 | 8.06 | 1568 | 1553.8 | 12.88 |
| | | 2op | 1568 | 1553.87 | 3.34 | 1570 | 1553.57 | 3.1 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1571 | 1559.67 | 10.8 | 1572 | 1559.37 | 8.34 | 1573 | 1560.2 | 10.75 | 1570 | 1553.83 | 11.19 |
| | | 2op | 1562 | 1554.23 | 2.7 | 1563 | 1554.47 | 2.89 | 1572 | 1555.1 | 4.25 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1558.83 | 8.53 | 1581 | 1562.63 | 8.24 | 1577 | 1559.47 | 7.09 | 1573 | 1555.77 | 9.33 |
| | | 2op | 1566 | 1555.2 | 4.07 | 1562 | 1554 | 2.36 | 1569 | 1555.57 | 4.28 | 1553 | 1553 | 0 |

Table A.1920: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1557.67 | 9.28 | 1577 | 1559.47 | 10.83 | 1572 | 1556.97 | 11.32 | 1577 | 1553.13 | 14.23 |
| | | 2op | 1567 | 1554.77 | 2.82 | 1571 | 1561.9 | 5.42 | 1557 | 1553.17 | 0.75 | 1553 | 1553 | 0 |
| | 50 | rnd | 1573 | 1560.17 | 6.98 | 1576 | 1563.03 | 6.87 | 1572 | 1554.37 | 10.78 | 1573 | 1552.8 | 14.22 |
| | | 2op | 1558 | 1553.7 | 1.21 | 1577 | 1568.63 | 3.17 | 1569 | 1557.37 | 4.29 | 1555 | 1553.07 | 0.37 |
| 51 | 20 | rnd | 1578 | 1558.73 | 8.99 | 1577 | 1559.93 | 10.07 | 1581 | 1561.8 | 9.9 | 1575 | 1558.8 | 9.94 |
| | | 2op | 1558 | 1553.9 | 1.6 | 1572 | 1566.4 | 4.3 | 1572 | 1560.77 | 5.75 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1556.4 | 10.6 | 1577 | 1561.73 | 9.89 | 1577 | 1563.7 | 8.42 | 1571 | 1556.9 | 9.73 |
| | | 2op | 1558 | 1554.5 | 1.72 | 1573 | 1565.8 | 5.22 | 1572 | 1566.67 | 3.91 | 1557 | 1553.27 | 0.87 |

Table A.1921: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1557.03 | 9.7 | 1573 | 1558.37 | 7.81 | 1573 | 1555.9 | 9.26 | 1580 | 1557.3 | 10.89 |
| | | 2op | 1570 | 1553.57 | 3.1 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1558.9 | 8.6 | 1576 | 1559.27 | 8.28 | 1574 | 1558.1 | 10.57 | 1574 | 1553.93 | 10.01 |
| | | 2op | 1570 | 1554.1 | 3.63 | 1553 | 1553 | 0 | 1558 | 1553.17 | 0.91 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1559.57 | 8.75 | 1580 | 1559.4 | 8.74 | 1574 | 1559.43 | 8.99 | 1573 | 1555.37 | 10.5 |
| | | 2op | 1563 | 1555.23 | 3.63 | 1563 | 1554.13 | 2.7 | 1571 | 1555.6 | 5 | 1553 | 1553 | 0 |
| | 50 | rnd | 1580 | 1562.3 | 7.8 | 1579 | 1561.5 | 8.42 | 1579 | 1559.97 | 8.03 | 1573 | 1555.77 | 10.71 |
| | | 2op | 1569 | 1554.23 | 3.91 | 1564 | 1554.2 | 2.85 | 1572 | 1554.33 | 4.03 | 1553 | 1553 | 0 |

Table A.1922: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1557.13 | 10.71 | 1577 | 1560 | 9.4 | 1576 | 1557.2 | 11.07 | 1574 | 1552.93 | 13.69 |
| | | 2op | 1558 | 1554 | 1.64 | 1571 | 1561.83 | 5.13 | 1562 | 1553.8 | 1.95 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1559.1 | 7.81 | 1574 | 1561.13 | 6.68 | 1576 | 1561.63 | 7.44 | 1571 | 1553.97 | 12.12 |
| | | 2op | 1558 | 1553.87 | 1.63 | 1572 | 1568.07 | 3.26 | 1563 | 1555.1 | 2.48 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1560.13 | 11.13 | 1574 | 1558.5 | 11.28 | 1574 | 1558.17 | 10.42 | 1570 | 1552.27 | 13.8 |
| | | 2op | 1564 | 1554.23 | 2.37 | 1573 | 1566.57 | 4.6 | 1569 | 1561.13 | 4.58 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1559.7 | 7.27 | 1572 | 1560.9 | 9.86 | 1572 | 1557.93 | 8.84 | 1578 | 1557.8 | 12.03 |
| | | 2op | 1558 | 1554.23 | 1.65 | 1572 | 1567.6 | 3.39 | 1572 | 1566.87 | 4.04 | 1563 | 1553.6 | 2.04 |

Table A.1923: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1580 | 1559.4 | 9.6 | 1581 | 1559.93 | 9.31 | 1573 | 1553.13 | 14.47 | 1570 | 1554.07 | 11.52 |
| | | 2op | 1568 | 1555.57 | 4.92 | 1571 | 1555.9 | 5.33 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1560.3 | 7.51 | 1572 | 1559.57 | 7.6 | 1578 | 1556.23 | 8.91 | 1570 | 1558.23 | 10.79 |
| | | 2op | 1564 | 1554.2 | 2.55 | 1567 | 1553.8 | 2.99 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1579 | 1560.67 | 8.31 | 1576 | 1562.8 | 6.67 | 1575 | 1558.5 | 9.49 | 1574 | 1554.6 | 10.49 |
| | | 2op | 1564 | 1557.9 | 3.21 | 1571 | 1568.2 | 2.83 | 1563 | 1553.9 | 2.32 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1560.27 | 7.46 | 1573 | 1560.57 | 7.41 | 1576 | 1556.27 | 8.9 | 1577 | 1559.17 | 9.12 |
| | | 2op | 1571 | 1560.6 | 6.23 | 1571 | 1560.63 | 5.92 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |

Table A.1924: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1560.43 | 7.25 | 1576 | 1558.87 | 9.2 | 1568 | 1552.5 | 16.38 | 1571 | 1551.67 | 14.01 |
| | | 2op | 1558 | 1554.13 | 1.43 | 1558 | 1554.63 | 1.5 | 1563 | 1553.33 | 1.83 | 1553 | 1553 | 0 |
| | 50 | rnd | 1570 | 1557.9 | 7.95 | 1578 | 1560.67 | 8.11 | 1572 | 1558.87 | 9.63 | 1577 | 1555.4 | 11.85 |
| | | 2op | 1558 | 1555.3 | 1.88 | 1560 | 1555.23 | 2.25 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1574 | 1559.7 | 10.87 | 1574 | 1561.6 | 8.27 | 1570 | 1556.1 | 10.45 | 1568 | 1552.77 | 10.66 |
| | | 2op | 1564 | 1554.97 | 2.36 | 1564 | 1556.57 | 2.71 | 1557 | 1553.27 | 0.87 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1561.97 | 7.21 | 1572 | 1560.7 | 5.9 | 1571 | 1557.83 | 11.21 | 1573 | 1556.43 | 10.88 |
| | | 2op | 1566 | 1556.63 | 3.12 | 1564 | 1556.7 | 2.84 | 1558 | 1553.37 | 1.19 | 1553 | 1553 | 0 |

Table A.1925: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1553.3 | 10.49 | 1569 | 1555.2 | 7.87 | 1566 | 1550.1 | 12.51 | 1565 | 1548.37 | 11.71 |
| | | 2op | 1563 | 1536 | 10.72 | 1564 | 1536.23 | 10.46 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1571 | 1553.23 | 9.31 | 1570 | 1555.2 | 7.2 | 1564 | 1553.77 | 8.77 | 1564 | 1551.73 | 9.46 |
| | | 2op | 1558 | 1534.23 | 8.46 | 1563 | 1539.47 | 12.56 | 1561 | 1533.37 | 7.37 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1567 | 1554.43 | 11.13 | 1571 | 1556.53 | 8.48 | 1570 | 1556.87 | 7.74 | 1570 | 1550.67 | 10.04 |
| | | 2op | 1561 | 1540.27 | 12.13 | 1565 | 1546.6 | 12.47 | 1567 | 1548.1 | 13.72 | 1531 | 1531 | 0 |
| | 50 | rnd | 1570 | 1553.7 | 7.82 | 1567 | 1556.1 | 7.29 | 1568 | 1559.53 | 5.84 | 1567 | 1550.57 | 11.79 |
| | | 2op | 1566 | 1541.63 | 13.81 | 1565 | 1550.07 | 13.31 | 1569 | 1553.7 | 11.62 | 1550 | 1531.63 | 3.47 |

Table A.1926: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1544.67 | 15.35 | 1570 | 1557.4 | 8.19 | 1566 | 1550.53 | 11.41 | 1568 | 1548.2 | 9.73 |
| | | 2op | 1531 | 1531 | 0 | 1567 | 1538.6 | 12.1 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1545.8 | 11.72 | 1569 | 1558.2 | 6.7 | 1569 | 1557.83 | 10.45 | 1564 | 1549.7 | 10.34 |
| | | 2op | 1531 | 1531 | 0 | 1568 | 1553.43 | 12.33 | 1547 | 1531.87 | 3.3 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1545.5 | 12.16 | 1572 | 1556.83 | 6.86 | 1569 | 1558 | 6.95 | 1569 | 1553.67 | 10.59 |
| | | 2op | 1531 | 1531 | 0 | 1566 | 1548.6 | 12.85 | 1565 | 1537.07 | 11.24 | 1531 | 1531 | 0 |
| | 50 | rnd | 1564 | 1545.87 | 13.71 | 1569 | 1552.93 | 7.83 | 1567 | 1555.6 | 7.47 | 1568 | 1552.7 | 12.44 |
| | | 2op | 1531 | 1531 | 0 | 1566 | 1537.03 | 9.92 | 1567 | 1544.37 | 14.77 | 1531 | 1531 | 0 |

Table A.1927: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1551.43 | 10.42 | 1569 | 1557.03 | 9.14 | 1569 | 1549.57 | 11.03 | 1566 | 1545.67 | 11.58 |
| | | 2op | 1557 | 1534.33 | 8.67 | 1562 | 1536.93 | 11.18 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1566 | 1554.67 | 9.54 | 1570 | 1554 | 7.47 | 1568 | 1553 | 8.94 | 1567 | 1546.6 | 13.18 |
| | | 2op | 1560 | 1533.47 | 7.6 | 1562 | 1536.3 | 10.46 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1554 | 7.17 | 1568 | 1551.93 | 9.61 | 1569 | 1555.13 | 6.66 | 1564 | 1552.73 | 7.95 |
| | | 2op | 1564 | 1537.77 | 11.68 | 1566 | 1544.83 | 12.58 | 1566 | 1541.87 | 14.07 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1553.83 | 8.53 | 1568 | 1555.4 | 9.22 | 1568 | 1557.77 | 7.22 | 1566 | 1554.23 | 12.49 |
| | | 2op | 1563 | 1541.3 | 13.91 | 1569 | 1548.67 | 14.46 | 1568 | 1553.53 | 11.08 | 1531 | 1531 | 0 |

Table A.1928: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1545.17 | 9.76 | 1569 | 1556.7 | 9.48 | 1565 | 1552.07 | 7.69 | 1567 | 1550.73 | 10.18 |
| | | 2op | 1531 | 1531 | 0 | 1565 | 1539.47 | 13.36 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1561 | 1545.97 | 11.18 | 1568 | 1558.03 | 6.95 | 1572 | 1554.03 | 10.88 | 1569 | 1551.57 | 10.49 |
| | | 2op | 1531 | 1531 | 0 | 1567 | 1553.87 | 11.9 | 1563 | 1532.07 | 5.84 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1569 | 1542.73 | 13.84 | 1565 | 1555.23 | 7.69 | 1569 | 1555.1 | 8.94 | 1568 | 1550.2 | 11.26 |
| | | 2op | 1531 | 1531 | 0 | 1565 | 1549.63 | 12.78 | 1564 | 1535.77 | 9.43 | 1531 | 1531 | 0 |
| | 50 | rnd | 1566 | 1549.43 | 11.42 | 1567 | 1552.47 | 10.24 | 1570 | 1556.17 | 9.57 | 1562 | 1549.13 | 8.37 |
| | | 2op | 1531 | 1531 | 0 | 1565 | 1542.9 | 12.64 | 1566 | 1545.33 | 13.51 | 1531 | 1531 | 0 |

Table A.1929: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1554.63 | 10.95 | 1570 | 1559.47 | 4.78 | 1564 | 1547.63 | 10.01 | 1570 | 1550.9 | 10.4 |
| | | 2op | 1569 | 1538.93 | 12.78 | 1573 | 1552.97 | 12.69 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1571 | 1554.37 | 8.16 | 1570 | 1557.37 | 8.26 | 1566 | 1548 | 13.9 | 1560 | 1545.33 | 11.21 |
| | | 2op | 1570 | 1540.7 | 13.78 | 1569 | 1544.73 | 14.92 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1572 | 1557.8 | 9.2 | 1572 | 1561.4 | 6.68 | 1565 | 1552.5 | 9.31 | 1567 | 1550.73 | 9.67 |
| | | 2op | 1564 | 1554.87 | 8.5 | 1565 | 1558.03 | 3.07 | 1561 | 1533.9 | 8.85 | 1531 | 1531 | 0 |
| | 50 | rnd | 1569 | 1557.03 | 8.12 | 1570 | 1559.07 | 6.72 | 1569 | 1554.5 | 10.94 | 1571 | 1551.27 | 11.24 |
| | | 2op | 1566 | 1554.9 | 10.32 | 1570 | 1557.57 | 6.93 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.1930: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1546.4 | 9.84 | 1569 | 1554.1 | 8.42 | 1569 | 1548.63 | 9.89 | 1566 | 1546.2 | 13.04 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1549.9 | 8.28 | 1569 | 1552.4 | 12.7 | 1563 | 1550.03 | 8.29 | 1569 | 1546.7 | 11.46 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1551.47 | 11.95 | 1569 | 1553.7 | 8.26 | 1569 | 1552.77 | 10.87 | 1570 | 1551.2 | 12.33 |
| | | 2op | 1531 | 1531 | 0 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1567 | 1552.6 | 10.1 | 1565 | 1551 | 7.64 | 1568 | 1551.47 | 12.31 | 1565 | 1544.83 | 12.66 |
| | | 2op | 1531 | 1531 | 0 | 1545 | 1532.67 | 3.88 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.1931: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1548.8 | 9.33 | 1564 | 1553.57 | 6.07 | 1568 | 1547.3 | 9.19 | 1562 | 1547.33 | 8.82 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1549.9 | 8.28 | 1565 | 1550.5 | 6.92 | 1566 | 1550.3 | 8.38 | 1561 | 1548.5 | 8.73 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1550.57 | 8.11 | 1566 | 1551.1 | 9.66 | 1565 | 1552.23 | 7.73 | 1562 | 1549.47 | 9.47 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1549.37 | 8.32 | 1566 | 1550.6 | 7.28 | 1563 | 1553.3 | 6.73 | 1564 | 1548.3 | 9.23 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1550 | 1548.13 | 0.51 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 |

Table A.1932: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1559 | 1548.17 | 8.53 | 1566 | 1553.83 | 6.32 | 1567 | 1549.63 | 6.7 | 1565 | 1548.67 | 7.16 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1562 | 1548.73 | 9.49 | 1567 | 1551.97 | 7.16 | 1566 | 1552.03 | 9.02 | 1561 | 1551.47 | 6.48 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1565 | 1547.1 | 8.26 | 1565 | 1551.47 | 9.81 | 1567 | 1551.9 | 8.95 | 1559 | 1548.73 | 7.14 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1549.13 | 9.14 | 1565 | 1552.57 | 6.4 | 1568 | 1550.73 | 7.93 | 1566 | 1550.33 | 8.95 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 |

Table A.1933: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1549.67 | 10.98 | 1564 | 1549.23 | 9.9 | 1563 | 1549.9 | 9.51 | 1563 | 1547.27 | 8.66 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1546.3 | 9.63 | 1563 | 1550.93 | 7.16 | 1560 | 1548.83 | 8.52 | 1563 | 1546.9 | 10.66 |
| | | 2op | 1548 | 1548 | 0 | 1556 | 1548.27 | 1.46 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1549.4 | 10.97 | 1565 | 1552 | 7.48 | 1565 | 1547.6 | 9.05 | 1564 | 1548.43 | 8.79 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1550.17 | 7.33 | 1568 | 1551.2 | 9.09 | 1565 | 1552.53 | 10.05 | 1561 | 1549.77 | 7.32 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1934: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1568 | 1547.63 | 10.26 | 1566 | 1551.47 | 8.35 | 1567 | 1548.8 | 10.67 | 1567 | 1551 | 8.52 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1558 | 1547.47 | 7.12 | 1565 | 1550.87 | 7.34 | 1565 | 1549.13 | 10.25 | 1564 | 1550.43 | 9.27 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1566 | 1547.7 | 8.28 | 1566 | 1550.6 | 9.46 | 1568 | 1551.4 | 8.58 | 1565 | 1545.17 | 12.6 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1548 | 8.32 | 1566 | 1552.5 | 6.04 | 1566 | 1551.7 | 6.77 | 1563 | 1550.87 | 7.72 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 |

Table A.1935: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1553.57 | 8.31 | 1565 | 1553.77 | 7.49 | 1568 | 1547.73 | 10.51 | 1565 | 1548.47 | 10.21 |
| | | 2op | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1548.8 | 7.49 | 1564 | 1552.67 | 6.17 | 1566 | 1547.43 | 10.62 | 1562 | 1547.4 | 9.25 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1565 | 1551.9 | 7.88 | 1564 | 1557.3 | 6.28 | 1565 | 1548.27 | 10.42 | 1564 | 1547.47 | 11.39 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1563 | 1554.33 | 7.11 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1549.57 | 7.93 | 1570 | 1553.17 | 8.24 | 1565 | 1548.33 | 8.47 | 1562 | 1547.57 | 9.65 |
| | | 2op | 1550 | 1548.13 | 0.51 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1936: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1549.57 | 7.67 | 1561 | 1548.4 | 8.53 | 1560 | 1543.97 | 10.99 | 1566 | 1548.53 | 8.9 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1564 | 1548.73 | 7.89 | 1566 | 1552.5 | 7.89 | 1565 | 1549.93 | 9.91 | 1564 | 1546.97 | 10.68 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1561 | 1548.33 | 6.43 | 1567 | 1552.8 | 8.68 | 1566 | 1548.93 | 7.96 | 1565 | 1548.07 | 10.01 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1550.93 | 7.92 | 1563 | 1547.93 | 9.48 | 1566 | 1549.3 | 8.74 | 1568 | 1546.17 | 10.18 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.1937: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2775 | 2745.43 | 12.37 | 2771 | 2746.93 | 12.52 | 2771 | 2742.87 | 15.5 | 2757 | 2740.63 | 10.76 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2759 | 2741.7 | 10.47 | 2758 | 2742.2 | 12.08 | 2764 | 2741.27 | 12.31 | 2765 | 2742.07 | 13.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2768 | 2741.37 | 12.51 | 2762 | 2745.47 | 9.22 | 2767 | 2740.8 | 14.58 | 2764 | 2736.3 | 14.14 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2771 | 2747.43 | 11.83 | 2764 | 2745.03 | 12.43 | 2763 | 2741.27 | 9.71 | 2763 | 2743.03 | 9.73 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1938: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2741.47 | 12.18 | 2780 | 2744.7 | 13.97 | 2758 | 2736.83 | 12.41 | 2767 | 2735.77 | 15.51 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.9 | 12.86 | 2772 | 2742.9 | 12.34 | 2771 | 2746.7 | 13.43 | 2763 | 2733.1 | 12.9 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2741.7 | 15.53 | 2771 | 2748 | 11.67 | 2764 | 2738.07 | 15.62 | 2773 | 2738.73 | 17.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2762 | 2736.33 | 17.79 | 2775 | 2746.93 | 15.28 | 2767 | 2743.07 | 12.29 | 2772 | 2741.27 | 15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1939: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2769 | 2744.13 | 18.01 | 2770 | 2743.97 | 13.74 | 2766 | 2741.4 | 13.77 | 2766 | 2746.3 | 10.41 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2746.87 | 12.22 | 2768 | 2741.8 | 12.79 | 2765 | 2742.2 | 13.94 | 2763 | 2743.27 | 12.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2764 | 2739.07 | 13.93 | 2774 | 2743.77 | 14.69 | 2763 | 2742.63 | 9.87 | 2767 | 2740.3 | 14.69 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2742.37 | 11.93 | 2770 | 2745.67 | 10.48 | 2760 | 2741.83 | 9.08 | 2762 | 2740.23 | 16.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1940: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2773 | 2740.97 | 17.35 | 2764 | 2742.07 | 15.09 | 2761 | 2741.47 | 11.95 | 2766 | 2741.37 | 19.15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2778 | 2743.17 | 12.23 | 2768 | 2743.53 | 16.69 | 2761 | 2742.83 | 11.19 | 2768 | 2740.03 | 15.66 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2770 | 2739.23 | 14.03 | 2762 | 2744.4 | 13.58 | 2759 | 2737.03 | 15.24 | 2770 | 2739.6 | 18.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2775 | 2739.67 | 12.77 | 2773 | 2744.97 | 16.18 | 2767 | 2743 | 13.35 | 2759 | 2741.6 | 12.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1941: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2766 | 2745.63 | 12.84 | 2771 | 2742.47 | 13.99 | 2760 | 2740.33 | 12.4 | 2765 | 2738.1 | 14.19 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.43 | 12.74 | 2766 | 2742.23 | 14.44 | 2761 | 2743.03 | 10.45 | 2763 | 2736.83 | 13.97 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2769 | 2746.37 | 14.21 | 2766 | 2747.4 | 10.26 | 2766 | 2744.27 | 12.45 | 2768 | 2743.83 | 15.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2769 | 2748.07 | 12.73 | 2763 | 2743.77 | 11.5 | 2764 | 2744.3 | 12.49 | 2761 | 2739.5 | 12.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1942: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2741.93 | 14.41 | 2767 | 2744.23 | 14.44 | 2767 | 2744.6 | 14.09 | 2770 | 2741.4 | 13.37 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2741.03 | 11.98 | 2769 | 2745.37 | 12.29 | 2772 | 2742.53 | 15.67 | 2763 | 2743.23 | 11.83 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2739.7 | 15.81 | 2765 | 2741.37 | 10.46 | 2768 | 2738.93 | 17.31 | 2773 | 2740.37 | 14.28 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2764 | 2739.6 | 18.15 | 2759 | 2740.8 | 11.35 | 2769 | 2741.07 | 15.78 | 2773 | 2742.83 | 13.22 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.1943: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2810.7 | 14.63 | 2843 | 2814.37 | 14.41 | 2837 | 2814.13 | 15.34 | 2839 | 2813.9 | 12.79 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2815.63 | 11.82 | 2838 | 2817.2 | 9.24 | 2840 | 2812.57 | 12.91 | 2835 | 2811.07 | 12.23 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2831 | 2813.33 | 12.46 | 2835 | 2818.8 | 12.93 | 2835 | 2810.7 | 18.77 | 2844 | 2811.87 | 12.11 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2813.9 | 10.56 | 2838 | 2813 | 14.67 | 2832 | 2814.43 | 10.66 | 2842 | 2815.47 | 13.99 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1944: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2834 | 2810.57 | 13.81 | 2842 | 2815.97 | 13.68 | 2845 | 2809.4 | 16.84 | 2835 | 2808.7 | 12.44 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2814.17 | 15.8 | 2831 | 2814.93 | 10.64 | 2836 | 2810.6 | 16.44 | 2837 | 2805.97 | 14.87 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.8 | 2.94 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2834 | 2810.23 | 14.95 | 2842 | 2817.63 | 9.61 | 2844 | 2814.87 | 13.07 | 2837 | 2809.1 | 16.26 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807 | 3.05 | 2810 | 2804.6 | 1.83 | 2804 | 2804 | 0 |
| | 50 | rnd | 2827 | 2809.17 | 11.02 | 2837 | 2817.53 | 13.72 | 2834 | 2814.27 | 13.98 | 2829 | 2806.13 | 12.85 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.8 | 2.94 | 2810 | 2805.6 | 2.7 | 2804 | 2804 | 0 |

Table A.1945: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2836 | 2814.27 | 12.29 | 2837 | 2810.27 | 15.73 | 2838 | 2814.8 | 14.12 | 2837 | 2814.8 | 10.91 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2815.5 | 12.86 | 2840 | 2817.27 | 10.52 | 2840 | 2814.5 | 14.17 | 2843 | 2812.33 | 11.7 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2837 | 2814.83 | 13.12 | 2848 | 2819.23 | 13.25 | 2836 | 2812.47 | 13.27 | 2833 | 2810.93 | 14.23 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2812 | 15.11 | 2838 | 2815.6 | 14.18 | 2842 | 2815.5 | 12.56 | 2838 | 2812.47 | 17.08 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1946: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2827 | 2813.33 | 10.91 | 2830 | 2813.7 | 10.82 | 2844 | 2811.73 | 17.61 | 2838 | 2809.8 | 16.1 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2835 | 2814.47 | 9.55 | 2829 | 2815.3 | 8.91 | 2846 | 2812.7 | 17.01 | 2845 | 2813.27 | 13.93 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.4 | 2.99 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2833 | 2808.33 | 14.12 | 2836 | 2815.33 | 12.59 | 2838 | 2810.6 | 13.77 | 2838 | 2814.4 | 10.51 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.4 | 2.99 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2810.33 | 13.3 | 2836 | 2815.67 | 10.55 | 2842 | 2816.67 | 14.25 | 2836 | 2813.47 | 11.78 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2808.2 | 2.8 | 2810 | 2805.4 | 2.58 | 2804 | 2804 | 0 |

Table A.1947: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2815.5 | 13.96 | 2835 | 2810.17 | 13.51 | 2837 | 2811.47 | 13.81 | 2825 | 2805.8 | 13.12 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2841 | 2814.5 | 14.51 | 2842 | 2815.57 | 14.3 | 2835 | 2805.03 | 15.11 | 2835 | 2814.8 | 11.06 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2835 | 2815.47 | 11.13 | 2838 | 2816.8 | 15.7 | 2835 | 2811.67 | 13.78 | 2842 | 2814.87 | 15.36 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806 | 2.88 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2817.2 | 13.78 | 2838 | 2817.8 | 12.26 | 2834 | 2813.77 | 12.71 | 2845 | 2811.83 | 16.74 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.1948: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2837 | 2812 | 16.97 | 2836 | 2809.37 | 16.35 | 2833 | 2813.1 | 12.89 | 2833 | 2809.67 | 15.24 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806 | 2.88 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2811 | 15.2 | 2839 | 2814.37 | 12.6 | 2840 | 2811.47 | 11.83 | 2837 | 2811.77 | 12.66 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2805.2 | 2.44 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2836 | 2812.73 | 13.05 | 2842 | 2813.13 | 12.03 | 2839 | 2810.57 | 17.3 | 2835 | 2810.37 | 13.57 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.4 | 2.99 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2836 | 2814.33 | 10.73 | 2838 | 2811.4 | 12.55 | 2836 | 2815.17 | 10.42 | 2847 | 2811.97 | 15.89 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.6 | 3.02 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 |

Table A.1949: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2682.97 | 12.42 | 2718 | 2688.87 | 15.28 | 2705 | 2686.83 | 11.3 | 2709 | 2684.5 | 13.12 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2685.5 | 12.61 | 2708 | 2685.87 | 13.31 | 2704 | 2681.97 | 13.66 | 2710 | 2683.67 | 13.6 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2712 | 2683.77 | 13.71 | 2700 | 2686.17 | 9.48 | 2705 | 2685.6 | 14.7 | 2709 | 2683.37 | 10.8 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2690.43 | 13.68 | 2713 | 2688.63 | 11.68 | 2707 | 2684.73 | 14.17 | 2699 | 2680.3 | 15.67 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.1950: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2709 | 2682.93 | 12.91 | 2710 | 2684.3 | 15.49 | 2714 | 2686.57 | 14.43 | 2702 | 2680.13 | 14.46 |
| | | 2op | 2700 | 2690.13 | 4.28 | 2698 | 2689.9 | 3.98 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2683.7 | 13.32 | 2710 | 2688.57 | 15.55 | 2716 | 2683.37 | 11.39 | 2708 | 2687.77 | 11.23 |
| | | 2op | 2706 | 2690.87 | 5.26 | 2702 | 2696.03 | 3.01 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2683.5 | 12.08 | 2711 | 2688 | 15.42 | 2715 | 2688.3 | 14.34 | 2706 | 2684.3 | 10.92 |
| | | 2op | 2701 | 2691.5 | 4.47 | 2704 | 2695.07 | 4.08 | 2699 | 2689.97 | 4.41 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2680.03 | 14.39 | 2722 | 2688.47 | 18.27 | 2710 | 2688.4 | 11.77 | 2710 | 2682.93 | 13.94 |
| | | 2op | 2698 | 2692.1 | 4 | 2702 | 2696.03 | 1.92 | 2698 | 2694.33 | 2.9 | 2687 | 2687 | 0 |

Table A.1951: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2713 | 2686.87 | 13.88 | 2706 | 2689.07 | 11.16 | 2707 | 2688.2 | 9.3 | 2703 | 2685.03 | 13.53 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2685.6 | 11.51 | 2712 | 2693.47 | 11 | 2703 | 2686.97 | 12.54 | 2709 | 2682.37 | 13.88 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2709 | 2688 | 11.42 | 2708 | 2684.97 | 11.7 | 2709 | 2683.2 | 15.57 | 2717 | 2685.5 | 16.35 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2683.97 | 11.42 | 2712 | 2688.8 | 13.32 | 2705 | 2682.83 | 11.9 | 2703 | 2684.17 | 16.39 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.1952: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2709 | 2680.17 | 12.93 | 2713 | 2685.37 | 15.17 | 2710 | 2684.07 | 12.28 | 2706 | 2684.17 | 14.9 |
| | | 2op | 2699 | 2690.37 | 4.11 | 2699 | 2690.17 | 4.41 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2684.63 | 11.32 | 2709 | 2685.23 | 10.54 | 2718 | 2683.87 | 12.34 | 2709 | 2682.33 | 14.12 |
| | | 2op | 2698 | 2690.83 | 4.26 | 2706 | 2695.5 | 3.8 | 2698 | 2687.37 | 2.01 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2704 | 2680.73 | 12.52 | 2708 | 2686.57 | 13.93 | 2704 | 2683.63 | 12.12 | 2698 | 2678.97 | 14.18 |
| | | 2op | 2700 | 2691 | 4.5 | 2700 | 2694.97 | 3.35 | 2704 | 2690.27 | 5.03 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2679.7 | 14.12 | 2709 | 2690.17 | 13.31 | 2707 | 2688.07 | 12.37 | 2707 | 2687.33 | 12.29 |
| | | 2op | 2698 | 2691.87 | 4.1 | 2700 | 2696.17 | 1.49 | 2700 | 2693.83 | 4.2 | 2687 | 2687 | 0 |

Table A.1953: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2707 | 2689.37 | 10.71 | 2714 | 2689.07 | 12.02 | 2710 | 2684.97 | 14.67 | 2701 | 2682.2 | 15.84 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2688.4 | 13.69 | 2708 | 2684.6 | 15.89 | 2703 | 2684.63 | 13.24 | 2711 | 2685.67 | 11.35 |
| | | 2op | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2685.93 | 12.66 | 2708 | 2690.2 | 8.49 | 2711 | 2686.83 | 15.97 | 2709 | 2683.83 | 12.16 |
| | | 2op | 2699 | 2690.53 | 4.55 | 2708 | 2693.9 | 6.18 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| | 50 | rnd | 2709 | 2683.93 | 14.92 | 2702 | 2681.03 | 13.44 | 2710 | 2686.57 | 11.45 | 2713 | 2686.7 | 14.63 |
| | | 2op | 2696 | 2687.57 | 2.16 | 2696 | 2687.57 | 2.16 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |

Table A.1954: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2705 | 2679.73 | 10.1 | 2708 | 2684.53 | 13.1 | 2707 | 2687.03 | 11.52 | 2711 | 2689.1 | 16.7 |
| | | 2op | 2700 | 2691.97 | 4.33 | 2700 | 2690.83 | 4.8 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2683.87 | 10.24 | 2710 | 2685.77 | 13.59 | 2706 | 2686.33 | 13.65 | 2711 | 2686.7 | 13 |
| | | 2op | 2700 | 2694.37 | 2.66 | 2698 | 2691.63 | 4.5 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2705 | 2680.83 | 14.38 | 2704 | 2680.67 | 14.8 | 2705 | 2688.73 | 9.21 | 2713 | 2684.53 | 12.4 |
| | | 2op | 2700 | 2693.63 | 3.92 | 2698 | 2694.7 | 2.45 | 2697 | 2687.53 | 2.1 | 2687 | 2687 | 0 |
| | 50 | rnd | 2699 | 2685.73 | 10.29 | 2708 | 2688.23 | 14.45 | 2715 | 2687.7 | 12.72 | 2716 | 2685.53 | 14.8 |
| | | 2op | 2696 | 2695.13 | 0.35 | 2699 | 2693.9 | 3.34 | 2695 | 2688 | 2.61 | 2687 | 2687 | 0 |

Table A.1955: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17882 | 17786.2 | 42.05 | 17841 | 17796.1 | 32.29 | 17871 | 17789.2 | 39.13 | 17863 | 17792.4 | 41.13 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17871 | 17807.37 | 32.64 | 17878 | 17798.63 | 36.52 | 17877 | 17803.53 | 41.03 | 17855 | 17782.07 | 37.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17857 | 17791.1 | 41.11 | 17876 | 17812.03 | 35.42 | 17834 | 17786.23 | 41.81 | 17848 | 17785.43 | 39.5 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17866 | 17801.43 | 38.79 | 17869 | 17792.57 | 39.73 | 17878 | 17799.2 | 47.72 | 17889 | 17802.93 | 49.79 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1956: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17870 | 17791.77 | 36.7 | 17886 | 17803 | 34.56 | 17887 | 17788.53 | 47.04 | 17845 | 17779.9 | 44.85 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17906 | 17800.47 | 45 | 17856 | 17799.73 | 35.11 | 17899 | 17799.47 | 35.64 | 17878 | 17785.33 | 46.37 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17899 | 17804 | 38.54 | 17871 | 17798.8 | 34.96 | 17866 | 17793.8 | 42.53 | 17860 | 17796.47 | 36.81 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17859 | 17792.93 | 35.71 | 17847 | 17781.93 | 38.19 | 17921 | 17808.7 | 37.78 | 17876 | 17791 | 48.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1957: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17844 | 17790.5 | 29.01 | 17910 | 17801.73 | 44 | 17880 | 17794.73 | 46.31 | 17887 | 17806.9 | 31.33 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17886 | 17803.37 | 36.65 | 17879 | 17804.57 | 36.42 | 17882 | 17815.67 | 30.07 | 17843 | 17789.63 | 32.32 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17925 | 17796.87 | 41.37 | 17868 | 17797 | 43.42 | 17887 | 17792.33 | 47.55 | 17868 | 17796.07 | 36.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17853 | 17796.07 | 33.06 | 17861 | 17801.5 | 33.06 | 17898 | 17808.4 | 30.79 | 17833 | 17792.77 | 34.09 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1958: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17880 | 17792.03 | 40.22 | 17880 | 17804.97 | 33.95 | 17886 | 17787.7 | 45.68 | 17882 | 17796.63 | 40.29 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17861 | 17800.23 | 33.65 | 17850 | 17798.53 | 31.82 | 17884 | 17790.37 | 44.28 | 17877 | 17796.9 | 45.64 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17897 | 17797.2 | 39.64 | 17861 | 17796.23 | 35.58 | 17866 | 17793.8 | 41.1 | 17863 | 17800.83 | 36.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17921 | 17803.8 | 41.47 | 17876 | 17793.77 | 44.69 | 17866 | 17783 | 44.78 | 17893 | 17808.33 | 41.73 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1959: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17879 | 17798.03 | 37.31 | 17899 | 17790.47 | 53.04 | 17880 | 17790.57 | 40.15 | 17866 | 17795.7 | 37.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17865 | 17800.23 | 28 | 17859 | 17809.8 | 30.08 | 17901 | 17814.67 | 40.25 | 17888 | 17806.53 | 43.87 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17865 | 17804.77 | 32.95 | 17862 | 17802.3 | 27.88 | 17849 | 17797 | 36.03 | 17906 | 17810.43 | 39.77 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17836 | 17782.27 | 32.19 | 17874 | 17789.47 | 36.63 | 17853 | 17790.17 | 31.19 | 17867 | 17801.9 | 37.22 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1960: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17853 | 17797.6 | 40.81 | 17877 | 17789.93 | 35.25 | 17843 | 17788.17 | 32.32 | 17862 | 17793.07 | 43.34 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17868 | 17797.97 | 45.17 | 17883 | 17806.77 | 36.28 | 17866 | 17800.07 | 29.95 | 17881 | 17793.03 | 46.05 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17841 | 17789.63 | 38.56 | 17834 | 17782.23 | 31.52 | 17904 | 17785.93 | 43.57 | 17883 | 17795.3 | 43.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17899 | 17799 | 45.28 | 17851 | 17800.37 | 31.86 | 17861 | 17803.53 | 32.55 | 17872 | 17798.73 | 37.59 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.1961: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22138 | 22071.3 | 45.43 | 22170 | 22064.8 | 43.43 | 22183 | 22056.63 | 48.21 | 22133 | 22060.53 | 36.71 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22167 | 22082.03 | 39.55 | 22143 | 22070.47 | 43.39 | 22161 | 22075.33 | 47.57 | 22170 | 22080.4 | 39.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22164 | 22082 | 51.82 | 22146 | 22066.33 | 34.85 | 22170 | 22065.7 | 44.12 | 22193 | 22066.6 | 54.18 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22069.23 | 43.42 | 22143 | 22057.6 | 48.01 | 22139 | 22065.53 | 46.61 | 22202 | 22084.37 | 46.51 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1962: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22166 | 22068.7 | 38.72 | 22124 | 22045.63 | 51.44 | 22139 | 22066.67 | 39.99 | 22154 | 22049.23 | 46.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22066.6 | 52.24 | 22180 | 22076.07 | 47.99 | 22141 | 22059.43 | 50.97 | 22129 | 22064.27 | 35.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22138 | 22068.4 | 38.27 | 22178 | 22072.13 | 52.6 | 22133 | 22064.53 | 40.4 | 22123 | 22064.33 | 41.55 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22175 | 22065.27 | 54.99 | 22162 | 22065.77 | 38.94 | 22146 | 22061.5 | 42.27 | 22171 | 22066.8 | 48.14 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1963: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22140 | 22059.03 | 36.75 | 22184 | 22082.97 | 46.58 | 22146 | 22057.5 | 46.54 | 22145 | 22065.43 | 42.4 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22141 | 22068.53 | 46.9 | 22145 | 22060.7 | 37.7 | 22155 | 22067.73 | 51.82 | 22161 | 22070.83 | 43.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22144 | 22071.83 | 43.05 | 22157 | 22073.23 | 43.72 | 22183 | 22055.93 | 44.98 | 22144 | 22067.37 | 43.53 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22120 | 22066.67 | 35.27 | 22136 | 22065.27 | 45.87 | 22143 | 22047 | 58.62 | 22155 | 22060.2 | 46.45 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1964: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22163 | 22078.77 | 47.16 | 22160 | 22080.27 | 45.12 | 22130 | 22050 | 42.62 | 22133 | 22053.47 | 42.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22162 | 22058.43 | 44.41 | 22134 | 22058.33 | 42.67 | 22148 | 22055.83 | 45.7 | 22135 | 22063.97 | 41.79 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22192 | 22068.07 | 47.16 | 22155 | 22073.33 | 51.26 | 22146 | 22065.43 | 42.14 | 22154 | 22061.8 | 50.3 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22148 | 22064.6 | 43.2 | 22160 | 22058.07 | 45.14 | 22168 | 22067.17 | 35.91 | 22168 | 22071.2 | 43.66 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1965: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22178 | 22084.53 | 48.81 | 22150 | 22075.37 | 52.84 | 22203 | 22078.03 | 50.14 | 22133 | 22049.13 | 43.7 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22163 | 22065.93 | 48.08 | 22153 | 22060.87 | 52.35 | 22130 | 22048.6 | 45.97 | 22128 | 22056.87 | 47.98 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22199 | 22068.6 | 47.82 | 22199 | 22068.6 | 47.82 | 22143 | 22067.33 | 44.74 | 22200 | 22068.97 | 60.78 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22155 | 22076.93 | 44.65 | 22155 | 22078.97 | 42.31 | 22154 | 22072.8 | 43.81 | 22166 | 22062.43 | 45.63 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1966: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22164 | 22060.73 | 53.31 | 22155 | 22063.5 | 43.82 | 22137 | 22065.53 | 38.39 | 22220 | 22069 | 53.22 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22136 | 22061.77 | 35.82 | 22128 | 22063.03 | 44.63 | 22176 | 22077.53 | 40.82 | 22157 | 22060.33 | 47.29 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22142 | 22076.33 | 44.3 | 22158 | 22068.6 | 49.43 | 22182 | 22087.17 | 43.58 | 22146 | 22066.73 | 47.13 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22128 | 22047.33 | 53.24 | 22169 | 22065.13 | 39.38 | 22176 | 22065.6 | 46.62 | 22148 | 22060.73 | 48.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.1967: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24737 | 24662.73 | 44.97 | 24747 | 24639.5 | 56.87 | 24752 | 24672.57 | 49.29 | 24776 | 24660.43 | 50.57 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24759 | 24667.47 | 51.05 | 24771 | 24656.47 | 51.22 | 24728 | 24664.8 | 39.58 | 24747 | 24655.83 | 41.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24673.73 | 50.69 | 24791 | 24669.97 | 50.42 | 24744 | 24664.77 | 52.91 | 24746 | 24655.37 | 44.26 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24777 | 24664.43 | 53.11 | 24746 | 24674.87 | 36.95 | 24795 | 24653.17 | 57.01 | 24746 | 24653.8 | 46.42 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1968: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24735 | 24674.03 | 43.38 | 24731 | 24659.37 | 49.11 | 24762 | 24667.8 | 51.36 | 24741 | 24671.9 | 43.3 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24651.7 | 60.03 | 24775 | 24656.33 | 39.57 | 24732 | 24663.2 | 40.92 | 24764 | 24683.3 | 43.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24808 | 24662.53 | 65.95 | 24731 | 24665.37 | 34.7 | 24790 | 24681.97 | 49.91 | 24747 | 24658.4 | 48.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24742 | 24655.17 | 49.91 | 24767 | 24664.9 | 48.45 | 24754 | 24658.63 | 51.39 | 24746 | 24671.27 | 47.59 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1969: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24770 | 24680.73 | 38.89 | 24744 | 24665.7 | 55.27 | 24752 | 24660.63 | 59.78 | 24772 | 24673.63 | 46.01 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24752 | 24663.53 | 50.09 | 24727 | 24665.1 | 38.52 | 24771 | 24647.43 | 62.5 | 24778 | 24664.53 | 54.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24763 | 24674.6 | 47.46 | 24770 | 24665.4 | 53.88 | 24800 | 24659.97 | 49.22 | 24746 | 24662 | 54.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24775 | 24683.23 | 49.99 | 24730 | 24671.83 | 38.58 | 24767 | 24679.8 | 42.61 | 24760 | 24675.63 | 53.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1970: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24753 | 24667.9 | 54.58 | 24771 | 24682.13 | 50.59 | 24762 | 24668.57 | 53.11 | 24784 | 24665.27 | 51.19 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24729 | 24661.23 | 40.52 | 24744 | 24670.93 | 41.89 | 24788 | 24661.23 | 48.81 | 24754 | 24669.67 | 41.53 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24747 | 24667.6 | 49.15 | 24788 | 24678.7 | 46.57 | 24781 | 24663.57 | 53.57 | 24734 | 24666.8 | 46.16 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24745 | 24664.7 | 49.48 | 24811 | 24683.17 | 62.38 | 24812 | 24659 | 53.61 | 24736 | 24649.9 | 41.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1971: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24757 | 24675.83 | 47.13 | 24732 | 24657.53 | 41.06 | 24720 | 24640.67 | 46.92 | 24754 | 24657.37 | 43.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24739 | 24651.23 | 53.09 | 24732 | 24652.4 | 45.58 | 24759 | 24657.27 | 56.2 | 24751 | 24675.67 | 32.95 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24672.13 | 54.39 | 24782 | 24672.13 | 54.39 | 24766 | 24673.33 | 52.29 | 24797 | 24667.97 | 61.86 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24674.3 | 41.95 | 24754 | 24674.3 | 41.95 | 24757 | 24650.8 | 53.14 | 24734 | 24661.07 | 34.91 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1972: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24809 | 24674.27 | 43.08 | 24787 | 24666.63 | 43.53 | 24750 | 24659.13 | 57.33 | 24796 | 24681.93 | 53.35 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24727 | 24646.43 | 41.62 | 24742 | 24662.17 | 45.47 | 24771 | 24656.37 | 59.25 | 24750 | 24666.93 | 45.65 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24778 | 24664.87 | 53.45 | 24755 | 24674.7 | 51.6 | 24775 | 24657.97 | 49.92 | 24729 | 24642.2 | 48.06 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24749 | 24661.1 | 46 | 24778 | 24668.43 | 44.53 | 24791 | 24672.3 | 52.43 | 24757 | 24665.63 | 49.5 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.1973: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47970 | 47857.6 | 61.56 | 47974 | 47860.57 | 83.4 | 47985 | 47841.37 | 83.33 | 48016 | 47857.93 | 80.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48057 | 47894.67 | 84.9 | 47986 | 47856.03 | 77.18 | 48017 | 47836 | 76.2 | 48025 | 47848.67 | 70.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48067 | 47877.27 | 70.49 | 48067 | 47868.37 | 89.96 | 47960 | 47867.07 | 67.08 | 48024 | 47849.87 | 72.61 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47865.43 | 71.56 | 48096 | 47840.37 | 97.09 | 48030 | 47855.27 | 79.85 | 48029 | 47847.23 | 90.2 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1974: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48003 | 47857.47 | 99.4 | 47998 | 47840.37 | 91 | 47965 | 47832.73 | 69.6 | 47964 | 47815.27 | 76.6 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47997 | 47846.03 | 83.05 | 47970 | 47854.77 | 63.47 | 47983 | 47837.47 | 66.1 | 47994 | 47866.53 | 59.53 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 47959 | 47815.17 | 67.55 | 47973 | 47863.53 | 67.3 | 48090 | 47831.73 | 108.29 | 47999 | 47810 | 102.62 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48012 | 47852.37 | 88.23 | 48002 | 47834.47 | 75.25 | 47957 | 47856.5 | 71.38 | 47979 | 47846.3 | 79.58 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1975: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48033 | 47858.03 | 76.76 | 48077 | 47848.13 | 100.18 | 47967 | 47832.2 | 79.98 | 47971 | 47849.3 | 83.01 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48000 | 47861.3 | 84.69 | 48025 | 47861.37 | 72.3 | 48032 | 47823.83 | 101.51 | 48043 | 47863.1 | 87.03 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48051 | 47907.73 | 77.27 | 47993 | 47864.2 | 76.6 | 47960 | 47831.37 | 75.98 | 48098 | 47871.6 | 92.92 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48021 | 47851.93 | 80.68 | 47990 | 47861.6 | 68.72 | 47940 | 47824.3 | 60.56 | 47979 | 47849.33 | 73.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1976: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47993 | 47850.57 | 75.47 | 48010 | 47877.1 | 74.91 | 48003 | 47828.13 | 114.68 | 48041 | 47867.13 | 74.19 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47982 | 47856.47 | 81.14 | 48081 | 47850.5 | 73.37 | 48033 | 47860.53 | 87.26 | 47993 | 47858.43 | 86.78 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48059 | 47876 | 88.89 | 47978 | 47843.5 | 76.05 | 47970 | 47867 | 63.03 | 47996 | 47857.13 | 84.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48016 | 47851.97 | 74.44 | 47948 | 47848.83 | 67.03 | 48029 | 47825.8 | 63.68 | 48027 | 47845.27 | 96.44 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1977: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48002 | 47844.03 | 68.81 | 48002 | 47844.03 | 68.81 | 47998 | 47865.57 | 70.59 | 48008 | 47838.6 | 81.28 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47964 | 47864.73 | 63.01 | 47964 | 47864.73 | 63.01 | 47983 | 47848.3 | 68.07 | 47998 | 47858.77 | 61.59 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48035 | 47861 | 70.01 | 48035 | 47861 | 70.01 | 47962 | 47856.27 | 61.44 | 47942 | 47832.03 | 60.48 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47841.27 | 77.04 | 48042 | 47841.27 | 77.04 | 47976 | 47809.13 | 85.75 | 47991 | 47810.1 | 89.97 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1978: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48067 | 47865.93 | 79.66 | 47977 | 47860.63 | 76.74 | 47978 | 47866.5 | 67.57 | 47976 | 47854.8 | 59.08 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47965 | 47854.07 | 64.58 | 47957 | 47855.57 | 70.13 | 48090 | 47887.67 | 82.34 | 47966 | 47838.6 | 63.15 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48092 | 47864.67 | 79.98 | 48092 | 47864.67 | 79.98 | 48112 | 47844.97 | 110.85 | 47945 | 47840.17 | 60.56 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47995 | 47860.03 | 93.25 | 47990 | 47844.83 | 80.31 | 48015 | 47871.93 | 64.9 | 48039 | 47866.63 | 91.73 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.1979: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56133 | 55944.5 | 86.47 | 56108 | 55940.9 | 94.81 | 56055 | 55922.33 | 79.46 | 56131 | 55911.13 | 113.25 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56124 | 55930.8 | 81.75 | 56130 | 55927.27 | 102.67 | 56098 | 55902.5 | 89.02 | 56205 | 55937.6 | 104.6 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56100 | 55935.07 | 82.69 | 56086 | 55939.1 | 83.46 | 56147 | 55900.13 | 85.57 | 56088 | 55925.9 | 71.94 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56151 | 55970.2 | 79.4 | 56144 | 55959.33 | 88.91 | 56105 | 55913.97 | 85.75 | 56045 | 55929.27 | 67.48 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1980: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56093 | 55893.87 | 103.21 | 56148 | 55945 | 80.61 | 56182 | 55942.17 | 98.7 | 56047 | 55916.13 | 85 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56152 | 55916 | 105.66 | 56131 | 55959.53 | 72.93 | 56110 | 55936.77 | 76.84 | 56051 | 55898.37 | 77.95 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56065 | 55928.83 | 83.98 | 56104 | 55955.53 | 72.05 | 56120 | 55945.33 | 80.11 | 56077 | 55903.77 | 83.29 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56030 | 55909.7 | 59.99 | 56057 | 55941.67 | 87.74 | 56083 | 55909.87 | 72.49 | 56168 | 55943.4 | 116.23 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1981: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56168 | 55962.37 | 104.1 | 56088 | 55941.73 | 88.05 | 56080 | 55927.8 | 74.91 | 56125 | 55936.5 | 96.18 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56172 | 55960.07 | 92.73 | 56066 | 55931.37 | 76.16 | 56083 | 55955.5 | 81.91 | 56029 | 55916 | 87.14 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56099 | 55953.03 | 78.58 | 56098 | 55965 | 83.41 | 56168 | 55952.97 | 96.98 | 56068 | 55935.03 | 84.74 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56099 | 55933.73 | 76.18 | 56177 | 55936 | 89.32 | 56073 | 55933.33 | 80.87 | 56092 | 55925.3 | 73.22 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1982: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56139 | 55909.33 | 104.41 | 56107 | 55949.2 | 80.46 | 56020 | 55898.47 | 69.87 | 56155 | 55955.43 | 91.27 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56114 | 55947.03 | 86.19 | 56147 | 55923.97 | 84.33 | 56086 | 55908.3 | 84.58 | 55996 | 55914.43 | 64.7 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56108 | 55933.53 | 89.43 | 56092 | 55926.57 | 82.01 | 56091 | 55914.23 | 75.41 | 56109 | 55929.4 | 102.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56120 | 55946.63 | 82.67 | 56170 | 55908.63 | 89.4 | 56083 | 55945.7 | 60.2 | 56137 | 55959.2 | 78.54 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1983: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56123 | 55919.67 | 87.96 | 56123 | 55919.67 | 87.96 | 56129 | 55913.2 | 84.72 | 56070 | 55951.27 | 71.9 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56195 | 55923.87 | 111.28 | 56195 | 55923.87 | 111.28 | 56103 | 55914.03 | 84.23 | 56053 | 55928.33 | 69.87 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56193 | 55940.7 | 96.72 | 56193 | 55940.7 | 96.72 | 56091 | 55940.33 | 90.3 | 56061 | 55941.63 | 69.33 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56062 | 55915.77 | 74.41 | 56062 | 55915.77 | 74.41 | 56074 | 55928.83 | 69.66 | 56115 | 55956.57 | 79.61 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1984: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56143 | 55942.57 | 98.83 | 56139 | 55931.73 | 78.41 | 56100 | 55948.57 | 85.87 | 56075 | 55925.97 | 87.59 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56069 | 55937.1 | 100.55 | 56076 | 55938.93 | 75.2 | 56077 | 55947.6 | 69.34 | 56159 | 55938.77 | 86.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56059 | 55947.2 | 70.21 | 56059 | 55947.2 | 70.21 | 56060 | 55940.7 | 70.49 | 56136 | 55945.4 | 84.8 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56146 | 55944 | 88.23 | 56146 | 55942.13 | 75.78 | 56175 | 55940 | 97.49 | 56091 | 55929.03 | 98.32 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.1985: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

**Results With Post Optimization and Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47354 | 47084.87 | 130.89 | 47339 | 47104.9 | 107.23 | 47395 | 47128.97 | 129.4 | 47302 | 47173.47 | 92.66 |
| | | 2op | 47386 | 47151.17 | 130.66 | 47378 | 47167.3 | 132.4 | 47318 | 47155.67 | 121.58 | 47368 | 47155.37 | 126.53 |
| | 50 | rnd | 47327 | 47089.4 | 119.78 | 47315 | 47090.93 | 121.85 | 47393 | 47134.4 | 100.4 | 47359 | 47135.43 | 108.56 |
| | | 2op | 47326 | 47147.63 | 94.34 | 47447 | 47154.13 | 108.4 | 47354 | 47155.47 | 88.47 | 47367 | 47134.6 | 136.01 |
| 51 | 20 | rnd | 47383 | 47186.13 | 96.54 | 47415 | 47171.3 | 99.9 | 47424 | 47178.9 | 110.48 | 47385 | 47194.03 | 147.91 |
| | | 2op | 47373 | 47189.2 | 95.51 | 47363 | 47205.27 | 101.08 | 47443 | 47201.33 | 114.67 | 47454 | 47240.47 | 121.97 |
| | 50 | rnd | 47382 | 47162.9 | 119.96 | 47382 | 47183.5 | 116.44 | 47399 | 47175.83 | 105.8 | 47421 | 47211.6 | 114.88 |
| | | 2op | 47371 | 47175.87 | 109.5 | 47375 | 47176.1 | 104.26 | 47432 | 47222.27 | 91.07 | 47407 | 47213.87 | 109.63 |

Table A.1986: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47414 | 47270.53 | 69.39 | 47377 | 47244.6 | 53.77 | 47371 | 47242.77 | 76.91 | 47456 | 47274.83 | 96.77 |
| | | 2op | 47426 | 47324.2 | 44.51 | 47386 | 47310.43 | 48.64 | 47401 | 47312.27 | 51.02 | 47418 | 47279.4 | 67.01 |
| | 50 | rnd | 47382 | 47281.7 | 61.7 | 47469 | 47316.97 | 72.84 | 47319 | 47230.53 | 62.62 | 47364 | 47233.3 | 63.53 |
| | | 2op | 47437 | 47350.93 | 41.62 | 47455 | 47355.37 | 45.67 | 47402 | 47328.17 | 42.82 | 47414 | 47287.47 | 68.76 |
| 51 | 20 | rnd | 47367 | 47273.5 | 65.75 | 47454 | 47361.83 | 47.19 | 47384 | 47266.13 | 62.98 | 47419 | 47291.13 | 62.9 |
| | | 2op | 47398 | 47334.5 | 37.5 | 47414 | 47361.33 | 34.13 | 47429 | 47290.7 | 54.72 | 47387 | 47283.53 | 47.72 |
| | 50 | rnd | 47396 | 47276.73 | 63.34 | 47460 | 47379.9 | 53.8 | 47387 | 47281.9 | 52.07 | 47416 | 47275.2 | 79.8 |
| | | 2op | 47376 | 47339.1 | 23.71 | 47434 | 47379.73 | 38.37 | 47355 | 47304.8 | 45.52 | 47425 | 47321.23 | 57.9 |

Table A.1987: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47295 | 47111.4 | 110.44 | 47316 | 47099.43 | 111.61 | 47366 | 47153.8 | 121.2 | 47434 | 47159.2 | 144.43 |
| | | 2op | 47368 | 47111.27 | 125.1 | 47485 | 47172.17 | 127.19 | 47379 | 47091.8 | 140.38 | 47427 | 47170.87 | 111.4 |
| | 50 | rnd | 47359 | 47112.2 | 123.19 | 47411 | 47115.67 | 128.18 | 47297 | 47110.1 | 108.06 | 47291 | 47110.03 | 121.73 |
| | | 2op | 47422 | 47157.43 | 146.19 | 47391 | 47152.87 | 123.96 | 47392 | 47168.33 | 122.8 | 47396 | 47160.87 | 138.45 |
| 51 | 20 | rnd | 47392 | 47177.3 | 105.12 | 47392 | 47159.5 | 105.1 | 47490 | 47198.73 | 121.27 | 47400 | 47193.6 | 113.1 |
| | | 2op | 47416 | 47213.47 | 102.33 | 47453 | 47202.73 | 119.74 | 47379 | 47197.53 | 83.37 | 47543 | 47207.7 | 129.97 |
| | 50 | rnd | 47338 | 47143.93 | 129.72 | 47400 | 47158.73 | 123.67 | 47416 | 47136.43 | 112.98 | 47367 | 47181.83 | 113.77 |
| | | 2op | 47338 | 47199.27 | 87.87 | 47347 | 47199.43 | 82.57 | 47332 | 47167.27 | 106.1 | 47418 | 47217.9 | 127.63 |

Table A.1988: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47359 | 47257.13 | 58.89 | 47470 | 47267.37 | 72.62 | 47372 | 47235.43 | 76.13 | 47430 | 47265.63 | 76.84 |
| | | 2op | 47413 | 47342.97 | 32.29 | 47399 | 47309.07 | 47.41 | 47402 | 47295.2 | 51.01 | 47357 | 47238.7 | 96.2 |
| | 50 | rnd | 47448 | 47262.17 | 62.3 | 47438 | 47299.57 | 80.82 | 47399 | 47249.33 | 96.35 | 47474 | 47252.23 | 83.97 |
| | | 2op | 47401 | 47338.27 | 37 | 47429 | 47351.43 | 45.21 | 47419 | 47303.97 | 48.94 | 47422 | 47291.8 | 75.34 |
| 51 | 20 | rnd | 47378 | 47283.7 | 63.88 | 47423 | 47356.83 | 46.64 | 47432 | 47237.6 | 90.62 | 47377 | 47241 | 90.37 |
| | | 2op | 47409 | 47341.23 | 44.96 | 47434 | 47356.27 | 41.61 | 47441 | 47309.6 | 52.39 | 47409 | 47306.83 | 60.74 |
| | 50 | rnd | 47415 | 47294.2 | 45 | 47448 | 47369.87 | 47.46 | 47372 | 47303.63 | 50.03 | 47393 | 47285.3 | 66.02 |
| | | 2op | 47410 | 47341.77 | 36.2 | 47439 | 47384.07 | 43.53 | 47386 | 47298.03 | 53.93 | 47431 | 47316.77 | 57.04 |

Table A.1989: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47376 | 47181.13 | 107.37 | 47177 | 46792.07 | 188.19 | 47137 | 46762.77 | 182.75 | 46963 | 46662.63 | 172.58 |
| | | 2op | 47344 | 47230.2 | 76.51 | 47099 | 46747.9 | 188.27 | 47084 | 46769.83 | 126.28 | 46992 | 46737.47 | 150.58 |
| | 50 | rnd | 47391 | 47238.9 | 82.81 | 47092 | 46792.27 | 147.8 | 47192 | 46802.8 | 173.1 | 47037 | 46776.23 | 146.03 |
| | | 2op | 47403 | 47262.03 | 72.86 | 47075 | 46767 | 145.96 | 47125 | 46758.87 | 184.5 | 47099 | 46752.2 | 169.3 |
| 51 | 20 | rnd | 47360 | 47283.87 | 52.1 | 47175 | 46895.03 | 144.19 | 47188 | 46886.27 | 183.37 | 47146 | 46846.9 | 197.67 |
| | | 2op | 47444 | 47346.1 | 35.94 | 47129 | 46852.5 | 135.08 | 47131 | 46840.8 | 151.03 | 47119 | 46805.5 | 176.37 |
| | 50 | rnd | 47438 | 47310.87 | 64.95 | 47077 | 46835.67 | 146.77 | 47211 | 46804.4 | 215.35 | 47178 | 46812.33 | 193.53 |
| | | 2op | 47439 | 47364.37 | 34.94 | 47108 | 46868.67 | 152.12 | 47175 | 46799 | 194.01 | 47052 | 46798.5 | 154.95 |

Table A.1990: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47345 | 47259 | 48.77 | 47253 | 46921.13 | 175.31 | 47058 | 46860.3 | 136.19 | 47234 | 46777.43 | 218.46 |
| | | 2op | 47429 | 47354.6 | 32.16 | 47354 | 46921.07 | 150.16 | 47093 | 46858.4 | 139.64 | 47195 | 46745.73 | 150 |
| | 50 | rnd | 47393 | 47292.17 | 51.4 | 47309 | 47050.07 | 121.02 | 47136 | 46810.87 | 186.6 | 47214 | 46753.57 | 196.82 |
| | | 2op | 47433 | 47355.3 | 27.49 | 47370 | 47088.97 | 138.57 | 47229 | 46854.43 | 187.71 | 47004 | 46745.5 | 172.59 |
| 51 | 20 | rnd | 47407 | 47279.87 | 61.33 | 47365 | 47006.23 | 204.76 | 47133 | 46898.57 | 151.83 | 47077 | 46846.9 | 141.15 |
| | | 2op | 47415 | 47349.93 | 29.34 | 47275 | 46978.43 | 149.63 | 47298 | 46962.23 | 170.94 | 47125 | 46790.07 | 174.85 |
| | 50 | rnd | 47386 | 47317.87 | 37.65 | 47371 | 47214.57 | 127.94 | 47322 | 47014.77 | 175.31 | 47130 | 46777.7 | 182.07 |
| | | 2op | 47404 | 47359.83 | 19.86 | 47423 | 47237.47 | 130.26 | 47190 | 46952.27 | 161.58 | 47053 | 46788.77 | 167.65 |

Table A.1991: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151252 | 150910.5 | 342.39 | 151213 | 150875.87 | 373.7 | 151271 | 150901.9 | 377.2 | 151294 | 150808.03 | 393.15 |
| | | 2op | 151268 | 150971.67 | 337.63 | 151287 | 150877.2 | 323.62 | 151229 | 150626.6 | 492.79 | 151265 | 150781.93 | 434.74 |
| | 50 | rnd | 151252 | 150956.7 | 361.38 | 151260 | 150923.57 | 352.63 | 151229 | 150867.27 | 373.79 | 151243 | 150801.83 | 482.57 |
| | | 2op | 151243 | 150935.63 | 310.39 | 151225 | 150948.27 | 307.59 | 151248 | 150845.87 | 354.34 | 151236 | 150794.47 | 330.65 |
| 51 | 20 | rnd | 151233 | 151060.37 | 265.66 | 151240 | 151045.7 | 248.35 | 151301 | 150916.67 | 357.99 | 151255 | 150988.13 | 320.75 |
| | | 2op | 151287 | 151095.4 | 235.24 | 151250 | 150955.17 | 328.59 | 151257 | 150903.5 | 435.97 | 151250 | 150851.43 | 405.97 |
| | 50 | rnd | 151260 | 150987.73 | 365.18 | 151246 | 150914.53 | 343.16 | 151248 | 150999.7 | 245.88 | 151255 | 150939.6 | 290.85 |
| | | 2op | 151229 | 150930.07 | 361.75 | 151271 | 151087.23 | 204.06 | 151244 | 150887.2 | 376.95 | 151216 | 150785.03 | 439.32 |

Table A.1992: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151321 | 151221.37 | 43.93 | 151284 | 151217.47 | 45.34 | 151270 | 151109.7 | 273.02 | 151249 | 150925.1 | 426.43 |
| | | 2op | 151269 | 151202.77 | 44.01 | 151312 | 151211.57 | 112.5 | 151315 | 151131.03 | 272.42 | 151305 | 150901.77 | 358.74 |
| | 50 | rnd | 151295 | 151209.17 | 44.33 | 151325 | 151193.4 | 157.18 | 151277 | 151216.73 | 31.46 | 151282 | 151012.17 | 330.76 |
| | | 2op | 151274 | 151218.4 | 32.1 | 151310 | 151219.57 | 46.74 | 151264 | 151179.37 | 121.21 | 151277 | 151035.03 | 289.55 |
| 51 | 20 | rnd | 151275 | 151197.53 | 46.03 | 151302 | 151203.4 | 45.75 | 151314 | 151176.1 | 158.48 | 151282 | 151067.53 | 238.67 |
| | | 2op | 151295 | 151215.37 | 40.85 | 151353 | 151234.03 | 40.04 | 151313 | 151122.9 | 219.23 | 151278 | 151132.57 | 198.02 |
| | 50 | rnd | 151258 | 151172.1 | 46 | 151273 | 151216.5 | 36.48 | 151291 | 151165.87 | 142.68 | 151294 | 151098.6 | 214.98 |
| | | 2op | 151270 | 151223.27 | 32.47 | 151298 | 151238.03 | 39.7 | 151314 | 151223.4 | 44.83 | 151289 | 151145.43 | 186.77 |

Table A.1993: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151286 | 150943.27 | 338.06 | 151206 | 150714.8 | 461.74 | 151252 | 150892.9 | 311.98 | 151286 | 150875.17 | 335.93 |
| | | 2op | 151235 | 151008.27 | 300.05 | 151237 | 150977.33 | 314.93 | 151245 | 150702.9 | 385.75 | 151288 | 150840.17 | 347.81 |
| | 50 | rnd | 151272 | 150928.5 | 447.46 | 151279 | 151003.47 | 310.92 | 151186 | 150813.5 | 397.7 | 151270 | 150817.47 | 484.76 |
| | | 2op | 151231 | 151086.27 | 183.9 | 151230 | 150908.07 | 350.35 | 151282 | 150960.6 | 399.22 | 151230 | 150830.9 | 423.05 |
| 51 | 20 | rnd | 151242 | 151057.4 | 266.78 | 151257 | 151001.37 | 273.62 | 151276 | 150974.5 | 337.99 | 151308 | 150796.57 | 548.56 |
| | | 2op | 151237 | 151058.2 | 211.8 | 151293 | 151048.27 | 249.61 | 151239 | 150874.33 | 430.41 | 151234 | 150778.97 | 425.71 |
| | 50 | rnd | 151260 | 151051.03 | 234.05 | 151263 | 150980.17 | 317.65 | 151258 | 150966.23 | 323.91 | 151231 | 150654.7 | 463.53 |
| | | 2op | 151246 | 151045.73 | 232.98 | 151260 | 150939.93 | 361.2 | 151254 | 150967.7 | 386.74 | 151245 | 150626.37 | 536.17 |

Table A.1994: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151336 | 151209.83 | 54.77 | 151303 | 151173.97 | 153.03 | 151305 | 151179.77 | 91.55 | 151290 | 150884.63 | 358.71 |
| | | 2op | 151311 | 151198.7 | 100.52 | 151296 | 151192.7 | 127.52 | 151317 | 151205.97 | 137.18 | 151242 | 150878.57 | 419.34 |
| | 50 | rnd | 151310 | 151201.7 | 49.11 | 151281 | 151206.47 | 46.17 | 151276 | 151144.23 | 194.41 | 151248 | 151088.3 | 273.18 |
| | | 2op | 151289 | 151227.93 | 40.59 | 151280 | 151215.7 | 38.01 | 151325 | 151215.8 | 112.26 | 151247 | 150990.6 | 307.27 |
| 51 | 20 | rnd | 151315 | 151179.97 | 116.46 | 151310 | 151219.07 | 48.93 | 151294 | 151167.6 | 210.84 | 151286 | 151139.63 | 156.19 |
| | | 2op | 151295 | 151217.23 | 35.99 | 151282 | 151219.9 | 37 | 151297 | 151205.8 | 84.42 | 151282 | 151148.2 | 155.88 |
| | 50 | rnd | 151277 | 151192.1 | 46.27 | 151284 | 151212.47 | 39.89 | 151286 | 151195.3 | 113.45 | 151315 | 151136.47 | 178.1 |
| | | 2op | 151282 | 151213.73 | 34.55 | 151287 | 151233 | 27.97 | 151273 | 151221.17 | 35.76 | 151296 | 151093.9 | 231.85 |

Table A.1995: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151235 | 151024.67 | 266.45 | 151258 | 150752.7 | 500.03 | 151248 | 150724.73 | 430.68 | 151274 | 150658.7 | 450.74 |
| | | 2op | 151236 | 151022.43 | 217.57 | 151205 | 150656.67 | 493.54 | 151247 | 150673.27 | 415.72 | 151240 | 150852.73 | 362.8 |
| | 50 | rnd | 151281 | 150972.77 | 373.17 | 151179 | 150721.87 | 374.63 | 151197 | 150816.03 | 412.08 | 151243 | 150748.33 | 401.7 |
| | | 2op | 151279 | 151054.47 | 233.04 | 151304 | 150831.8 | 427.83 | 151237 | 150697.8 | 458.16 | 151230 | 150714.47 | 465.61 |
| 51 | 20 | rnd | 151248 | 151130.47 | 149.8 | 151243 | 150771 | 434.71 | 151268 | 150787.67 | 390.62 | 151228 | 150727.9 | 387.4 |
| | | 2op | 151288 | 151165.23 | 118.42 | 151255 | 150878.47 | 407.87 | 151247 | 150831.6 | 467.81 | 151192 | 150719.17 | 477.74 |
| | 50 | rnd | 151257 | 151127.87 | 160.27 | 151235 | 150808.17 | 412.84 | 151204 | 150844.97 | 382.74 | 151245 | 150725.2 | 555.52 |
| | | 2op | 151268 | 151138.13 | 111.37 | 151247 | 150784.47 | 429.36 | 151346 | 150701.1 | 489.54 | 151240 | 150809.57 | 373.94 |

Table A.1996: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151281 | 151202.2 | 41.02 | 151241 | 150843.67 | 398.46 | 151278 | 150777.73 | 415.5 | 151216 | 150627.77 | 596.35 |
| | | 2op | 151313 | 151226.73 | 40.34 | 151217 | 150840.47 | 346.54 | 151301 | 150853.8 | 402.69 | 151249 | 150644.17 | 450 |
| | 50 | rnd | 151299 | 151201.43 | 46.6 | 151235 | 150917.7 | 286.26 | 151233 | 150659.23 | 485.27 | 151213 | 150794.57 | 410.41 |
| | | 2op | 151289 | 151222.47 | 33.49 | 151238 | 150789.5 | 486.91 | 151270 | 150728 | 542.55 | 151246 | 150802.47 | 363.21 |
| 51 | 20 | rnd | 151288 | 151198.87 | 47.88 | 151218 | 150801.03 | 463.31 | 151259 | 150795.13 | 390.36 | 151225 | 150684.93 | 406.77 |
| | | 2op | 151311 | 151226.2 | 36.39 | 151316 | 150964.3 | 373.26 | 151224 | 150719 | 382.39 | 151222 | 150757.97 | 389.29 |
| | 50 | rnd | 151299 | 151205.8 | 40.11 | 151281 | 150996.2 | 383.16 | 151228 | 150939.9 | 323.36 | 151188 | 150649.03 | 455.41 |
| | | 2op | 151292 | 151215.43 | 38.84 | 151288 | 150943.27 | 334.95 | 151320 | 150750.83 | 422.56 | 151249 | 150850.77 | 289.41 |

Table A.1997: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166868 | 166448.87 | 282.07 | 166997 | 166482.43 | 332.94 | 167096 | 166306.53 | 487.84 | 166920 | 166322.1 | 362.45 |
| | | 2op | 166887 | 166412 | 344.19 | 166801 | 166303.77 | 412.19 | 166883 | 166415.57 | 380.89 | 166832 | 166445.23 | 286.12 |
| | 50 | rnd | 166980 | 166440.47 | 392.54 | 166957 | 166422.53 | 352.13 | 166839 | 166331.97 | 376.85 | 166847 | 166336.6 | 423.1 |
| | | 2op | 166941 | 166409.97 | 309.28 | 167035 | 166471.9 | 305.4 | 166929 | 166318.03 | 418.36 | 166840 | 166383.77 | 315.3 |
| 51 | 20 | rnd | 166890 | 166515.33 | 290.92 | 166852 | 166427.1 | 392.83 | 167019 | 166339.27 | 412.75 | 166944 | 166364.97 | 279.75 |
| | | 2op | 167013 | 166464.3 | 298.99 | 166964 | 166542.8 | 284.32 | 166950 | 166383.9 | 335.63 | 166937 | 166227.37 | 406.14 |
| | 50 | rnd | 166952 | 166469.97 | 368.65 | 166930 | 166597.93 | 154.42 | 166925 | 166290.4 | 364.23 | 167183 | 166538.13 | 350.5 |
| | | 2op | 166979 | 166582.1 | 260.23 | 166909 | 166452.17 | 277.77 | 166999 | 166369.13 | 407.65 | 166901 | 166364.37 | 339.56 |

Table A.1998: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167374 | 167005 | 187.43 | 167283 | 166907.47 | 229.83 | 167237 | 166813.57 | 255.53 | 167122 | 166561.1 | 416.62 |
| | | 2op | 166708 | 166620.73 | 52.88 | 166929 | 166652.8 | 92.23 | 166742 | 166643.07 | 43.08 | 166842 | 166463.47 | 314.16 |
| | 50 | rnd | 167286 | 167015.8 | 163.46 | 167434 | 167060.13 | 269.83 | 167254 | 166954.43 | 183.12 | 167340 | 166692.23 | 295.84 |
| | | 2op | 166702 | 166612.77 | 40.22 | 166713 | 166639.6 | 46.91 | 166807 | 166633.1 | 114.8 | 166918 | 166534.67 | 273.2 |
| 51 | 20 | rnd | 167418 | 167028.37 | 210.2 | 167417 | 167079.93 | 183.29 | 167431 | 166864.57 | 245.74 | 167165 | 166765.63 | 276.31 |
| | | 2op | 166699 | 166598.43 | 82.21 | 166750 | 166641.37 | 58.75 | 166730 | 166648.03 | 48.15 | 166906 | 166607.1 | 150.88 |
| | 50 | rnd | 167390 | 167016.93 | 173.97 | 167419 | 167139.6 | 207.07 | 167413 | 166947.67 | 232.41 | 167356 | 166921.43 | 193.5 |
| | | 2op | 166743 | 166604.8 | 57.17 | 166715 | 166631.77 | 44.45 | 166749 | 166638.03 | 46.64 | 166794 | 166587.33 | 156.66 |

Table A.1999: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166798 | 166406.53 | 291.98 | 166980 | 166389.93 | 391.59 | 166821 | 166286.5 | 440.19 | 167143 | 166459.53 | 363.14 |
| | | 2op | 167007 | 166382.73 | 398.19 | 166951 | 166442.93 | 335.53 | 166775 | 166332.4 | 375.02 | 166822 | 166320.8 | 485.17 |
| | 50 | rnd | 167020 | 166511.73 | 267.39 | 166881 | 166414.7 | 361.04 | 166907 | 166263.57 | 478.55 | 166786 | 166239.43 | 388.55 |
| | | 2op | 167158 | 166454.63 | 390.43 | 166935 | 166411.17 | 378.16 | 166764 | 166291.7 | 455.5 | 167134 | 166397.13 | 421.31 |
| 51 | 20 | rnd | 166941 | 166552.77 | 268.28 | 167215 | 166486.4 | 446.3 | 166921 | 166363 | 364.74 | 166898 | 166286.5 | 423.57 |
| | | 2op | 167171 | 166568.27 | 396.63 | 166984 | 166429.7 | 389.14 | 167024 | 166446.73 | 403.98 | 166928 | 166401.97 | 370.05 |
| | 50 | rnd | 167015 | 166623.63 | 194.19 | 167012 | 166519.07 | 322.65 | 166954 | 166458.43 | 422.59 | 167176 | 166425.4 | 345.11 |
| | | 2op | 166954 | 166503.57 | 340.82 | 166831 | 166506.3 | 282.02 | 167117 | 166537.77 | 287.24 | 167025 | 166469.5 | 350.38 |

Table A.2000: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167420 | 166975.2 | 203.23 | 167335 | 166918.43 | 241.71 | 167347 | 166787.13 | 222.16 | 166897 | 166356.53 | 342.74 |
| | | 2op | 166706 | 166610.3 | 84.74 | 166837 | 166604.67 | 118.74 | 166877 | 166631.9 | 125.35 | 166985 | 166480.6 | 383.77 |
| | 50 | rnd | 167477 | 166991.03 | 239.03 | 167337 | 166989.43 | 176.86 | 167347 | 166868.43 | 206.47 | 167136 | 166740.23 | 268.05 |
| | | 2op | 166803 | 166613.4 | 107.83 | 166709 | 166624.13 | 85.4 | 166832 | 166608.83 | 152.69 | 166952 | 166458.17 | 327.71 |
| 51 | 20 | rnd | 167410 | 167030.53 | 184.97 | 167382 | 167049.4 | 211.12 | 167197 | 166913.93 | 141.32 | 167281 | 166792.57 | 252.64 |
| | | 2op | 166682 | 166594.5 | 39.09 | 166773 | 166637.53 | 49.72 | 166752 | 166613.23 | 135.96 | 166837 | 166623.93 | 86.65 |
| | 50 | rnd | 167309 | 167007.9 | 185.52 | 167435 | 167226.3 | 146.98 | 167367 | 166940.87 | 245.41 | 167231 | 166907.93 | 181.83 |
| | | 2op | 166646 | 166584.93 | 42.39 | 166835 | 166644.1 | 59.08 | 166715 | 166639.3 | 44.5 | 166763 | 166617.7 | 80.86 |

Table A.2001: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166943 | 166546.2 | 255.03 | 166971 | 166233.67 | 421.76 | 166962 | 166299.7 | 434.42 | 166998 | 166309.13 | 421.17 |
| | | 2op | 166943 | 166464.57 | 344.06 | 166865 | 166288.47 | 358.23 | 166886 | 166360.47 | 403.77 | 166802 | 166272.63 | 404.04 |
| | 50 | rnd | 166937 | 166573.63 | 264.25 | 166997 | 166197.07 | 573.27 | 166818 | 166290.2 | 380.66 | 166876 | 166286.13 | 446.14 |
| | | 2op | 166954 | 166529.7 | 308.48 | 166998 | 166401.87 | 348.24 | 166791 | 166181.9 | 480.1 | 166807 | 166322.1 | 374.35 |
| 51 | 20 | rnd | 167124 | 166770.9 | 177.86 | 167124 | 166652.43 | 304.71 | 166849 | 166312.4 | 429.36 | 166900 | 166267.43 | 464.29 |
| | | 2op | 167038 | 166689.83 | 158.73 | 167038 | 166579.3 | 324.99 | 167122 | 166433.9 | 354.06 | 166875 | 166198.67 | 455 |
| | 50 | rnd | 167112 | 166678.37 | 242.67 | 167128 | 166635.33 | 284.05 | 166871 | 166258.03 | 388.47 | 166960 | 166435.6 | 308.92 |
| | | 2op | 166998 | 166628.03 | 221.83 | 166998 | 166565.17 | 292.61 | 166746 | 166261.17 | 429.14 | 167066 | 166255.77 | 496.46 |

Table A.2002: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167456 | 167053.57 | 201.71 | 166908 | 166394.53 | 399.27 | 166831 | 166202.3 | 525.62 | 166836 | 166225.33 | 425.62 |
| | | 2op | 166783 | 166604.53 | 143.33 | 166793 | 166503.1 | 312.55 | 166817 | 166344.47 | 354.2 | 166958 | 166318.47 | 487.66 |
| | 50 | rnd | 167438 | 167082.73 | 177.53 | 166893 | 166459.43 | 329.11 | 167087 | 166219.77 | 433.77 | 166904 | 166341.87 | 386.09 |
| | | 2op | 166686 | 166605.93 | 54.12 | 166983 | 166446.4 | 314.62 | 166915 | 166398.63 | 305.54 | 166820 | 166331.5 | 433.82 |
| 51 | 20 | rnd | 167382 | 167056.73 | 163.51 | 166890 | 166409.23 | 323 | 167026 | 166278.37 | 401.57 | 166802 | 166303.53 | 401.03 |
| | | 2op | 166703 | 166613.97 | 53 | 166905 | 166305.2 | 479.32 | 166807 | 166187.87 | 429.17 | 166929 | 166319.03 | 426.75 |
| | 50 | rnd | 167403 | 167065.2 | 207.96 | 166983 | 166482.03 | 322.68 | 166994 | 166499.67 | 336.71 | 166950 | 166279.9 | 563.63 |
| | | 2op | 166750 | 166606.13 | 47.7 | 166781 | 166354.47 | 435.33 | 166831 | 166243.17 | 507.44 | 166782 | 166281.57 | 345.05 |

Table A.2003: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163160 | 162944.23 | 99.07 | 163093 | 162960.97 | 77.95 | 163101 | 162910.97 | 103.73 | 163113 | 162949.13 | 111.69 |
| | | 2op | 163113 | 162937.47 | 119.05 | 163115 | 162950.53 | 92.61 | 163116 | 162972.8 | 84.49 | 163133 | 162999.73 | 70.62 |
| | 50 | rnd | 163134 | 162968.9 | 100.54 | 163139 | 162959.6 | 107.79 | 163071 | 162920.17 | 95.17 | 163144 | 162979.7 | 77.91 |
| | | 2op | 163129 | 162973.1 | 80.76 | 163143 | 162947.6 | 111.25 | 163053 | 162944.07 | 85.05 | 163108 | 162965.47 | 75.48 |
| 51 | 20 | rnd | 163168 | 162969.5 | 89.24 | 163137 | 162988.7 | 71.69 | 163086 | 162981.2 | 68.44 | 163136 | 162972.47 | 105.02 |
| | | 2op | 163166 | 162991.83 | 96.02 | 163103 | 162994.3 | 59.49 | 163102 | 162961 | 93.79 | 163290 | 162967.27 | 131.5 |
| | 50 | rnd | 163189 | 162980.17 | 88.36 | 163150 | 162971.27 | 124.55 | 163091 | 162958.83 | 103.82 | 163122 | 162977.6 | 93.66 |
| | | 2op | 163173 | 162981.2 | 99.02 | 163164 | 163007.57 | 94.91 | 163146 | 162981.17 | 78.97 | 163159 | 163005.27 | 64.8 |

Table A.2004: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163222 | 163071.5 | 79.67 | 163254 | 163100.8 | 73.06 | 163243 | 163093.67 | 75.14 | 163197 | 163031.5 | 108.46 |
| | | 2op | 163192 | 163098.73 | 55.28 | 163304 | 163119.87 | 72.23 | 163238 | 163107.53 | 74.4 | 163313 | 163060.07 | 87.12 |
| | 50 | rnd | 163232 | 163053.37 | 72.92 | 163163 | 163055.17 | 71.62 | 163244 | 163094.83 | 96 | 163188 | 163070.7 | 79.33 |
| | | 2op | 163212 | 163084.1 | 61.06 | 163225 | 163116.27 | 48.91 | 163253 | 163118.87 | 68.21 | 163188 | 163082.4 | 57.94 |
| 51 | 20 | rnd | 163228 | 163074.17 | 82.36 | 163213 | 163103.33 | 48.29 | 163202 | 163105 | 61.11 | 163198 | 163084.83 | 73.01 |
| | | 2op | 163239 | 163089.2 | 55.96 | 163212 | 163117.77 | 59.47 | 163231 | 163105.83 | 76.05 | 163288 | 163120.47 | 76.08 |
| | 50 | rnd | 163196 | 163060.23 | 66.66 | 163201 | 163089.67 | 69.14 | 163193 | 163085.33 | 62.71 | 163196 | 163075.33 | 63.93 |
| | | 2op | 163173 | 163057.63 | 72.53 | 163158 | 163080.2 | 49.95 | 163242 | 163123.23 | 64.57 | 163195 | 163112.07 | 52.14 |

Table A.2005: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163125 | 162953.37 | 92.13 | 163208 | 162941.03 | 105.54 | 163112 | 162951.07 | 85.73 | 163140 | 162991.63 | 89.23 |
| | | 2op | 163148 | 162925.9 | 130.42 | 163064 | 162941.03 | 93.93 | 163135 | 162961.23 | 70.5 | 163251 | 162961.03 | 120.53 |
| | 50 | rnd | 163180 | 162978.8 | 121.72 | 163108 | 162927.63 | 108.62 | 163091 | 162942.53 | 81.94 | 163093 | 162970.53 | 82.14 |
| | | 2op | 163135 | 162981.57 | 80.29 | 163163 | 162959.87 | 79.94 | 163085 | 162920.87 | 115.99 | 163119 | 162949.77 | 92.83 |
| 51 | 20 | rnd | 163097 | 162966.7 | 114.3 | 163132 | 162990.13 | 96.6 | 163123 | 162975.93 | 89.87 | 163083 | 162956.83 | 103.47 |
| | | 2op | 163118 | 162997.3 | 89.54 | 163139 | 162964.13 | 107.04 | 163069 | 162942.67 | 104.55 | 163164 | 162979.5 | 119.82 |
| | 50 | rnd | 163154 | 162994.77 | 89.52 | 163240 | 162985.83 | 108.95 | 163087 | 162952.97 | 84.36 | 163140 | 162974.83 | 101.1 |
| | | 2op | 163177 | 163000.9 | 87.41 | 163096 | 162966.37 | 86.93 | 163053 | 162958.7 | 69.69 | 163103 | 162943.7 | 94.02 |

Table A.2006: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163215 | 163082.5 | 71.9 | 163209 | 163077.1 | 75.25 | 163172 | 163084.63 | 54.66 | 163202 | 163024.77 | 116.12 |
| | | 2op | 163201 | 163084.47 | 59.96 | 163269 | 163123.63 | 69.71 | 163217 | 163101.97 | 61.76 | 163246 | 163040.37 | 85.48 |
| | 50 | rnd | 163200 | 163048.87 | 65.31 | 163204 | 163063.07 | 66.45 | 163281 | 163103.37 | 91.83 | 163248 | 163051.4 | 109.15 |
| | | 2op | 163186 | 163095.8 | 47.93 | 163272 | 163110.1 | 84.33 | 163263 | 163147.07 | 62.68 | 163278 | 163084.5 | 72 |
| 51 | 20 | rnd | 163186 | 163073.37 | 70.27 | 163237 | 163086.6 | 69.29 | 163222 | 163098.37 | 65.89 | 163284 | 163124.83 | 63.35 |
| | | 2op | 163156 | 163054.17 | 74.37 | 163214 | 163093.6 | 59.87 | 163209 | 163118.63 | 66.45 | 163221 | 163116.5 | 56.16 |
| | 50 | rnd | 163175 | 163055.63 | 77.25 | 163244 | 163068.97 | 107.17 | 163191 | 163071.57 | 63.69 | 163215 | 163084.6 | 71.35 |
| | | 2op | 163303 | 163062.93 | 72.55 | 163174 | 163099.9 | 55.07 | 163212 | 163096.37 | 61.72 | 163238 | 163127.97 | 71.66 |

Table A.2007: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163173 | 162971.47 | 115.41 | 163151 | 162971.03 | 114.79 | 163064 | 162920.37 | 81.05 | 163206 | 162984.17 | 92.91 |
| | | 2op | 163158 | 162998.03 | 91.82 | 163131 | 162939.07 | 123.36 | 163163 | 162943.67 | 104.3 | 163157 | 162983.57 | 67.74 |
| | 50 | rnd | 163182 | 162949.2 | 120.39 | 163136 | 162935.1 | 103.14 | 163095 | 162975.6 | 78.16 | 163120 | 162966.03 | 60.02 |
| | | 2op | 163112 | 162942.8 | 97.61 | 163137 | 162943.87 | 113.91 | 163118 | 162979.93 | 81.5 | 163085 | 162935.9 | 110.6 |
| 51 | 20 | rnd | 163236 | 162975.3 | 94.44 | 163236 | 162975.3 | 94.44 | 163115 | 162935.17 | 133.41 | 163125 | 162979.6 | 91.37 |
| | | 2op | 163163 | 162993.73 | 78.89 | 163163 | 162993.73 | 78.89 | 163057 | 162937.2 | 91.59 | 163046 | 162908.63 | 113.54 |
| | 50 | rnd | 163109 | 162973.93 | 68.56 | 163109 | 162973.93 | 68.56 | 163124 | 162939.37 | 100.23 | 163108 | 162957.7 | 95 |
| | | 2op | 163080 | 162985.67 | 60.23 | 163080 | 162985.67 | 60.23 | 163067 | 162931.43 | 89.65 | 163188 | 162927.83 | 130.61 |

Table A.2008: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163225 | 163078 | 69.27 | 163179 | 162970.87 | 75.7 | 163083 | 162935.6 | 88.05 | 163125 | 162955.1 | 99.71 |
| | | 2op | 163213 | 163111.13 | 53.61 | 163112 | 162967.83 | 87.61 | 163110 | 162970.5 | 104.05 | 163111 | 162959.87 | 89.18 |
| | 50 | rnd | 163237 | 163047.47 | 75.97 | 163170 | 162996.33 | 83.84 | 163181 | 163011.3 | 83.32 | 163160 | 162980.5 | 86.89 |
| | | 2op | 163172 | 163049.13 | 46.33 | 163125 | 162957.53 | 112.06 | 163172 | 162966.03 | 94.79 | 163135 | 162914.57 | 122.45 |
| 51 | 20 | rnd | 163218 | 163065.83 | 71.3 | 163136 | 162960.57 | 94.83 | 163104 | 162971.4 | 80.63 | 163163 | 162970.87 | 86.44 |
| | | 2op | 163163 | 163085.07 | 46.29 | 163173 | 162962.07 | 143.02 | 163106 | 162931.27 | 168.39 | 163130 | 162956.43 | 89.98 |
| | 50 | rnd | 163234 | 163070.33 | 67.91 | 163119 | 163012.17 | 79.78 | 163165 | 162948.2 | 109.17 | 163105 | 162953.93 | 78.63 |
| | | 2op | 163147 | 163052.13 | 58.02 | 163158 | 162983.63 | 69.1 | 163156 | 162981.33 | 113.19 | 163126 | 162957.63 | 96.06 |

Table A.2009: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179978 | 179769.67 | 89.19 | 179880 | 179688.6 | 95.93 | 179893 | 179710.03 | 84.58 | 179880 | 179725.67 | 69.78 |
| | | 2op | 179904 | 179751.77 | 76.16 | 179836 | 179716.3 | 94.36 | 179849 | 179699.57 | 84.66 | 179916 | 179736.37 | 78.2 |
| | 50 | rnd | 179912 | 179718.07 | 95.59 | 179963 | 179705.67 | 109.15 | 179834 | 179686.1 | 82.78 | 179888 | 179731.3 | 85.1 |
| | | 2op | 179941 | 179730.97 | 104.23 | 179915 | 179690 | 91.21 | 179809 | 179693 | 71.58 | 179885 | 179741.33 | 79.38 |
| 51 | 20 | rnd | 179929 | 179758.07 | 73.41 | 179935 | 179719.53 | 99.89 | 179920 | 179724.97 | 97.02 | 179885 | 179738.13 | 94.15 |
| | | 2op | 179873 | 179744.9 | 76.07 | 179965 | 179771.53 | 84.41 | 179898 | 179698.07 | 76.42 | 179964 | 179764.07 | 105.64 |
| | 50 | rnd | 179935 | 179747.4 | 100.72 | 179895 | 179708.03 | 97.75 | 179852 | 179698.6 | 74.61 | 179867 | 179726.77 | 81.32 |
| | | 2op | 179939 | 179751.77 | 74.83 | 179938 | 179738.7 | 95.9 | 179926 | 179718.93 | 97.12 | 179835 | 179687.57 | 86.09 |

Table A.2010: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 180078 | 179819.37 | 90.87 | 180036 | 179864.7 | 86.81 | 180039 | 179869.07 | 68.49 | 179964 | 179831.7 | 88.34 |
| | | 2op | 180079 | 179955.67 | 67.85 | 180111 | 179970.53 | 64.32 | 180112 | 179972.33 | 65.49 | 180007 | 179860.2 | 79.71 |
| | 50 | rnd | 180089 | 179841.97 | 107.17 | 180020 | 179857.3 | 101.11 | 180018 | 179887.03 | 83.58 | 179991 | 179837.63 | 96.19 |
| | | 2op | 180127 | 179925.6 | 71.27 | 180051 | 179947.23 | 64.23 | 180149 | 179964.53 | 79.65 | 180089 | 179902.23 | 85.28 |
| 51 | 20 | rnd | 180006 | 179842.8 | 77.83 | 179955 | 179825.5 | 84.39 | 180037 | 179873.07 | 98.71 | 180029 | 179853.63 | 97.41 |
| | | 2op | 180097 | 179940.47 | 79.48 | 180171 | 179973.53 | 91.36 | 180151 | 179992.1 | 75.8 | 180071 | 179926.93 | 82.6 |
| | 50 | rnd | 179953 | 179802.43 | 89.65 | 180031 | 179851.3 | 87.83 | 179981 | 179849.97 | 68.16 | 179962 | 179850.27 | 83.44 |
| | | 2op | 180035 | 179913.73 | 72.54 | 180071 | 179961.5 | 72.5 | 180177 | 179983.53 | 83.04 | 180096 | 179939.17 | 86.61 |

Table A.2011: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179854 | 179734.33 | 61.35 | 179906 | 179682.37 | 92.48 | 179852 | 179690.57 | 79.17 | 179912 | 179741.2 | 94.47 |
| | | 2op | 179901 | 179718.1 | 90.86 | 179916 | 179706.5 | 85.44 | 179834 | 179682.97 | 95.63 | 179935 | 179766.8 | 91.12 |
| | 50 | rnd | 179876 | 179688.27 | 109.16 | 179905 | 179716.03 | 89.48 | 179833 | 179708.6 | 74.56 | 179895 | 179711.2 | 110.15 |
| | | 2op | 179895 | 179739.37 | 77.38 | 179886 | 179712.5 | 93.15 | 179839 | 179705.87 | 72.37 | 179884 | 179718.57 | 64.48 |
| 51 | 20 | rnd | 179944 | 179769.37 | 78.07 | 179913 | 179743.37 | 65.09 | 179870 | 179700.3 | 86.56 | 179880 | 179751.5 | 70.86 |
| | | 2op | 179968 | 179767.23 | 98.95 | 179920 | 179744.77 | 76.81 | 179888 | 179746.67 | 84.89 | 179884 | 179733.13 | 80.81 |
| | 50 | rnd | 179878 | 179772.4 | 64.18 | 179906 | 179753.77 | 82.85 | 179872 | 179726.6 | 82.38 | 179914 | 179738.9 | 88.66 |
| | | 2op | 179909 | 179751.37 | 77.75 | 179904 | 179772.43 | 73.04 | 179962 | 179722.23 | 77.78 | 179948 | 179744.7 | 79.14 |

Table A.2012: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 180031 | 179824.7 | 82.65 | 180048 | 179857.2 | 94.32 | 180045 | 179880.37 | 83.16 | 179961 | 179806.6 | 68.58 |
| | | 2op | 180124 | 179958.53 | 84.31 | 180104 | 179981.97 | 77.97 | 180143 | 179958.27 | 91.27 | 179989 | 179853.13 | 75.23 |
| | 50 | rnd | 179977 | 179828.03 | 89.5 | 180040 | 179851.7 | 88.38 | 180071 | 179888.63 | 74.57 | 179995 | 179830.87 | 78.69 |
| | | 2op | 180075 | 179931.9 | 62.81 | 180134 | 179977.8 | 71.2 | 180106 | 179987.07 | 75.15 | 180082 | 179881.23 | 86.25 |
| 51 | 20 | rnd | 180062 | 179861.93 | 107.01 | 180006 | 179879.93 | 79.87 | 180061 | 179892.5 | 79.19 | 179964 | 179862.5 | 64.93 |
| | | 2op | 180141 | 179971.23 | 74.48 | 180105 | 179968.27 | 79.37 | 180147 | 179984.73 | 70.18 | 180067 | 179896.77 | 81.63 |
| | 50 | rnd | 180021 | 179815.67 | 97.69 | 179964 | 179798.4 | 95.58 | 180007 | 179867.57 | 75.79 | 179997 | 179866.8 | 60.7 |
| | | 2op | 180094 | 179926.3 | 63.48 | 180102 | 179989.13 | 53.04 | 180117 | 179961.37 | 72.68 | 180098 | 179931.27 | 81.32 |

Table A.2013: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179928 | 179709.27 | 92.48 | 179889 | 179717.57 | 109.13 | 179857 | 179677.3 | 67.84 | 179905 | 179713.73 | 114.79 |
| | | 2op | 179895 | 179720.27 | 100.11 | 179806 | 179731.8 | 54.31 | 179844 | 179679.6 | 97.29 | 179911 | 179726.3 | 90.29 |
| | 50 | rnd | 179829 | 179692.47 | 57.17 | 179936 | 179719.63 | 76.63 | 179934 | 179682.03 | 112.91 | 179855 | 179693.47 | 75.16 |
| | | 2op | 179892 | 179716.87 | 86.01 | 179852 | 179682.33 | 92.36 | 179929 | 179680.97 | 96.2 | 179880 | 179758.97 | 77.43 |
| 51 | 20 | rnd | 179909 | 179732.4 | 79.18 | 179909 | 179732.4 | 79.18 | 179890 | 179697.93 | 80.1 | 179863 | 179696.17 | 80.87 |
| | | 2op | 179883 | 179753.73 | 75.93 | 179883 | 179753.73 | 75.93 | 179968 | 179679.57 | 104.12 | 179889 | 179710.23 | 103.65 |
| | 50 | rnd | 179985 | 179727.87 | 98.11 | 179985 | 179727.87 | 98.11 | 179812 | 179685.47 | 73.79 | 179868 | 179723.8 | 88.11 |
| | | 2op | 179897 | 179753.43 | 65.88 | 179897 | 179753.43 | 65.88 | 179885 | 179691.23 | 88.63 | 179927 | 179721.2 | 77.4 |

Table A.2014: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 180016 | 179846.4 | 94.03 | 179880 | 179737 | 82.34 | 179862 | 179743.93 | 85.93 | 179867 | 179692.7 | 95.89 |
| | | 2op | 180151 | 179972.97 | 57 | 179922 | 179723.17 | 84.44 | 179923 | 179726.7 | 87.09 | 179882 | 179714.6 | 74.1 |
| | 50 | rnd | 179970 | 179835.57 | 73.12 | 179892 | 179712.83 | 72.89 | 179905 | 179723.2 | 87.15 | 179903 | 179723.83 | 93.68 |
| | | 2op | 180050 | 179925.23 | 67.4 | 179898 | 179710.67 | 84.41 | 179927 | 179740.37 | 108.24 | 179918 | 179729.53 | 93.68 |
| 51 | 20 | rnd | 180033 | 179819.87 | 82.99 | 179923 | 179746.03 | 93.71 | 179878 | 179726.67 | 85.34 | 179856 | 179716.43 | 73.23 |
| | | 2op | 180088 | 179960.8 | 69.02 | 179875 | 179737.37 | 81.38 | 179905 | 179748.53 | 88.76 | 179884 | 179740.8 | 80.32 |
| | 50 | rnd | 179965 | 179806.4 | 83.48 | 179879 | 179739.23 | 74.23 | 179862 | 179716 | 85.99 | 179933 | 179704.67 | 77.82 |
| | | 2op | 180077 | 179926.17 | 68.96 | 179953 | 179743.5 | 97.03 | 179972 | 179731.87 | 101.08 | 179861 | 179734.7 | 68.14 |

Table A.2015: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343061 | 342251.57 | 591.64 | 343056 | 342373.37 | 476.52 | 342963 | 342177.27 | 511.1 | 343063 | 342184.83 | 541.18 |
| | | 2op | 343260 | 342473.37 | 499.86 | 343160 | 342438.33 | 655.26 | 343061 | 342308.7 | 537.72 | 343115 | 342327.2 | 453.63 |
| | 50 | rnd | 343101 | 342599.67 | 375.26 | 343093 | 342447.6 | 440.92 | 343078 | 342424.87 | 421.78 | 343073 | 342251.33 | 634.19 |
| | | 2op | 343146 | 342480.4 | 529.95 | 343140 | 342657.83 | 401.94 | 342938 | 342256.93 | 435.02 | 343035 | 342231.9 | 606.87 |
| 51 | 20 | rnd | 343105 | 342603.67 | 374.5 | 343136 | 342624.4 | 352.18 | 343187 | 342385.1 | 550.86 | 343068 | 342434.77 | 460.38 |
| | | 2op | 343181 | 342604.53 | 417.81 | 343074 | 342613.23 | 368.56 | 342989 | 342190.4 | 458.1 | 343089 | 342274.73 | 568.2 |
| | 50 | rnd | 343089 | 342660.67 | 385.17 | 343087 | 342436.97 | 431.7 | 343117 | 342463.5 | 520.97 | 343030 | 342341.27 | 466.75 |
| | | 2op | 343071 | 342607.53 | 364.42 | 343170 | 342627.77 | 376.79 | 343206 | 342397.03 | 556.29 | 342942 | 342177.3 | 454.36 |

Table A.2016: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343185 | 343021.23 | 123.36 | 343212 | 343012.13 | 173.19 | 343230 | 342863 | 389.59 | 343074 | 342600.73 | 405.67 |
| | | 2op | 343239 | 343073.43 | 87.12 | 343217 | 343016.4 | 212.19 | 343200 | 342929.3 | 217.56 | 343122 | 342488.47 | 466.57 |
| | 50 | rnd | 343232 | 343019.3 | 105.63 | 343206 | 343022.5 | 182.02 | 343197 | 342845.07 | 326.27 | 343194 | 342633.77 | 445.96 |
| | | 2op | 343282 | 343057.83 | 99.57 | 343231 | 343002.8 | 270.24 | 343196 | 343006.3 | 162.81 | 343231 | 342799.1 | 440.01 |
| 51 | 20 | rnd | 343232 | 343034.03 | 91.07 | 343315 | 343094.23 | 103.44 | 343236 | 342958.13 | 259.33 | 343190 | 342858.3 | 275.82 |
| | | 2op | 343188 | 343082.43 | 78.84 | 343240 | 343049.3 | 160.3 | 343200 | 342976.37 | 217.66 | 343315 | 342799.27 | 351.84 |
| | 50 | rnd | 343259 | 343025.4 | 109.32 | 343217 | 343041.5 | 141.14 | 343181 | 342991.73 | 210.75 | 343187 | 342822.27 | 296.88 |
| | | 2op | 343183 | 343042.6 | 70.62 | 343166 | 343048.7 | 116.89 | 343236 | 343048.4 | 159.95 | 343236 | 342943.17 | 291.02 |

Table A.2017: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343002 | 342436.8 | 473.05 | 343014 | 342331.5 | 463.18 | 343095 | 342394.73 | 625.39 | 343010 | 342450.77 | 406.08 |
| | | 2op | 343064 | 342607.4 | 267.19 | 343173 | 342400.73 | 521.53 | 343042 | 342337.23 | 532.1 | 343106 | 342339.23 | 564.75 |
| | 50 | rnd | 343000 | 342340.27 | 407.23 | 343057 | 342520.57 | 424.17 | 343051 | 342172.17 | 583.41 | 343032 | 342054.9 | 566.09 |
| | | 2op | 343086 | 342454.47 | 547.84 | 343087 | 342260.67 | 577.38 | 343003 | 342292.47 | 514.28 | 342915 | 342061.03 | 605.25 |
| 51 | 20 | rnd | 343365 | 342667.63 | 401.54 | 343115 | 342627.37 | 335.9 | 343074 | 342248.53 | 570.7 | 343104 | 342268.73 | 548.46 |
| | | 2op | 343233 | 342738 | 395.1 | 343127 | 342517 | 436.49 | 343037 | 342390.43 | 461.13 | 343036 | 342220.5 | 509.5 |
| | 50 | rnd | 343155 | 342686.03 | 328.36 | 343286 | 342641.5 | 462.95 | 343017 | 342400.97 | 416.22 | 343075 | 342251.13 | 653.52 |
| | | 2op | 343155 | 342620.3 | 365.22 | 343087 | 342469.17 | 593.7 | 343135 | 342602.1 | 405.41 | 343088 | 342338.27 | 512.36 |

Table A.2018: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343200 | 343002.9 | 197.72 | 343248 | 342979.9 | 229.06 | 343192 | 342908.63 | 241.49 | 343124 | 342581.73 | 420.22 |
| | | 2op | 343334 | 343097.6 | 96.64 | 343270 | 343026.9 | 178.77 | 343213 | 343022.13 | 152.32 | 343144 | 342458.07 | 453 |
| | 50 | rnd | 343190 | 343061.27 | 84.71 | 343231 | 342981.27 | 240.42 | 343190 | 342991.2 | 189.51 | 343111 | 342667.5 | 407.06 |
| | | 2op | 343261 | 343066.23 | 82.52 | 343269 | 343033.3 | 154.87 | 343264 | 342993.4 | 250.6 | 343169 | 342565.37 | 410.17 |
| 51 | 20 | rnd | 343163 | 342996.23 | 178.7 | 343190 | 343012.6 | 166.87 | 343269 | 342880.23 | 260 | 343162 | 342805.1 | 303.19 |
| | | 2op | 343297 | 343073.3 | 86.39 | 343259 | 343000.87 | 206.97 | 343264 | 343005.87 | 218.04 | 343290 | 342869.13 | 412.2 |
| | 50 | rnd | 343181 | 343015.07 | 122.19 | 343270 | 343011.23 | 154.36 | 343219 | 342983.33 | 223.28 | 343209 | 342943.87 | 258.77 |
| | | 2op | 343208 | 343031.43 | 128.55 | 343221 | 343053.1 | 133.74 | 343210 | 342985.73 | 209.94 | 343223 | 342926.23 | 260.44 |

Table A.2019: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343194 | 342331.37 | 486.46 | 343194 | 342351.2 | 491.01 | 343138 | 342121.47 | 596.91 | 343011 | 342126.47 | 567.7 |
| | | 2op | 343073 | 342642.13 | 369.57 | 343073 | 342576.8 | 450.91 | 342994 | 342124.63 | 448.51 | 343010 | 342280.27 | 612.64 |
| | 50 | rnd | 343099 | 342423.23 | 527 | 343135 | 342339 | 541.29 | 342967 | 342240.2 | 696.73 | 343150 | 342426.07 | 473.04 |
| | | 2op | 343070 | 342376.97 | 508.78 | 343070 | 342290.2 | 627.87 | 343105 | 342098.33 | 624.12 | 343103 | 342339.03 | 532.9 |
| 51 | 20 | rnd | 343062 | 342720.9 | 348.79 | 343062 | 342720.9 | 348.79 | 343020 | 342307.13 | 499.38 | 342942 | 342246.77 | 460.81 |
| | | 2op | 343052 | 342695.37 | 394.71 | 343052 | 342695.37 | 394.71 | 343024 | 342118.67 | 663.59 | 343133 | 342216.9 | 602.51 |
| | 50 | rnd | 343097 | 342749.5 | 310.09 | 343097 | 342749.5 | 310.09 | 343020 | 342095.8 | 548.96 | 343092 | 342115.63 | 588.46 |
| | | 2op | 343181 | 342762.27 | 355.03 | 343181 | 342762.27 | 355.03 | 343015 | 341860.87 | 585 | 343045 | 342187.03 | 539.32 |

Table A.2020: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343191 | 343029.73 | 85.66 | 343143 | 342399.4 | 539.46 | 343106 | 342454.23 | 422.26 | 343129 | 342418.13 | 577.07 |
| | | 2op | 343310 | 343062.9 | 93.27 | 343110 | 342364.03 | 496.69 | 343230 | 342361.17 | 547.94 | 343049 | 342455.67 | 482.64 |
| | 50 | rnd | 343254 | 343078.1 | 92.82 | 343146 | 342397 | 560.07 | 343037 | 342282.83 | 581.2 | 343071 | 342253.07 | 615.03 |
| | | 2op | 343278 | 343031.93 | 89.42 | 343234 | 342481.43 | 580.13 | 343173 | 342291.43 | 472.47 | 343174 | 342309.13 | 616.15 |
| 51 | 20 | rnd | 343297 | 343088.53 | 80.65 | 343127 | 342248.33 | 473.02 | 343060 | 342306.17 | 585.04 | 343037 | 342287.37 | 554.53 |
| | | 2op | 343219 | 343063.7 | 84.58 | 343044 | 342235.33 | 511.62 | 343072 | 342234.7 | 610.28 | 343017 | 342336.33 | 554.26 |
| | 50 | rnd | 343201 | 343035.33 | 81.6 | 343137 | 342500.13 | 479.99 | 343012 | 342215.37 | 494.86 | 343120 | 342294.2 | 639.5 |
| | | 2op | 343246 | 343061.87 | 79.18 | 343109 | 342487.37 | 569.51 | 342968 | 342029.87 | 540.74 | 343011 | 342352.27 | 404.69 |

Table A.2021: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226817 | 225691.23 | 683.57 | 226735 | 225595.97 | 665.39 | 226996 | 225773.4 | 670.19 | 227009 | 225513.37 | 742.3 |
| | | 2op | 226715 | 225893.4 | 458.37 | 227084 | 225861.1 | 622.61 | 226698 | 225865.67 | 540.99 | 226920 | 225771.73 | 623.67 |
| | 50 | rnd | 226723 | 225582.87 | 662.34 | 227012 | 225708.5 | 675.81 | 226741 | 225366.17 | 825.14 | 226402 | 225692.87 | 469.28 |
| | | 2op | 226928 | 225905.1 | 711.44 | 226855 | 225861.43 | 647.46 | 226613 | 225759.53 | 553.27 | 227033 | 225765.23 | 641.62 |
| 51 | 20 | rnd | 227052 | 225959.37 | 517.58 | 227115 | 225803.5 | 673.69 | 226856 | 225772.27 | 778.57 | 226759 | 225854.33 | 570.86 |
| | | 2op | 226992 | 226208.23 | 507.81 | 226878 | 225907.37 | 515.1 | 227032 | 226052.6 | 549.58 | 227045 | 225952.47 | 586.83 |
| | 50 | rnd | 226831 | 225889.3 | 607.91 | 227560 | 225906.17 | 748.15 | 226996 | 225801.13 | 680.2 | 226755 | 225886.13 | 496.07 |
| | | 2op | 226867 | 225956.3 | 551.81 | 227078 | 225952.23 | 658.72 | 227267 | 225933.57 | 783.83 | 227279 | 226259.03 | 514.41 |

Table A.2022: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226579 | 225792.83 | 566.38 | 227343 | 225832.87 | 830.77 | 226784 | 225814.6 | 654.64 | 227102 | 225884.43 | 616.85 |
| | | 2op | 226795 | 226105.2 | 334.49 | 226823 | 226230.4 | 320.89 | 226991 | 226305.2 | 451.5 | 227150 | 226286.9 | 502 |
| | 50 | rnd | 226939 | 225595.33 | 644.99 | 226488 | 225617.73 | 637.03 | 227003 | 225699.97 | 618.19 | 227153 | 225914.57 | 686.3 |
| | | 2op | 226888 | 226161.43 | 361.98 | 226793 | 226191.97 | 304.23 | 226915 | 226377.23 | 302.59 | 227041 | 226348.97 | 398.64 |
| 51 | 20 | rnd | 226991 | 225544.03 | 809.14 | 227021 | 225880.97 | 536.7 | 226889 | 225863.4 | 640.84 | 226873 | 225879.4 | 546.35 |
| | | 2op | 226826 | 226148.03 | 356.02 | 226940 | 226390.3 | 318.02 | 227013 | 226327.47 | 397.11 | 226957 | 226369.87 | 419.06 |
| | 50 | rnd | 227069 | 225518.13 | 800.88 | 227555 | 226304.37 | 535.72 | 226912 | 225913.17 | 710.5 | 226837 | 225876.8 | 577.36 |
| | | 2op | 226824 | 226159.5 | 404.05 | 227016 | 226334.4 | 341.31 | 226998 | 226233.6 | 415.76 | 227003 | 226436.37 | 366.34 |

Table A.2023: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226812 | 225657.5 | 870.33 | 226814 | 225693.17 | 640.15 | 226511 | 225710.7 | 471.91 | 226704 | 225578.3 | 738.1 |
| | | 2op | 226832 | 225850.27 | 506.47 | 226865 | 225886.6 | 642.95 | 227014 | 225633.47 | 681.59 | 226587 | 225754.47 | 436 |
| | 50 | rnd | 226873 | 225588.27 | 738.1 | 227139 | 226013.6 | 623.1 | 226880 | 225544.63 | 856.42 | 226547 | 225665.5 | 591.44 |
| | | 2op | 226659 | 225853.43 | 468.76 | 226819 | 225969.3 | 557.08 | 226695 | 225620.63 | 559.34 | 227130 | 225887.03 | 549.48 |
| 51 | 20 | rnd | 227025 | 225742.13 | 757.86 | 227219 | 225879.4 | 646.56 | 227019 | 225818.4 | 674.8 | 226600 | 225750.43 | 646.33 |
| | | 2op | 226847 | 226112.83 | 540.6 | 227015 | 226284.83 | 416.51 | 226924 | 226093.3 | 488.23 | 227191 | 225901.5 | 751.36 |
| | 50 | rnd | 227146 | 225954 | 613.82 | 227017 | 225928.5 | 598.35 | 226863 | 225879.27 | 744.39 | 226551 | 225723.97 | 472.66 |
| | | 2op | 227106 | 225899.87 | 671.23 | 226554 | 225721.43 | 522.46 | 227071 | 225891.13 | 771.63 | 226943 | 225921.8 | 613.89 |

Table A.2024: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226961 | 225672.43 | 735.79 | 227098 | 225764.4 | 679.25 | 227130 | 225925.33 | 651.58 | 226729 | 225969.6 | 513.6 |
| | | 2op | 226997 | 226169.73 | 285.67 | 226592 | 226156.6 | 293.37 | 227139 | 226297.87 | 387.97 | 227136 | 226220.33 | 570.73 |
| | 50 | rnd | 227016 | 225742.2 | 596.07 | 227053 | 225917.13 | 609.3 | 227321 | 226005.43 | 707.7 | 227209 | 225744.2 | 864.57 |
| | | 2op | 226937 | 226221.9 | 366.72 | 226976 | 226172.6 | 419.57 | 226992 | 226284.97 | 389.96 | 227136 | 226325.6 | 416.18 |
| 51 | 20 | rnd | 226863 | 225742.1 | 671.62 | 226808 | 225994.1 | 596.54 | 227294 | 225616.53 | 619.77 | 227201 | 225841.8 | 713.04 |
| | | 2op | 226660 | 226266.8 | 302.67 | 226932 | 226317.13 | 373.13 | 226955 | 226267.43 | 423.22 | 226979 | 226273.97 | 367.27 |
| | 50 | rnd | 227130 | 225662.73 | 832.55 | 226844 | 226096.83 | 580.52 | 226838 | 225843.5 | 680.72 | 227036 | 225979.8 | 548.59 |
| | | 2op | 226776 | 226196.97 | 301.66 | 226970 | 226395.4 | 222.6 | 226851 | 226339.23 | 306 | 226930 | 226321.03 | 338.5 |

Table A.2025: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 227083 | 225919.5 | 603.9 | 226567 | 225402.97 | 838.62 | 226645 | 225385.97 | 901.93 | 226764 | 225040.7 | 893.35 |
| | | 2op | 227085 | 226172.27 | 612.09 | 226472 | 225311.13 | 633.59 | 226424 | 225121.57 | 717.85 | 226887 | 225131.67 | 821.75 |
| | 50 | rnd | 227274 | 225925.83 | 659.34 | 226251 | 224980 | 843.73 | 226073 | 225002.3 | 564.76 | 226515 | 225239.43 | 679.44 |
| | | 2op | 227093 | 226190.17 | 466.66 | 226821 | 225383.23 | 754.24 | 226289 | 225293.5 | 595.79 | 226748 | 225336.93 | 775.2 |
| 51 | 20 | rnd | 226828 | 226079.43 | 502.91 | 226740 | 225247.7 | 809.98 | 226227 | 225077.37 | 790.68 | 226407 | 225261 | 678.49 |
| | | 2op | 227004 | 226370.8 | 301.36 | 225908 | 225081.2 | 709.64 | 226793 | 225249.67 | 532.64 | 226714 | 225481.4 | 622.67 |
| | 50 | rnd | 227024 | 226099.87 | 539.26 | 226773 | 225266.9 | 836.24 | 226528 | 225237.97 | 772.25 | 226207 | 225031.43 | 813.24 |
| | | 2op | 227075 | 226411.13 | 417.1 | 226482 | 225149.07 | 752.31 | 226733 | 225448.17 | 663.02 | 226738 | 225264.77 | 633.91 |

Table A.2026: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226710 | 225647.13 | 744.95 | 226527 | 225295.23 | 707.48 | 226552 | 225395.2 | 758.74 | 226581 | 225093.03 | 811.5 |
| | | 2op | 226766 | 226224.43 | 292.17 | 226806 | 225327.4 | 779.48 | 226433 | 225402.27 | 629.4 | 226772 | 225257.3 | 784.35 |
| | 50 | rnd | 226916 | 225716.63 | 737.03 | 226956 | 225795.73 | 734.39 | 226393 | 225264.6 | 651.43 | 226892 | 225441.77 | 912.67 |
| | | 2op | 226794 | 226205.47 | 267.73 | 226794 | 225686.13 | 628.56 | 226396 | 225356.9 | 642.64 | 226812 | 225348.7 | 672.82 |
| 51 | 20 | rnd | 227120 | 225613.37 | 871.25 | 226858 | 225405.77 | 831.39 | 226865 | 225314.1 | 848.67 | 226431 | 225207.77 | 862.19 |
| | | 2op | 226899 | 226242.97 | 316.79 | 226529 | 225239.33 | 706.83 | 226614 | 225445.73 | 662.16 | 226168 | 225203.03 | 683.54 |
| | 50 | rnd | 227384 | 225921.17 | 586.92 | 227012 | 225772.43 | 677.04 | 226389 | 225139.27 | 720.18 | 226447 | 225290.23 | 727.25 |
| | | 2op | 226913 | 226287.1 | 243.03 | 227150 | 226085.3 | 716.03 | 227159 | 225553.07 | 835.53 | 226839 | 225419 | 681.6 |

Table A.2027: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 443013 | 440248.13 | 1196.56 | 442614 | 440484.07 | 970.38 | 442952 | 440267.3 | 1272.22 | 442971 | 440458.17 | 1248.34 |
| | | 2op | 442664 | 440224.27 | 1062.89 | 442290 | 440333.83 | 1198 | 442316 | 440743 | 996.15 | 442124 | 440524.9 | 1184.09 |
| | 50 | rnd | 442009 | 440053.53 | 1091.44 | 442093 | 440003.73 | 1237.34 | 441728 | 440453.97 | 829.72 | 442370 | 439786.43 | 1175.27 |
| | | 2op | 442320 | 440100.6 | 935.42 | 441818 | 440517.33 | 881.53 | 442697 | 440184.17 | 1081.33 | 443043 | 440746.2 | 1005.94 |
| 51 | 20 | rnd | 442044 | 440109.43 | 1000.97 | 442440 | 440036.7 | 1095.73 | 442135 | 440438.23 | 909.06 | 443435 | 440388.1 | 1158.73 |
| | | 2op | 441920 | 440422.4 | 901.25 | 442042 | 440388.63 | 1070.29 | 442472 | 441043.5 | 803.57 | 441963 | 440586.03 | 835.76 |
| | 50 | rnd | 441781 | 439900.83 | 1024.68 | 442322 | 440359 | 1049.4 | 441865 | 440320.57 | 1042 | 442338 | 440193.47 | 889.27 |
| | | 2op | 442092 | 440205.73 | 1066.86 | 442022 | 440293.63 | 882.01 | 441857 | 440593.87 | 881.8 | 442519 | 440632.07 | 1014.91 |

Table A.2028: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 442164 | 439578.37 | 1440.17 | 441746 | 439505.37 | 1129.34 | 442308 | 439393.07 | 1177.64 | 442208 | 440484.37 | 1083.15 |
| | | 2op | 439048 | 438453.63 | 406.79 | 439293 | 438411.27 | 482.33 | 440437 | 439048.73 | 652.11 | 442361 | 440424.07 | 879.89 |
| | 50 | rnd | 441264 | 439109.43 | 1102.07 | 440748 | 439124.63 | 1094.23 | 441518 | 439462.73 | 1041.35 | 441692 | 439678.93 | 1031.16 |
| | | 2op | 439010 | 438382.17 | 364.81 | 439729 | 438447.8 | 564.71 | 440270 | 438996.93 | 562.07 | 441641 | 440055.27 | 684.68 |
| 51 | 20 | rnd | 440972 | 439021.2 | 1293.32 | 440947 | 438846.03 | 954.84 | 441074 | 439307.97 | 1159 | 442277 | 439329.1 | 1268.57 |
| | | 2op | 439246 | 438340.33 | 422.09 | 439662 | 438502.9 | 543.22 | 440424 | 438678.1 | 710.85 | 441304 | 439478.47 | 753.12 |
| | 50 | rnd | 441296 | 438919.9 | 1188.65 | 442269 | 439621.1 | 1226.13 | 442385 | 439482.3 | 1145.19 | 441705 | 439920.47 | 958.48 |
| | | 2op | 439167 | 438313.17 | 369.14 | 439889 | 438526.03 | 468.61 | 439540 | 438475.5 | 464.49 | 440452 | 439278.27 | 706.85 |

Table A.2029: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 442423 | 440214.83 | 952.86 | 442358 | 439959.33 | 1185.69 | 442413 | 440179.8 | 992.32 | 441883 | 440218.1 | 905.88 |
| | | 2op | 442515 | 440248.83 | 1066.95 | 442622 | 440099.03 | 1265.42 | 441491 | 440414.6 | 684.97 | 442688 | 440620.17 | 1070.59 |
| | 50 | rnd | 441615 | 440016.4 | 840.48 | 441729 | 439750.5 | 1035.9 | 442248 | 440298.77 | 1000.38 | 442168 | 440017.73 | 1284.1 |
| | | 2op | 442724 | 440207.5 | 1196.29 | 442229 | 440472.27 | 970.86 | 442230 | 440378.2 | 802.1 | 442703 | 440406.13 | 926.76 |
| 51 | 20 | rnd | 442064 | 440523.67 | 769.79 | 442276 | 440395.37 | 1182.84 | 442205 | 440483.5 | 1061.64 | 443089 | 440425.9 | 1335.76 |
| | | 2op | 441822 | 440119.2 | 924.99 | 442761 | 440633.93 | 919.19 | 442670 | 440612.77 | 979.21 | 442414 | 440785.23 | 887 |
| | 50 | rnd | 442389 | 440339.17 | 1024.29 | 442184 | 440458 | 1051.48 | 442192 | 440387.6 | 744.89 | 442127 | 440519.73 | 1061.12 |
| | | 2op | 442039 | 440508 | 1029.32 | 442416 | 440337.03 | 1172.45 | 442719 | 440818.07 | 948.45 | 442789 | 440663.4 | 1061.58 |

Table A.2030: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441770 | 439412.5 | 1119.81 | 441772 | 439385 | 1240.53 | 441220 | 439146.83 | 1236.72 | 442130 | 440163.37 | 1068.97 |
| | | 2op | 439342 | 438556.07 | 360.37 | 439871 | 438819.33 | 569.32 | 441170 | 439165.1 | 669.63 | 441764 | 440277.43 | 829.9 |
| | 50 | rnd | 441369 | 439360.7 | 970.13 | 442050 | 439369.43 | 1122.41 | 441952 | 439335.17 | 1237.72 | 441565 | 439481.5 | 862.71 |
| | | 2op | 439760 | 438495.13 | 518.71 | 439473 | 438390.77 | 452.79 | 440142 | 439008.63 | 650.56 | 441467 | 439889.73 | 876.39 |
| 51 | 20 | rnd | 442115 | 439170.17 | 1311.55 | 441375 | 439305.83 | 1392.65 | 441510 | 438875.23 | 1179.53 | 441578 | 439366.1 | 1332.1 |
| | | 2op | 439117 | 438360.6 | 442.56 | 439662 | 438422.37 | 603.98 | 440177 | 438791.67 | 658.98 | 441265 | 439472.07 | 667.46 |
| | 50 | rnd | 441926 | 439382.5 | 1077.72 | 442227 | 439187.4 | 1205.16 | 441841 | 439525.77 | 1015.83 | 441069 | 439152.37 | 1245.47 |
| | | 2op | 439040 | 438266.63 | 385.98 | 439017 | 438334.13 | 365.44 | 439711 | 438528.53 | 582.98 | 440649 | 439224.27 | 665.07 |

Table A.2031: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 442268 | 440331.23 | 1005.24 | 440223 | 438748.57 | 1058.61 | 441095 | 438879.47 | 1143.46 | 442190 | 438669.87 | 1383.77 |
| | | 2op | 441656 | 439947.67 | 785.49 | 440806 | 438438.57 | 1412.15 | 441857 | 439184.2 | 1367.15 | 440208 | 438466.83 | 1021.11 |
| | 50 | rnd | 442564 | 440165.53 | 1205.18 | 441508 | 438779.23 | 1426.55 | 441263 | 438970.77 | 1022.29 | 440858 | 438839.07 | 826.82 |
| | | 2op | 441517 | 440151.17 | 1037.72 | 440223 | 438355.53 | 1277.08 | 441148 | 438739.17 | 1366.47 | 441549 | 438891.53 | 1158.3 |
| 51 | 20 | rnd | 442363 | 440213.07 | 968.89 | 441771 | 439189.63 | 1372.68 | 440614 | 439130.73 | 931.91 | 440509 | 438648.87 | 1000.08 |
| | | 2op | 440772 | 439457.87 | 637.75 | 440970 | 439463.57 | 910.78 | 441779 | 438736.57 | 1407.3 | 442087 | 439039.63 | 1215.86 |
| | 50 | rnd | 442689 | 440208.43 | 1131.23 | 441213 | 439111.63 | 1338.92 | 441525 | 438974.87 | 1481.46 | 441045 | 438747.87 | 1229.23 |
| | | 2op | 441962 | 440012.57 | 783.91 | 441148 | 439021.37 | 1177.22 | 441304 | 438522.37 | 1347.11 | 441682 | 438682.73 | 1343.14 |

Table A.2032: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440746 | 439040.93 | 1241.95 | 440462 | 438703.1 | 1172.44 | 441216 | 438997.57 | 1261.68 | 440563 | 438699.8 | 1356.11 |
| | | 2op | 439101 | 438340.83 | 384.91 | 441247 | 439096.07 | 1400.47 | 441057 | 439188.1 | 903.68 | 440779 | 438671.07 | 1342.77 |
| | 50 | rnd | 441262 | 439283.43 | 1150.05 | 440555 | 439210.4 | 1016.46 | 441216 | 439152.13 | 1255.74 | 440486 | 438413.77 | 1138.32 |
| | | 2op | 439515 | 438361.97 | 397.52 | 441059 | 439518.63 | 1001.05 | 441406 | 439131.83 | 1219.92 | 441271 | 438734.9 | 1109.58 |
| 51 | 20 | rnd | 441626 | 439398.77 | 1229.53 | 441899 | 439304.27 | 1261.63 | 440856 | 439085.6 | 1101.11 | 441212 | 439132.63 | 1353.49 |
| | | 2op | 439298 | 438319.93 | 393.25 | 441037 | 438891.37 | 1141.82 | 441760 | 438912.33 | 1335.36 | 440401 | 438397.93 | 1061.67 |
| | 50 | rnd | 441146 | 439291.83 | 1180.87 | 442101 | 440148.77 | 1022.94 | 441181 | 439287.47 | 1106.96 | 440643 | 438832.9 | 772.88 |
| | | 2op | 439101 | 438232.5 | 332.15 | 442760 | 440147.03 | 860.43 | 441181 | 438734.57 | 1070.19 | 440640 | 438892.73 | 1220.93 |

Table A.2033: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115944 | 115297.1 | 448.83 | 116241 | 115343.53 | 562.03 | 116224 | 115399.53 | 455.27 | 116159 | 115467.63 | 418.99 |
| | | 2op | 116348 | 115627.13 | 375.2 | 116286 | 115767.3 | 349.93 | 116229 | 115437.07 | 378.02 | 116317 | 115728.77 | 355.79 |
| | 50 | rnd | 115972 | 115327.1 | 337.69 | 116236 | 115467.7 | 307.71 | 116100 | 115425.87 | 454.48 | 116287 | 115187.83 | 354.27 |
| | | 2op | 116107 | 115349.53 | 393.35 | 116292 | 115531.93 | 340.11 | 116412 | 115661.2 | 415.55 | 116004 | 115587.07 | 386.42 |
| 51 | 20 | rnd | 116050 | 115376.8 | 434.67 | 116133 | 115428.97 | 419.65 | 116213 | 115456.3 | 415.99 | 115997 | 115301.57 | 392.03 |
| | | 2op | 116310 | 115693.43 | 300.9 | 116270 | 115760.3 | 299.12 | 116345 | 115760.53 | 311.84 | 116083 | 115698.07 | 256.2 |
| | 50 | rnd | 116317 | 115515.77 | 499.9 | 116276 | 115462.77 | 464.65 | 116123 | 115402.6 | 379.42 | 116101 | 115496.8 | 375.44 |
| | | 2op | 116391 | 115748.07 | 365.12 | 116175 | 115711.53 | 336.38 | 116431 | 115756.4 | 405.89 | 116191 | 115644.1 | 324.91 |

Table A.2034: *j02459_7*: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 116017 | 115177.67 | 438.12 | 115820 | 115002.9 | 454.18 | 116310 | 115210.2 | 479.11 | 115652 | 115145.93 | 374.31 |
| | | 2op | 116365 | 115684.8 | 248.55 | 116075 | 115582.27 | 280.94 | 116325 | 115669.17 | 290.02 | 116177 | 115723.8 | 309.17 |
| | 50 | rnd | 115821 | 115048.93 | 474.29 | 115872 | 115009.4 | 457.49 | 116167 | 115224.17 | 433.47 | 116475 | 115408.7 | 451.32 |
| | | 2op | 115987 | 115586.63 | 235.83 | 116078 | 115658.4 | 275.76 | 116011 | 115542.83 | 233.81 | 116126 | 115663.03 | 286.36 |
| 51 | 20 | rnd | 116242 | 115031.1 | 658.33 | 116434 | 115442 | 401.29 | 115679 | 114903.07 | 402.06 | 116247 | 115294.57 | 350.09 |
| | | 2op | 115990 | 115563.23 | 191.17 | 116487 | 115768.3 | 254.11 | 116041 | 115587.97 | 262.37 | 115977 | 115590.53 | 172.55 |
| | 50 | rnd | 116066 | 115119.6 | 471.17 | 116299 | 115423.2 | 584.08 | 116243 | 115145.03 | 484.3 | 115799 | 115008 | 475.86 |
| | | 2op | 115921 | 115576.53 | 191.96 | 116452 | 115845.33 | 172.17 | 116196 | 115547.17 | 256.05 | 116078 | 115597.17 | 222.37 |

Table A.2035: *j02459_7*: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115996 | 115341.73 | 422.29 | 115998 | 115344.2 | 420.7 | 116091 | 115456.53 | 396.98 | 116303 | 115412.8 | 485.38 |
| | | 2op | 116354 | 115604.67 | 376.95 | 116294 | 115469.53 | 413.91 | 116305 | 115424 | 401.95 | 116167 | 115472.9 | 406.62 |
| | 50 | rnd | 116228 | 115391.4 | 466.15 | 115996 | 115140.03 | 542.34 | 115933 | 115260.63 | 415.47 | 115968 | 115379.6 | 363.54 |
| | | 2op | 116328 | 115527.4 | 412.82 | 116247 | 115477.97 | 454.74 | 116438 | 115351.17 | 454.53 | 116040 | 115498.37 | 325.74 |
| 51 | 20 | rnd | 116069 | 115441.5 | 390.16 | 116323 | 115445.07 | 600.73 | 116404 | 115443.53 | 493.71 | 116227 | 115442.53 | 437.5 |
| | | 2op | 116313 | 115720.3 | 410.82 | 116211 | 115716.47 | 339.28 | 116272 | 115628.5 | 325.09 | 116263 | 115681.13 | 368.81 |
| | 50 | rnd | 116045 | 115475.53 | 393.37 | 116432 | 115530 | 422.38 | 116356 | 115418.27 | 415.29 | 116282 | 115382.67 | 507.4 |
| | | 2op | 116424 | 115714.3 | 305.48 | 116424 | 115643.1 | 363.36 | 116244 | 115718.7 | 346.62 | 116405 | 115774.27 | 325.73 |

Table A.2036: *j02459_7*: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 116006 | 115168.5 | 440.18 | 116087 | 115262.33 | 494.64 | 116011 | 115319.1 | 434.37 | 116277 | 115358.4 | 480.45 |
| | | 2op | 116083 | 115648.27 | 181.65 | 116006 | 115562.23 | 235.57 | 116110 | 115516.37 | 306.77 | 116233 | 115727.87 | 329.55 |
| | 50 | rnd | 116055 | 115067.9 | 497.79 | 115943 | 115280.03 | 437.19 | 116411 | 115132.1 | 474.26 | 116099 | 115144.83 | 533.97 |
| | | 2op | 116187 | 115603.07 | 232 | 116139 | 115604.37 | 259.02 | 116047 | 115487.97 | 266.85 | 116298 | 115725.1 | 330.61 |
| 51 | 20 | rnd | 116017 | 115154.1 | 585.31 | 116047 | 115333.13 | 481.44 | 115774 | 115114.67 | 390.8 | 116247 | 115243.9 | 542.17 |
| | | 2op | 116082 | 115608.03 | 259.67 | 116178 | 115822.1 | 220.27 | 116162 | 115585.53 | 235.23 | 116001 | 115660.8 | 219.39 |
| | 50 | rnd | 116044 | 115153.33 | 526.21 | 116296 | 115619.8 | 395.46 | 116080 | 115132.93 | 527.16 | 116009 | 115128.97 | 453.25 |
| | | 2op | 116327 | 115667.53 | 228.51 | 116487 | 115834.23 | 207.38 | 116082 | 115571.93 | 243.17 | 116038 | 115527.3 | 276.39 |

Table A.2037: *j*02459_7: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115990 | 115371.07 | 339.66 | 116095 | 114855.77 | 698.99 | 116016 | 114857.57 | 519.14 | 115739 | 114933.1 | 519.52 |
| | | 2op | 116302 | 115690.3 | 339.27 | 115758 | 114786.6 | 554.4 | 115947 | 114925.37 | 566.58 | 116028 | 114879.07 | 657.77 |
| | 50 | rnd | 115914 | 115295.17 | 339.69 | 115841 | 114747.8 | 639.14 | 115766 | 114850.97 | 524.23 | 115865 | 114797.2 | 512.37 |
| | | 2op | 116298 | 115767.93 | 305.42 | 115575 | 114838.77 | 444.56 | 115896 | 114885.63 | 565.25 | 115780 | 114948.4 | 516.33 |
| 51 | 20 | rnd | 116241 | 115447.07 | 426.89 | 115972 | 114892.87 | 572.19 | 115892 | 114890.53 | 505.92 | 116036 | 114788.93 | 723.41 |
| | | 2op | 116383 | 115748.73 | 277.31 | 115933 | 114990.27 | 515.52 | 115663 | 114858.93 | 671.51 | 116290 | 114964.27 | 527.14 |
| | 50 | rnd | 116147 | 115503.13 | 350.67 | 116049 | 114963.37 | 473.19 | 115998 | 115058.27 | 487.82 | 115835 | 114680.73 | 541.72 |
| | | 2op | 116442 | 115945.9 | 256.63 | 115790 | 114863.93 | 504.69 | 116284 | 115173.77 | 473.78 | 115930 | 115000.97 | 563.83 |

Table A.2038: *j*02459_7: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115930 | 115118.9 | 398.45 | 115956 | 114885.87 | 509.08 | 115810 | 114826.77 | 479.09 | 115876 | 114720.97 | 646.14 |
| | | 2op | 116352 | 115640.07 | 276.99 | 116039 | 115044.23 | 585.65 | 116211 | 114941.43 | 560.73 | 115890 | 114854.6 | 490.6 |
| | 50 | rnd | 115846 | 115171.67 | 370.73 | 115999 | 115189.63 | 428.33 | 115837 | 115043.37 | 435.17 | 115803 | 115028.8 | 408.25 |
| | | 2op | 116018 | 115647.43 | 224.72 | 116240 | 115246.53 | 661.85 | 116190 | 114987.7 | 520.52 | 116017 | 114881.27 | 719.72 |
| 51 | 20 | rnd | 116116 | 115195.97 | 524.34 | 116123 | 115077.47 | 563.55 | 116066 | 115032.87 | 499.25 | 115807 | 115003.07 | 475.69 |
| | | 2op | 116038 | 115643.2 | 219.92 | 115709 | 115027.33 | 427.92 | 116000 | 115101.7 | 512.37 | 115845 | 114937.77 | 493.16 |
| | 50 | rnd | 116171 | 115112.43 | 551.37 | 116261 | 115450.37 | 420.36 | 116139 | 114992.47 | 542.49 | 116026 | 114961.57 | 553.08 |
| | | 2op | 116091 | 115686.87 | 210.99 | 116178 | 115572.63 | 353.09 | 116201 | 114903.3 | 539.92 | 116055 | 114974.7 | 607.45 |

Table A.2039: *j*02459_7: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38560 | 38331.5 | 150.18 | 38591 | 38238.23 | 203.63 | 38585 | 38296.3 | 176.58 | 38527 | 38268.13 | 168.14 |
| | | 2op | 38552 | 38278.47 | 201.49 | 38505 | 38293.03 | 143 | 38547 | 38315.1 | 163.83 | 38507 | 38208.2 | 122.91 |
| | 50 | rnd | 38570 | 38311.47 | 189.3 | 38681 | 38294.23 | 202.74 | 38660 | 38265.53 | 225 | 38531 | 38189.97 | 214.54 |
| | | 2op | 38576 | 38348.37 | 125.09 | 38569 | 38337.47 | 154.86 | 38530 | 38338.6 | 171.18 | 38547 | 38271.93 | 144.41 |
| 51 | 20 | rnd | 38645 | 38325.57 | 157.63 | 38624 | 38334.4 | 174.31 | 38652 | 38335.33 | 194.7 | 38630 | 38361.27 | 161.95 |
| | | 2op | 38530 | 38365.4 | 97.71 | 38511 | 38361.7 | 77.84 | 38569 | 38403.6 | 104.44 | 38584 | 38329.63 | 146.63 |
| | 50 | rnd | 38538 | 38321.87 | 127.58 | 38683 | 38377.73 | 139.06 | 38666 | 38378.7 | 167.19 | 38672 | 38320.97 | 169.81 |
| | | 2op | 38550 | 38377.4 | 87.86 | 38620 | 38349.67 | 111.05 | 38526 | 38297.77 | 132.35 | 38562 | 38311.93 | 149.96 |

Table A.2040: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38562 | 38309.93 | 163.45 | 38629 | 38420.6 | 132.68 | 38581 | 38346.9 | 163.88 | 38654 | 38356.87 | 166.64 |
| | | 2op | 38418 | 38369.6 | 63.43 | 38437 | 38414.6 | 12.1 | 38557 | 38397.27 | 89.75 | 38682 | 38406.77 | 126.12 |
| | 50 | rnd | 38665 | 38290.63 | 211.15 | 38636 | 38401.13 | 179.25 | 38642 | 38293.2 | 200.25 | 38664 | 38369.4 | 149.31 |
| | | 2op | 38414 | 38390.4 | 45.55 | 38442 | 38426.7 | 14.96 | 38538 | 38420.67 | 50.38 | 38587 | 38446.3 | 93.08 |
| 51 | 20 | rnd | 38566 | 38326.23 | 158.73 | 38694 | 38428.67 | 142.94 | 38650 | 38409.73 | 115.55 | 38684 | 38292.73 | 236.6 |
| | | 2op | 38437 | 38390.2 | 51.63 | 38442 | 38429.93 | 13.63 | 38520 | 38414.13 | 24.61 | 38557 | 38421.27 | 65.81 |
| | 50 | rnd | 38681 | 38313.93 | 204.16 | 38690 | 38440.33 | 161.51 | 38685 | 38395.7 | 160.53 | 38616 | 38310.4 | 159.16 |
| | | 2op | 38432 | 38387.6 | 50.47 | 38442 | 38437.27 | 9.99 | 38529 | 38417.83 | 24.62 | 38524 | 38414.03 | 61.6 |

Table A.2041: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38630 | 38324.8 | 223.05 | 38644 | 38313.67 | 170.12 | 38678 | 38308.53 | 187.2 | 38589 | 38260.13 | 234.15 |
| | | 2op | 38541 | 38329.43 | 137.94 | 38552 | 38279.3 | 174.27 | 38592 | 38340.8 | 168.83 | 38444 | 38184.53 | 162.31 |
| | 50 | rnd | 38653 | 38301.13 | 158.92 | 38652 | 38328.77 | 173.98 | 38612 | 38336.4 | 186.98 | 38579 | 38226.97 | 210.14 |
| | | 2op | 38504 | 38303.53 | 147.16 | 38684 | 38319.1 | 197.01 | 38507 | 38265.3 | 153.02 | 38570 | 38272.93 | 196.31 |
| 51 | 20 | rnd | 38627 | 38382.63 | 166.41 | 38535 | 38362.53 | 123.53 | 38538 | 38276.03 | 198.08 | 38503 | 38287.67 | 114.86 |
| | | 2op | 38511 | 38360.7 | 89.45 | 38507 | 38384.93 | 57.98 | 38545 | 38348.6 | 132.28 | 38571 | 38340.73 | 148.29 |
| | 50 | rnd | 38618 | 38338.9 | 162.63 | 38610 | 38397.87 | 135.77 | 38622 | 38333.4 | 167.66 | 38633 | 38336.67 | 185.33 |
| | | 2op | 38556 | 38387.9 | 94.14 | 38491 | 38363.37 | 77.29 | 38582 | 38378.87 | 111.03 | 38562 | 38353.73 | 147.25 |

Table A.2042: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38663 | 38370.77 | 182.77 | 38681 | 38447.07 | 145.99 | 38679 | 38235.33 | 284.02 | 38679 | 38309.83 | 188.5 |
| | | 2op | 38437 | 38378 | 66.17 | 38532 | 38420.5 | 25.27 | 38519 | 38392.43 | 69.09 | 38543 | 38404.5 | 100.8 |
| | 50 | rnd | 38509 | 38280.87 | 152.62 | 38681 | 38423.07 | 181.85 | 38639 | 38387.97 | 149.84 | 38634 | 38371.83 | 192.75 |
| | | 2op | 38414 | 38381.07 | 55.6 | 38442 | 38427.63 | 14.96 | 38552 | 38404.13 | 53.47 | 38551 | 38392.6 | 106.07 |
| 51 | 20 | rnd | 38635 | 38350.67 | 169.92 | 38634 | 38449.2 | 108.88 | 38630 | 38357.87 | 165.64 | 38569 | 38300.4 | 174.13 |
| | | 2op | 38441 | 38396.47 | 47.5 | 38442 | 38426.37 | 13.93 | 38442 | 38410.1 | 14.4 | 38533 | 38427.03 | 60.56 |
| | 50 | rnd | 38662 | 38320.27 | 193.2 | 38635 | 38444.7 | 121.29 | 38644 | 38429.73 | 127.24 | 38655 | 38343.2 | 185.37 |
| | | 2op | 38414 | 38384.17 | 55.13 | 38442 | 38433.63 | 11.66 | 38442 | 38417.33 | 15.47 | 38557 | 38407 | 76.63 |

Table A.2043: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38642 | 38395.6 | 133.56 | 38590 | 38198.03 | 191.5 | 38543 | 38221.77 | 160.51 | 38634 | 38191.2 | 254.32 |
| | | 2op | 38482 | 38394.4 | 51.63 | 38551 | 38213.63 | 185.63 | 38504 | 38192.5 | 202.2 | 38518 | 38246.63 | 161.81 |
| | 50 | rnd | 38636 | 38369.8 | 121.53 | 38553 | 38204.17 | 215.66 | 38674 | 38131.9 | 242.85 | 38447 | 38189.2 | 156.22 |
| | | 2op | 38504 | 38393.63 | 52.72 | 38633 | 38140.67 | 310.8 | 38558 | 38167.3 | 269.31 | 38662 | 38191.53 | 203.64 |
| 51 | 20 | rnd | 38604 | 38365.43 | 145.84 | 38557 | 38159.13 | 202.76 | 38622 | 38148.93 | 239.2 | 38653 | 38190.33 | 171.45 |
| | | 2op | 38442 | 38425.17 | 13.49 | 38575 | 38144.47 | 243.61 | 38531 | 38157.63 | 154.5 | 38667 | 38206.97 | 171.49 |
| | 50 | rnd | 38572 | 38375.83 | 163.34 | 38635 | 38263.97 | 195.07 | 38576 | 38168.83 | 190.82 | 38611 | 38178.9 | 251.32 |
| | | 2op | 38442 | 38434 | 12.27 | 38612 | 38160 | 192.98 | 38512 | 38169 | 205.48 | 38401 | 38128 | 173.91 |

Table A.2044: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38683 | 38355.23 | 162.95 | 38637 | 38258.43 | 219.62 | 38574 | 38261.23 | 187.82 | 38552 | 38204.7 | 207.52 |
| | | 2op | 38414 | 38405.87 | 6.42 | 38481 | 38123.67 | 183.4 | 38684 | 38200.2 | 231.71 | 38562 | 38213.7 | 208.8 |
| | 50 | rnd | 38695 | 38393.23 | 156.29 | 38614 | 38320.7 | 177.5 | 38669 | 38223.47 | 254.73 | 38660 | 38225.8 | 220.97 |
| | | 2op | 38432 | 38410.9 | 5.97 | 38514 | 38221.3 | 216.27 | 38565 | 38157.43 | 247.67 | 38532 | 38200.6 | 220.52 |
| 51 | 20 | rnd | 38636 | 38375.5 | 140.32 | 38681 | 38265.2 | 223.8 | 38535 | 38229.4 | 216.52 | 38572 | 38225.67 | 226.18 |
| | | 2op | 38437 | 38414.2 | 11.4 | 38592 | 38254.03 | 204.99 | 38653 | 38208.33 | 195.48 | 38689 | 38123.2 | 295.45 |
| | 50 | rnd | 38652 | 38400.07 | 122.41 | 38626 | 38419.87 | 156.09 | 38538 | 38243.4 | 204.27 | 38552 | 38177.4 | 203.76 |
| | | 2op | 38437 | 38411.47 | 6.59 | 38580 | 38422.8 | 85.72 | 38435 | 38144.9 | 219.81 | 38586 | 38196.17 | 210.97 |

Table A.2045: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47957 | 47644.53 | 193.34 | 48019 | 47679.67 | 179.95 | 48018 | 47636.07 | 217.79 | 47977 | 47685.6 | 194.61 |
| | | 2op | 47888 | 47661.33 | 162.64 | 47852 | 47655.37 | 182.62 | 47819 | 47608.27 | 196.9 | 47843 | 47563.9 | 227.22 |
| | 50 | rnd | 48050 | 47722.9 | 231.1 | 47977 | 47692.2 | 174.95 | 48018 | 47637.77 | 220.79 | 47901 | 47619.3 | 190.04 |
| | | 2op | 47837 | 47617.2 | 172.8 | 47837 | 47629.9 | 169.18 | 47830 | 47613.93 | 186.02 | 47803 | 47584.33 | 177.31 |
| 51 | 20 | rnd | 47912 | 47601.63 | 237.38 | 47918 | 47647.67 | 210.77 | 47947 | 47682.23 | 137.18 | 47946 | 47677.27 | 181.57 |
| | | 2op | 47830 | 47635.93 | 151.03 | 47830 | 47635.37 | 156.98 | 47878 | 47673.6 | 127.67 | 47814 | 47632.67 | 164.02 |
| | 50 | rnd | 47948 | 47635.8 | 191.14 | 47949 | 47679.57 | 195.04 | 48021 | 47677.9 | 193.34 | 47864 | 47613.23 | 174.1 |
| | | 2op | 47814 | 47648.33 | 120.21 | 47814 | 47640.4 | 149.55 | 47961 | 47635.57 | 192.99 | 47830 | 47653.17 | 125.53 |

Table A.2046: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47887 | 47668.13 | 177.16 | 47961 | 47614.57 | 226.7 | 47977 | 47685.23 | 215.06 | 47958 | 47605.43 | 207.68 |
| | | 2op | 47758 | 47561.93 | 196.69 | 47758 | 47748.93 | 9.76 | 47960 | 47599.4 | 186.92 | 47951 | 47646.87 | 162.78 |
| | 50 | rnd | 48052 | 47585.3 | 267.38 | 47976 | 47691.67 | 209.51 | 47860 | 47598.5 | 211.79 | 47943 | 47647.73 | 185.01 |
| | | 2op | 47758 | 47558.13 | 182.44 | 47758 | 47756.47 | 3.64 | 47819 | 47574.57 | 180.47 | 47924 | 47617.63 | 195.59 |
| 51 | 20 | rnd | 47934 | 47585.63 | 242.77 | 47977 | 47716.77 | 167.2 | 47958 | 47617.57 | 288.57 | 47943 | 47650.17 | 244.34 |
| | | 2op | 47758 | 47586.27 | 176.39 | 47758 | 47757.4 | 1.22 | 47758 | 47664.83 | 146.24 | 47798 | 47593.6 | 174.62 |
| | 50 | rnd | 47864 | 47498.3 | 244.8 | 47943 | 47612.63 | 239.93 | 47974 | 47612.73 | 231.18 | 47897 | 47558.87 | 215.56 |
| | | 2op | 47758 | 47519.23 | 163.37 | 47758 | 47756.9 | 1.47 | 47758 | 47745.07 | 11.91 | 47793 | 47478.5 | 155.83 |

Table A.2047: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48034 | 47670.9 | 195.95 | 47948 | 47699.93 | 170.42 | 48026 | 47705.03 | 192.6 | 48021 | 47668.73 | 190.33 |
| | | 2op | 47776 | 47622.63 | 121.63 | 47892 | 47640.07 | 186.44 | 47852 | 47641.97 | 141.24 | 47821 | 47612.8 | 165.27 |
| | 50 | rnd | 48052 | 47582.47 | 280.39 | 47961 | 47722.13 | 159.79 | 47976 | 47655.37 | 218.54 | 48036 | 47651.9 | 193.61 |
| | | 2op | 47830 | 47679 | 145.71 | 47830 | 47599.3 | 151.1 | 48032 | 47641.67 | 162.26 | 47830 | 47520.43 | 198.6 |
| 51 | 20 | rnd | 47977 | 47666.4 | 210.02 | 47924 | 47676.73 | 202.98 | 48048 | 47705.3 | 206.11 | 48002 | 47634.1 | 176.79 |
| | | 2op | 47810 | 47666.33 | 111.16 | 47930 | 47670.9 | 125.56 | 47814 | 47651.03 | 107.5 | 47814 | 47604.4 | 128.17 |
| | 50 | rnd | 47960 | 47688.47 | 184.07 | 47973 | 47649.63 | 242.28 | 47949 | 47694.43 | 181.86 | 48022 | 47704.7 | 194.81 |
| | | 2op | 47852 | 47709.7 | 102.94 | 47830 | 47661 | 122.71 | 47814 | 47690.67 | 84.67 | 47924 | 47612.2 | 143.63 |

Table A.2048: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47923 | 47606.6 | 228.31 | 48030 | 47647.57 | 224.32 | 47939 | 47606.67 | 231.03 | 47974 | 47656.8 | 195.23 |
| | | 2op | 47758 | 47627.1 | 164.19 | 47758 | 47738.7 | 53.01 | 47758 | 47589.97 | 161.44 | 47960 | 47646.53 | 142.76 |
| | 50 | rnd | 47830 | 47514.73 | 281.53 | 47923 | 47637.73 | 211.47 | 48002 | 47597.97 | 271.3 | 48019 | 47687.33 | 222.89 |
| | | 2op | 47758 | 47536.6 | 189.34 | 47758 | 47757 | 1.98 | 47798 | 47598 | 166.29 | 47758 | 47574.27 | 135.72 |
| 51 | 20 | rnd | 48052 | 47614.47 | 261.78 | 47978 | 47683.53 | 227.66 | 47968 | 47668.13 | 178.03 | 47941 | 47648.73 | 185.86 |
| | | 2op | 47758 | 47525.9 | 175.93 | 47758 | 47757.2 | 1.35 | 47830 | 47627.77 | 177.46 | 47758 | 47583.43 | 167.41 |
| | 50 | rnd | 47877 | 47521 | 236.2 | 47864 | 47611.53 | 192.33 | 48041 | 47643.37 | 262.47 | 47939 | 47636.77 | 209.94 |
| | | 2op | 47758 | 47561.63 | 183.87 | 47758 | 47757.2 | 1.35 | 47758 | 47750.07 | 14.1 | 47758 | 47563.17 | 166.47 |

Table A.2049: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47704.4 | 158.46 | 47885 | 47524.33 | 214.92 | 47829 | 47558.77 | 180.31 | 47872 | 47519.6 | 218.51 |
| | | 2op | 47758 | 47663.7 | 121.22 | 48007 | 47583.2 | 201.86 | 47929 | 47520.53 | 223.95 | 47821 | 47497.03 | 259.93 |
| | 50 | rnd | 48034 | 47746.17 | 189.55 | 47920 | 47519.43 | 277.61 | 47833 | 47499.53 | 273.54 | 47943 | 47529.27 | 271.4 |
| | | 2op | 47821 | 47672.53 | 136.07 | 47832 | 47514.33 | 256.72 | 47828 | 47526.03 | 230.84 | 47818 | 47576 | 204.84 |
| 51 | 20 | rnd | 47972 | 47612.6 | 258.69 | 47957 | 47582.23 | 249.45 | 47879 | 47544.7 | 200.17 | 47978 | 47600.9 | 211.05 |
| | | 2op | 47758 | 47750.1 | 9.82 | 47916 | 47559.87 | 199.78 | 47836 | 47574.43 | 211.58 | 47823 | 47563.53 | 227.91 |
| | 50 | rnd | 47879 | 47632.07 | 205.75 | 47866 | 47603.37 | 202.61 | 47843 | 47458.97 | 258.71 | 47884 | 47536.07 | 229.67 |
| | | 2op | 47758 | 47752.47 | 9.23 | 47830 | 47534.7 | 240.13 | 47821 | 47493.9 | 223.65 | 47835 | 47562.03 | 209.5 |

Table A.2050: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48036 | 47572.5 | 290.64 | 48032 | 47525.5 | 290.17 | 47908 | 47582.1 | 182.23 | 47930 | 47459.97 | 314.01 |
| | | 2op | 47758 | 47596.7 | 170.5 | 47962 | 47586.8 | 178.39 | 47945 | 47574.6 | 234.57 | 47959 | 47600.4 | 237.94 |
| | 50 | rnd | 47973 | 47630.17 | 227.19 | 48039 | 47645.7 | 231.14 | 48052 | 47639.67 | 195.52 | 47872 | 47511.47 | 263.44 |
| | | 2op | 47758 | 47698.13 | 127.58 | 48039 | 47665.37 | 168.47 | 47836 | 47498.73 | 227.25 | 47827 | 47534.93 | 216.32 |
| 51 | 20 | rnd | 47961 | 47642.77 | 269.05 | 47998 | 47630.53 | 253.21 | 47913 | 47569.1 | 263.25 | 47956 | 47591.9 | 233.7 |
| | | 2op | 47758 | 47741.87 | 61.61 | 47948 | 47579.2 | 224.9 | 47947 | 47669.27 | 184.46 | 47951 | 47565.93 | 186.58 |
| | 50 | rnd | 48052 | 47631.8 | 192.62 | 47939 | 47675.8 | 189.9 | 47959 | 47613.17 | 230.97 | 48023 | 47612.07 | 256.52 |
| | | 2op | 47758 | 47741.23 | 61.51 | 47885 | 47687.37 | 112.37 | 47976 | 47620.93 | 203.16 | 48036 | 47565.83 | 256.14 |

Table A.2051: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55116 | 54613.07 | 263.15 | 55051 | 54594.6 | 317.31 | 54978 | 54554.5 | 265.06 | 55002 | 54558.57 | 272.82 |
| | | 2op | 55058 | 54630.33 | 181.47 | 54970 | 54629.7 | 204.63 | 55055 | 54647.27 | 178.35 | 55152 | 54580.1 | 249.35 |
| | 50 | rnd | 55093 | 54520.6 | 345.48 | 55086 | 54644.83 | 243.92 | 55047 | 54606.63 | 280.75 | 55106 | 54610.3 | 341.31 |
| | | 2op | 55004 | 54592.63 | 269.93 | 54907 | 54640.03 | 227.46 | 54983 | 54655.37 | 271.39 | 54997 | 54641 | 180.42 |
| 51 | 20 | rnd | 54970 | 54574.77 | 284.37 | 55169 | 54510.43 | 301.08 | 55075 | 54576.83 | 217.57 | 55057 | 54536.83 | 277.58 |
| | | 2op | 54932 | 54640.83 | 144.27 | 54932 | 54623.77 | 157.99 | 55028 | 54693.33 | 146.13 | 54950 | 54730.13 | 140.13 |
| | 50 | rnd | 54942 | 54613.63 | 226.56 | 55095 | 54682.3 | 255.86 | 54935 | 54562.27 | 256.64 | 55148 | 54562.13 | 299.24 |
| | | 2op | 54967 | 54683.27 | 139.97 | 54942 | 54639.07 | 140.67 | 54942 | 54629.33 | 163.01 | 54930 | 54712.9 | 189.79 |

Table A.2052: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54793 | 54328.47 | 247.58 | 55072 | 54564.03 | 383.69 | 54960 | 54546.87 | 247.74 | 54946 | 54480.53 | 278.04 |
| | | 2op | 54753 | 54724.47 | 28.51 | 54919 | 54739.03 | 55.96 | 54959 | 54753.2 | 115.33 | 54956 | 54711.03 | 176.2 |
| | 50 | rnd | 54895 | 54460.1 | 319.08 | 55002 | 54605.67 | 274.62 | 54998 | 54449.17 | 407.62 | 54970 | 54556.37 | 237.13 |
| | | 2op | 54939 | 54736.03 | 43.04 | 54756 | 54746.9 | 5.76 | 54942 | 54737.33 | 86.85 | 54891 | 54709.63 | 99.06 |
| 51 | 20 | rnd | 55010 | 54426.13 | 307.79 | 55020 | 54701.1 | 224.15 | 55170 | 54525.7 | 248.39 | 55038 | 54550.37 | 298.77 |
| | | 2op | 54754 | 54725.3 | 30.29 | 54771 | 54750.4 | 7.41 | 54921 | 54727.07 | 67.56 | 55071 | 54757.83 | 131.64 |
| | 50 | rnd | 54961 | 54531.8 | 238.89 | 55018 | 54727.2 | 223.87 | 55010 | 54442 | 374.24 | 54787 | 54427.73 | 244.63 |
| | | 2op | 54754 | 54736.17 | 20.39 | 54754 | 54751.13 | 4.65 | 54959 | 54746.5 | 70.76 | 54983 | 54755.77 | 115.28 |

Table A.2053: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55135 | 54595.4 | 262.93 | 54969 | 54585.57 | 257.38 | 55021 | 54593.37 | 270.25 | 54860 | 54483.73 | 295.05 |
| | | 2op | 55082 | 54600.43 | 264.09 | 54968 | 54620.5 | 223.33 | 55071 | 54714.43 | 165.93 | 54938 | 54630.4 | 225.47 |
| | 50 | rnd | 54935 | 54531.73 | 286.32 | 55071 | 54533.2 | 321.09 | 54993 | 54590.73 | 242.52 | 55087 | 54567.1 | 266.19 |
| | | 2op | 55071 | 54616.9 | 218.61 | 55119 | 54568.53 | 241.93 | 54964 | 54655.53 | 227.72 | 55005 | 54610.67 | 206.13 |
| 51 | 20 | rnd | 55096 | 54570.2 | 300.97 | 55037 | 54543.8 | 306.87 | 55025 | 54571.57 | 289.32 | 55154 | 54527.93 | 306.26 |
| | | 2op | 54939 | 54613.47 | 240.92 | 54939 | 54646.3 | 197.9 | 55018 | 54671.2 | 169.7 | 55033 | 54677.53 | 214.11 |
| | 50 | rnd | 55038 | 54638.1 | 252.02 | 55035 | 54646.13 | 281.68 | 54964 | 54568.27 | 289.1 | 55155 | 54641.73 | 264.27 |
| | | 2op | 54905 | 54610.6 | 203.95 | 55130 | 54687.33 | 205.66 | 54957 | 54612.4 | 214.34 | 54938 | 54622.53 | 234.66 |

Table A.2054: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55013 | 54437.77 | 323.58 | 55017 | 54627.3 | 245.42 | 54856 | 54514.87 | 254.4 | 54968 | 54591.37 | 244.48 |
| | | 2op | 54959 | 54737.67 | 65.72 | 54968 | 54767.43 | 78.42 | 54924 | 54726.87 | 99.49 | 54967 | 54718.83 | 154.23 |
| | 50 | rnd | 54901 | 54429.47 | 370.07 | 55044 | 54648.67 | 275.08 | 54880 | 54322.63 | 320.21 | 54971 | 54505.13 | 286.16 |
| | | 2op | 54754 | 54729.83 | 25.63 | 54756 | 54746.27 | 7.52 | 54955 | 54766.4 | 84.15 | 54907 | 54739.97 | 89.79 |
| 51 | 20 | rnd | 54934 | 54444.97 | 292.99 | 55017 | 54680.27 | 241.86 | 55050 | 54467 | 312.1 | 54890 | 54532.1 | 250.69 |
| | | 2op | 54939 | 54721.93 | 63.84 | 54756 | 54748.07 | 8.5 | 54964 | 54745.47 | 108.83 | 54944 | 54732.93 | 115.72 |
| | 50 | rnd | 54974 | 54478.87 | 314.79 | 55133 | 54703.57 | 291.11 | 54972 | 54533.4 | 271.67 | 54960 | 54486.83 | 304.32 |
| | | 2op | 54754 | 54734.47 | 18.15 | 54771 | 54752.47 | 5.61 | 54959 | 54716.83 | 57.1 | 54997 | 54720.5 | 89.99 |

Table A.2055: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55039 | 54646.4 | 233.41 | 54868 | 54367.9 | 275.02 | 54826 | 54393.03 | 294.76 | 54952 | 54422.3 | 356.5 |
| | | 2op | 54989 | 54715.57 | 127.63 | 54853 | 54402.47 | 339.58 | 54814 | 54287.27 | 380.2 | 55164 | 54374.23 | 411.67 |
| | 50 | rnd | 55125 | 54702.1 | 212.6 | 54856 | 54299.87 | 305.43 | 54738 | 54257.53 | 379.76 | 54951 | 54365.1 | 339.62 |
| | | 2op | 54883 | 54667.8 | 125.88 | 54895 | 54337.73 | 357.97 | 55023 | 54400.83 | 328.31 | 55088 | 54385.8 | 424.8 |
| 51 | 20 | rnd | 54981 | 54605.07 | 308.08 | 54941 | 54498.97 | 296.23 | 54909 | 54413.23 | 338.51 | 54874 | 54351.5 | 332.58 |
| | | 2op | 54754 | 54728.9 | 20.14 | 54821 | 54423.33 | 283.23 | 54915 | 54431.07 | 277.43 | 55004 | 54415 | 397.78 |
| | 50 | rnd | 55168 | 54752.47 | 221.93 | 55129 | 54516.43 | 392.14 | 54901 | 54402 | 346.76 | 54931 | 54359.47 | 325.74 |
| | | 2op | 54754 | 54738.9 | 22.33 | 54872 | 54439.73 | 264.13 | 54862 | 54366.53 | 394.38 | 54993 | 54422.53 | 320.02 |

Table A.2056: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54916 | 54462.3 | 417.34 | 54925 | 54486.17 | 257.63 | 55008 | 54400.23 | 356.21 | 55050 | 54435.63 | 352.34 |
| | | 2op | 54754 | 54740.27 | 14.61 | 54896 | 54465.5 | 285.57 | 54933 | 54380.9 | 425.33 | 54994 | 54473.13 | 218.86 |
| | 50 | rnd | 54962 | 54596.3 | 251.39 | 54930 | 54655.77 | 184.48 | 55002 | 54494.73 | 323.56 | 54903 | 54458.43 | 299.18 |
| | | 2op | 54745 | 54742.67 | 7.62 | 54926 | 54590.13 | 186.13 | 54833 | 54504.37 | 277.22 | 54934 | 54443.8 | 276.28 |
| 51 | 20 | rnd | 55119 | 54496.13 | 299.05 | 54987 | 54487.43 | 270.25 | 54980 | 54497.93 | 310.77 | 54952 | 54395.23 | 366.61 |
| | | 2op | 54756 | 54747.9 | 4.49 | 54960 | 54529.77 | 275.1 | 54954 | 54541.43 | 286.23 | 54937 | 54450.47 | 326.7 |
| | 50 | rnd | 54964 | 54584.7 | 245.25 | 54992 | 54726.4 | 174.7 | 54891 | 54529.2 | 299.82 | 54902 | 54307.23 | 412.81 |
| | | 2op | 54754 | 54746.8 | 3.66 | 54932 | 54679.53 | 134.3 | 54876 | 54494.2 | 310.78 | 54921 | 54564.17 | 238.93 |

Table A.2057: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11242.7 | 175.1 | 11478 | 11308.03 | 124.1 | 11478 | 11245.03 | 127.07 | 11478 | 11225 | 149.46 |
| | | 2op | 11411 | 11131.1 | 128.89 | 11411 | 11295.3 | 62.81 | 11346 | 11180.13 | 138.2 | 11346 | 11183.2 | 122.94 |
| | 50 | rnd | 11478 | 11286.1 | 148.15 | 11478 | 11338.13 | 104.33 | 11478 | 11292.23 | 123.47 | 11478 | 11259.97 | 124.9 |
| | | 2op | 11305 | 11138.3 | 102.1 | 11394 | 11292.17 | 61 | 11308 | 11182.57 | 112.14 | 11346 | 11158.8 | 144.67 |
| 51 | 20 | rnd | 11478 | 11207.17 | 155.05 | 11478 | 11262.57 | 129.55 | 11478 | 11264.77 | 129.74 | 11478 | 11226.4 | 144.17 |
| | | 2op | 11346 | 11063.27 | 92.14 | 11305 | 11141.97 | 67.62 | 11373 | 11237.63 | 82.84 | 11346 | 11099 | 99.88 |
| | 50 | rnd | 11478 | 11254.47 | 145.18 | 11478 | 11329.5 | 112.47 | 11478 | 11335.6 | 109.75 | 11478 | 11230.2 | 170.25 |
| | | 2op | 11346 | 11083.97 | 70.95 | 11411 | 11236.5 | 93.2 | 11394 | 11288.73 | 53.43 | 11305 | 11116.53 | 98.9 |

Table A.2058: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11372 | 11166.37 | 180.83 | 11478 | 11276.93 | 100.41 | 11478 | 11290.67 | 158.36 | 11478 | 11242.93 | 158.34 |
| | | 2op | 11109 | 11033.33 | 40.79 | 11285 | 11144.2 | 71.6 | 11109 | 11107.47 | 8.4 | 11305 | 11103.8 | 76.19 |
| | 50 | rnd | 11413 | 11173.3 | 146.44 | 11478 | 11235.73 | 141.51 | 11478 | 11254.03 | 155.97 | 11478 | 11264.97 | 139.18 |
| | | 2op | 11109 | 11027.67 | 35.09 | 11285 | 11156.97 | 74.95 | 11285 | 11131.5 | 58.53 | 11151 | 11071.23 | 49.88 |
| 51 | 20 | rnd | 11411 | 11155.13 | 148.03 | 11478 | 11335.13 | 101.16 | 11478 | 11267.13 | 164.61 | 11478 | 11272.33 | 124.35 |
| | | 2op | 11109 | 11021.07 | 29.05 | 11256 | 11113.9 | 26.84 | 11285 | 11134.47 | 58.12 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11119.73 | 160.4 | 11478 | 11289.93 | 123.35 | 11478 | 11242.43 | 169.44 | 11478 | 11287 | 128.28 |
| | | 2op | 11109 | 11020.6 | 30.71 | 11109 | 11109 | 0 | 11305 | 11165.5 | 82.4 | 11109 | 11109 | 0 |

Table A.2059: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11236.8 | 129.48 | 11478 | 11295 | 117.28 | 11478 | 11273.43 | 132.99 | 11478 | 11185.77 | 176.68 |
| | | 2op | 11348 | 11148.2 | 126.42 | 11394 | 11289.77 | 40.74 | 11346 | 11139.8 | 152.2 | 11411 | 11196.6 | 129.02 |
| | 50 | rnd | 11478 | 11211.97 | 133.72 | 11478 | 11319.7 | 98.29 | 11478 | 11258.63 | 119.45 | 11478 | 11241.63 | 175.45 |
| | | 2op | 11394 | 11159.7 | 132.04 | 11411 | 11273.57 | 66.16 | 11373 | 11218.33 | 100.66 | 11478 | 11135.27 | 147.03 |
| 51 | 20 | rnd | 11478 | 11225.5 | 150.41 | 11478 | 11232.9 | 124.29 | 11478 | 11265.4 | 105.05 | 11478 | 11191.47 | 168.21 |
| | | 2op | 11109 | 11049.2 | 42.11 | 11305 | 11131.4 | 68.33 | 11373 | 11201.4 | 96.36 | 11285 | 11093.47 | 58.82 |
| | 50 | rnd | 11478 | 11262.1 | 170.76 | 11478 | 11329.53 | 120.42 | 11478 | 11337.07 | 98.02 | 11478 | 11294.63 | 123.95 |
| | | 2op | 11478 | 11109.5 | 106.81 | 11373 | 11254.47 | 83.73 | 11373 | 11289.6 | 42.78 | 11346 | 11096.17 | 110.7 |

Table A.2060: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11413 | 11186.03 | 169.57 | 11478 | 11302.2 | 102.8 | 11478 | 11248.87 | 140.32 | 11478 | 11254 | 127.76 |
| | | 2op | 11109 | 11017.53 | 25.78 | 11285 | 11146.2 | 68.94 | 11305 | 11115.53 | 35.78 | 11346 | 11079.67 | 96.03 |
| | 50 | rnd | 11343 | 11113.1 | 200.56 | 11478 | 11256.97 | 140.15 | 11413 | 11247.53 | 111.5 | 11478 | 11274.53 | 113.42 |
| | | 2op | 11109 | 11027.2 | 35.33 | 11305 | 11174.63 | 82.89 | 11285 | 11124.67 | 48.01 | 11346 | 11088.37 | 67.14 |
| 51 | 20 | rnd | 11411 | 11154.5 | 186.11 | 11413 | 11263.07 | 132.91 | 11478 | 11316.33 | 106.72 | 11478 | 11273.53 | 113.52 |
| | | 2op | 11109 | 11022 | 28.67 | 11109 | 11109 | 0 | 11305 | 11132.17 | 60.42 | 11109 | 11109 | 0 |
| | 50 | rnd | 11413 | 11230.27 | 109.03 | 11478 | 11262.4 | 136.1 | 11478 | 11286.13 | 139.69 | 11478 | 11296.7 | 129.29 |
| | | 2op | 11109 | 11022.73 | 33.75 | 11109 | 11109 | 0 | 11285 | 11155.03 | 71.83 | 11109 | 11109 | 0 |

Table A.2061: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11237.8 | 147.52 | 11413 | 11157.27 | 148.5 | 11478 | 11194.87 | 139.92 | 11478 | 11156.5 | 196.46 |
| | | 2op | 11109 | 11082.93 | 41.29 | 11478 | 11154.7 | 190.85 | 11394 | 11138.6 | 172.62 | 11372 | 11112.83 | 161.12 |
| | 50 | rnd | 11478 | 11223.17 | 146.8 | 11411 | 11136.4 | 147.79 | 11353 | 11140.53 | 120.09 | 11478 | 11174.9 | 165.73 |
| | | 2op | 11256 | 11086.6 | 62.95 | 11411 | 11176.23 | 175.96 | 11411 | 11151.03 | 147.27 | 11478 | 11138.3 | 164.41 |
| 51 | 20 | rnd | 11478 | 11244.43 | 134.22 | 11478 | 11229.9 | 165.52 | 11478 | 11166.7 | 195.14 | 11478 | 11213.3 | 166.94 |
| | | 2op | 11109 | 11084.47 | 41.38 | 11305 | 11218.57 | 92.56 | 11332 | 11165.5 | 135.17 | 11353 | 11158.93 | 119.95 |
| | 50 | rnd | 11478 | 11266.07 | 120.34 | 11478 | 11305.87 | 113.19 | 11478 | 11254.43 | 143.54 | 11478 | 11140.33 | 157.41 |
| | | 2op | 11305 | 11114.3 | 51.23 | 11346 | 11234.07 | 138.63 | 11478 | 11225.43 | 125.49 | 11372 | 11157.37 | 107.98 |

Table A.2062: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11413 | 11201.83 | 181.96 | 11478 | 11177.83 | 156.48 | 11478 | 11203.5 | 141.15 | 11478 | 11145.4 | 181.7 |
| | | 2op | 11109 | 11044.6 | 42.88 | 11346 | 11168.33 | 139.84 | 11372 | 11167.7 | 120.68 | 11394 | 11139 | 173 |
| | 50 | rnd | 11394 | 11210.1 | 131.37 | 11478 | 11262.97 | 147.93 | 11478 | 11198 | 139.74 | 11478 | 11175.33 | 195.65 |
| | | 2op | 11109 | 11063 | 46.79 | 11394 | 11158.93 | 102.26 | 11346 | 11130.97 | 144.89 | 11478 | 11127.03 | 198.83 |
| 51 | 20 | rnd | 11413 | 11192.23 | 168.93 | 11478 | 11224 | 132.16 | 11478 | 11200.6 | 153.09 | 11478 | 11182.9 | 146.28 |
| | | 2op | 11109 | 11084.47 | 41.38 | 11478 | 11172.13 | 149.6 | 11318 | 11147.37 | 97.14 | 11372 | 11099.43 | 147.69 |
| | 50 | rnd | 11413 | 11214.83 | 154.25 | 11478 | 11211.7 | 189.53 | 11478 | 11272.57 | 138.62 | 11353 | 11126.9 | 149.23 |
| | | 2op | 11109 | 11084.47 | 41.38 | 11346 | 11105.9 | 92.57 | 11346 | 11129.9 | 122.97 | 11478 | 11107.8 | 202.16 |

Table A.2063: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13889.77 | 132.72 | 14161 | 13989.67 | 118.8 | 14139 | 13915.8 | 121.54 | 14157 | 13920.63 | 117.45 |
| | | 2op | 14038 | 13925.33 | 77.48 | 14157 | 14021.63 | 55.53 | 14095 | 13905.2 | 80.99 | 14100 | 13887.73 | 117.64 |
| | 50 | rnd | 14157 | 13884.87 | 155.95 | 14137 | 13980.13 | 107.23 | 14161 | 13921.7 | 128.19 | 14127 | 13862.47 | 113.62 |
| | | 2op | 14133 | 13923.87 | 104.4 | 14157 | 14069.43 | 67.99 | 14161 | 13953.93 | 73.93 | 14097 | 13898.5 | 103.49 |
| 51 | 20 | rnd | 14133 | 13889.9 | 169.95 | 14157 | 13944.2 | 111.83 | 14161 | 13959.97 | 128.57 | 14139 | 13901.4 | 156.98 |
| | | 2op | 14038 | 13896.7 | 86.95 | 14157 | 14003.77 | 40.99 | 14038 | 13992.17 | 30.31 | 14038 | 13956.8 | 51.97 |
| | 50 | rnd | 14139 | 13885.73 | 169.78 | 14161 | 13993.83 | 115.61 | 14161 | 13984.9 | 129.37 | 14139 | 13881.23 | 155.64 |
| | | 2op | 14038 | 13933.3 | 77.66 | 14157 | 14035.87 | 52.63 | 14157 | 14044.47 | 64.11 | 14038 | 13898.17 | 111.88 |

Table A.2064: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13870 | 159.75 | 14157 | 13984 | 152.63 | 14161 | 13932.37 | 163.57 | 14157 | 13865.7 | 173.72 |
| | | 2op | 13938 | 13774.17 | 61.13 | 14157 | 13979.8 | 46.63 | 13995 | 13972.3 | 22.39 | 14038 | 13879.57 | 112 |
| | 50 | rnd | 14133 | 13866.87 | 179.76 | 14137 | 13948.57 | 127.39 | 14161 | 13990.47 | 125.74 | 14157 | 13936.63 | 138.11 |
| | | 2op | 13938 | 13791.8 | 64.6 | 14157 | 14012.17 | 63.87 | 14038 | 13973.93 | 22 | 14001 | 13877.37 | 111.29 |
| 51 | 20 | rnd | 14161 | 13890.37 | 138.71 | 14161 | 13928.33 | 179 | 14161 | 13973.03 | 140.42 | 14161 | 13958.93 | 129.42 |
| | | 2op | 13938 | 13803.1 | 78.63 | 14064 | 13984.57 | 31.46 | 14038 | 13973.37 | 22.08 | 14038 | 13891.97 | 87.19 |
| | 50 | rnd | 14161 | 13883.53 | 165.87 | 14161 | 13948.7 | 159.84 | 14161 | 14005.67 | 122.05 | 14161 | 13916.57 | 147.72 |
| | | 2op | 13827 | 13756.33 | 50.82 | 14038 | 13964.87 | 27.03 | 14157 | 14010.33 | 45.96 | 13995 | 13918.53 | 69.46 |

Table A.2065: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13877.03 | 183.84 | 14157 | 14001.07 | 108.8 | 14157 | 13879.47 | 138.63 | 14139 | 13861.13 | 141.13 |
| | | 2op | 14038 | 13923.33 | 91.46 | 14157 | 14022.83 | 73.93 | 14121 | 13849.73 | 155.62 | 14088 | 13890.4 | 130.89 |
| | 50 | rnd | 14139 | 13914.97 | 121.37 | 14157 | 14007.7 | 124.93 | 14133 | 13907.3 | 146.77 | 14133 | 13871.87 | 143.46 |
| | | 2op | 14038 | 13943.93 | 62.16 | 14157 | 14064.03 | 64.43 | 14133 | 13902.67 | 118.74 | 14062 | 13854.47 | 136.12 |
| 51 | 20 | rnd | 14137 | 13891.33 | 142.42 | 14137 | 13929.1 | 101.19 | 14161 | 13929.13 | 154.76 | 14157 | 13950 | 165.3 |
| | | 2op | 14038 | 13879.93 | 88.38 | 14157 | 14010.87 | 51.85 | 14157 | 14009.37 | 50.38 | 14038 | 13933.33 | 93.58 |
| | 50 | rnd | 14157 | 13913.4 | 172.87 | 14161 | 14004.9 | 109.59 | 14161 | 14016.4 | 127.07 | 14137 | 13845.37 | 157.34 |
| | | 2op | 14038 | 13939.7 | 85.13 | 14133 | 14011.73 | 40.52 | 14157 | 14020.2 | 50.91 | 14133 | 13932.77 | 101.65 |

Table A.2066: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14137 | 13878.37 | 161.37 | 14161 | 14023.97 | 118.29 | 14161 | 13929.47 | 135.91 | 14157 | 13859.4 | 146.4 |
| | | 2op | 13938 | 13774.33 | 67.58 | 14157 | 13984.97 | 51 | 13995 | 13949.27 | 55.13 | 13995 | 13872.67 | 111.69 |
| | 50 | rnd | 14133 | 13864.33 | 165.27 | 14161 | 13938.13 | 141.93 | 14157 | 13999.8 | 106.2 | 14133 | 13903.4 | 127.99 |
| | | 2op | 13938 | 13780.67 | 66.37 | 14157 | 14001.9 | 53.62 | 14038 | 13963.93 | 31.57 | 14038 | 13881.9 | 102.3 |
| 51 | 20 | rnd | 14127 | 13852.37 | 196.11 | 14161 | 13957.13 | 159.71 | 14157 | 13949.03 | 143.6 | 14157 | 13937.2 | 137.04 |
| | | 2op | 13932 | 13783.13 | 57.12 | 14157 | 13983 | 42.07 | 14005 | 13968.1 | 27.32 | 13995 | 13893.1 | 84.66 |
| | 50 | rnd | 14103 | 13899.23 | 134.03 | 14161 | 13939.17 | 172.31 | 14161 | 13965.33 | 142.15 | 14161 | 13975.97 | 130.3 |
| | | 2op | 13827 | 13777.53 | 53.79 | 14064 | 13965.87 | 46.13 | 14157 | 13993.13 | 53.23 | 13995 | 13905.43 | 74.16 |

Table A.2067: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13894.77 | 138.71 | 14121 | 13830.23 | 162.63 | 14127 | 13828.37 | 149.38 | 14099 | 13858.57 | 140.79 |
| | | 2op | 14038 | 13942.87 | 74.37 | 14121 | 13854.1 | 158.99 | 14133 | 13789.4 | 135.37 | 14105 | 13822.8 | 146.46 |
| | 50 | rnd | 14161 | 13889.37 | 161.44 | 14157 | 13840.8 | 185.1 | 14018 | 13765.13 | 164.96 | 14103 | 13825.83 | 171.21 |
| | | 2op | 14038 | 13980.97 | 60.2 | 14157 | 13873.93 | 160.08 | 14133 | 13830.57 | 185.81 | 14079 | 13801.63 | 177.61 |
| 51 | 20 | rnd | 14137 | 13904.77 | 146.86 | 14157 | 13971.5 | 115.07 | 14139 | 13897.37 | 130.2 | 14161 | 13866.03 | 171.71 |
| | | 2op | 14038 | 13960.73 | 60.28 | 14094 | 13933.2 | 90.25 | 14133 | 13883.57 | 141.97 | 14119 | 13855 | 162.65 |
| | 50 | rnd | 14137 | 13910.7 | 117.33 | 14133 | 13943.67 | 128.93 | 14161 | 13914.8 | 156.06 | 14089 | 13819.23 | 155.71 |
| | | 2op | 14038 | 13983.57 | 36.44 | 14157 | 13993.73 | 76.16 | 14095 | 13870.07 | 141.39 | 14161 | 13841.87 | 161.19 |

Table A.2068: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13921.3 | 169.36 | 14157 | 13838.8 | 185.58 | 14102 | 13900.97 | 147.31 | 14095 | 13755.9 | 168.95 |
| | | 2op | 13948 | 13830.1 | 64.89 | 14157 | 13867.07 | 175.57 | 14127 | 13810.87 | 174.33 | 14100 | 13878.9 | 160.12 |
| | 50 | rnd | 14139 | 13948.6 | 187.77 | 14161 | 13944.33 | 147.8 | 14029 | 13819.2 | 153.93 | 14048 | 13811.37 | 148.2 |
| | | 2op | 13995 | 13834.63 | 55.15 | 14133 | 13922.03 | 120.82 | 14062 | 13904.43 | 108.45 | 14100 | 13813.17 | 170 |
| 51 | 20 | rnd | 14161 | 13953.43 | 129.72 | 14064 | 13867.8 | 120.61 | 14157 | 13885.53 | 185.26 | 14088 | 13845.9 | 122.23 |
| | | 2op | 13995 | 13852.77 | 60.68 | 13997 | 13882.3 | 86.85 | 14038 | 13827.47 | 163.79 | 14103 | 13790.3 | 166.9 |
| | 50 | rnd | 14139 | 13976.7 | 115.81 | 14139 | 13937.97 | 93.88 | 14139 | 13935.8 | 145.4 | 14122 | 13784.47 | 164.42 |
| | | 2op | 13995 | 13848.2 | 49.23 | 14071 | 13927.7 | 68.05 | 14038 | 13933.7 | 103.45 | 14133 | 13804 | 212.01 |

Table A.2069: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18127 | 17941.9 | 118.42 | 18301 | 18003.23 | 141.11 | 18301 | 17988.53 | 172.93 | 18301 | 17960.6 | 161.28 |
| | | 2op | 18134 | 17981.87 | 89.58 | 18064 | 17988.87 | 36.45 | 18119 | 17929.7 | 141.8 | 18142 | 17918.4 | 118.83 |
| | 50 | rnd | 18175 | 17942.3 | 143.47 | 18301 | 18052.17 | 126.43 | 18125 | 17972.07 | 148.73 | 18196 | 17956.47 | 144.59 |
| | | 2op | 18017 | 17977.47 | 69.2 | 18142 | 18023.7 | 37.52 | 18142 | 17941.53 | 104.97 | 18142 | 17952.57 | 118.6 |
| 51 | 20 | rnd | 18184 | 17929.1 | 146.06 | 18171 | 18016.43 | 120.3 | 18301 | 17963.37 | 168.74 | 18176 | 17988.33 | 177.49 |
| | | 2op | 18017 | 18001.17 | 20.78 | 18017 | 18015.7 | 6.09 | 18107 | 18004.23 | 25.27 | 18119 | 17984.17 | 55 |
| | 50 | rnd | 18114 | 17900.1 | 193.96 | 18132 | 17964.13 | 138.71 | 18156 | 17956.77 | 121.53 | 18181 | 17923.43 | 163.11 |
| | | 2op | 18017 | 18004.87 | 22.1 | 18064 | 18018.57 | 8.58 | 18064 | 18011.6 | 18.95 | 18051 | 17968.27 | 63.07 |

Table A.2070: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18143 | 17910.87 | 134.91 | 18216 | 17967.67 | 150.82 | 18172 | 17913.9 | 178.18 | 18172 | 17909.3 | 151.44 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18013.27 | 9.87 | 18074 | 17996.2 | 23.28 |
| | 50 | rnd | 18156 | 17903.73 | 114.78 | 18301 | 18044.57 | 132.56 | 18301 | 17912.87 | 210.31 | 18184 | 17895.4 | 183.73 |
| | | 2op | 18017 | 18007.03 | 11.59 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18003.53 | 16.63 |
| 51 | 20 | rnd | 18184 | 17894.9 | 185.83 | 18301 | 17907.73 | 172.12 | 18301 | 17947.13 | 174.37 | 18171 | 17935.23 | 154.3 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.37 | 10.48 |
| | 50 | rnd | 18184 | 17947.03 | 158.71 | 18176 | 17897 | 153.5 | 18216 | 17987.6 | 155.31 | 18175 | 17942.17 | 151.46 |
| | | 2op | 18017 | 18006.27 | 11.67 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18009.13 | 13.23 |

Table A.2071: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17995.57 | 167.51 | 18301 | 17996.53 | 134.58 | 18165 | 17939.4 | 180.46 | 18170 | 17913.57 | 176.95 |
| | | 2op | 18090 | 17984.7 | 40.45 | 18064 | 17989.43 | 51.6 | 18142 | 17966.6 | 78.59 | 18142 | 17941.5 | 131.31 |
| | 50 | rnd | 18172 | 17957.73 | 115.32 | 18176 | 18018.77 | 88.39 | 18172 | 17927.57 | 131.34 | 18175 | 17949.63 | 153.35 |
| | | 2op | 18142 | 17995.47 | 66.44 | 18074 | 18012.87 | 26 | 18142 | 17936.8 | 102.95 | 18142 | 17915.53 | 156.02 |
| 51 | 20 | rnd | 18275 | 17962.23 | 123.14 | 18165 | 18010.77 | 121.07 | 18275 | 18003.4 | 133.43 | 18156 | 17964.83 | 118.96 |
| | | 2op | 18142 | 18008.17 | 35.24 | 18017 | 18017 | 0 | 18090 | 18003.17 | 24.05 | 18046 | 17984.9 | 36.81 |
| | 50 | rnd | 18301 | 17998.77 | 134.19 | 18301 | 18014.2 | 130.94 | 18301 | 17980.7 | 137.4 | 18134 | 17905.1 | 173.65 |
| | | 2op | 18017 | 17997.3 | 42.37 | 18017 | 18016.8 | 1.1 | 18017 | 18007.47 | 18.38 | 18049 | 17920.87 | 112.38 |

Table A.2072: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17920.9 | 164.44 | 18171 | 17997.93 | 162.82 | 18301 | 17939.37 | 164.07 | 18184 | 17943.37 | 169.59 |
| | | 2op | 18017 | 18003.77 | 13.63 | 18017 | 18017 | 0 | 18017 | 18011.83 | 10.9 | 18119 | 18004.07 | 28.79 |
| | 50 | rnd | 18172 | 17869.83 | 189.14 | 18301 | 18009.77 | 132.25 | 18172 | 17978.3 | 160.07 | 18142 | 17939.43 | 146.21 |
| | | 2op | 18017 | 18005.5 | 11.7 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18001.3 | 14.42 |
| 51 | 20 | rnd | 18175 | 17891.53 | 162.61 | 18186 | 17932.93 | 140.09 | 18301 | 18009.8 | 155.67 | 18109 | 17875.63 | 179.6 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18003.97 | 13.99 |
| | 50 | rnd | 18142 | 17874.53 | 151.55 | 18301 | 17941.8 | 184.81 | 18165 | 18001.77 | 111.52 | 18301 | 17923.27 | 208.84 |
| | | 2op | 18017 | 18008.57 | 11.27 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.37 | 10.48 |

Table A.2073: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17968.27 | 148.68 | 18152 | 17920.13 | 146.89 | 18301 | 17931.9 | 189.14 | 18301 | 17859.37 | 216.89 |
| | | 2op | 18017 | 18017 | 0 | 18090 | 17855.2 | 167.34 | 18142 | 17841.77 | 174.12 | 18120 | 17819.33 | 220.85 |
| | 50 | rnd | 18152 | 17926.27 | 139.53 | 18176 | 17926.07 | 161.77 | 18114 | 17886.1 | 166.1 | 18193 | 17929.07 | 197.9 |
| | | 2op | 18017 | 18015.63 | 7.49 | 18186 | 17896.9 | 160.12 | 18120 | 17855.6 | 188.17 | 18186 | 17881.5 | 169.25 |
| 51 | 20 | rnd | 18181 | 17970.87 | 186.39 | 18301 | 17933.63 | 192.12 | 18181 | 17895.1 | 197.2 | 18266 | 17903.07 | 178.28 |
| | | 2op | 18017 | 18017 | 0 | 18119 | 17941.3 | 112.09 | 18119 | 17907.53 | 151.52 | 18142 | 17903.73 | 154.88 |
| | 50 | rnd | 18176 | 18046.37 | 77.33 | 18144 | 17940.57 | 137.18 | 18216 | 17891.3 | 166.31 | 18136 | 17874.03 | 174.28 |
| | | 2op | 18017 | 18017 | 0 | 18142 | 17953.93 | 100.04 | 18105 | 17875.6 | 168.87 | 18301 | 17972.13 | 128.82 |

Table A.2074: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18156 | 17917.57 | 188.89 | 18266 | 17981.03 | 122.51 | 18301 | 17936.07 | 164.64 | 18301 | 17905.57 | 207.05 |
| | | 2op | 18017 | 18017 | 0 | 18301 | 17943.33 | 151.14 | 18150 | 17868.77 | 172.31 | 18193 | 17880.1 | 181.96 |
| | 50 | rnd | 18184 | 17919.23 | 122.16 | 18301 | 17979.6 | 174.89 | 18156 | 17893.13 | 178.58 | 18216 | 17841.27 | 210.51 |
| | | 2op | 18017 | 18016.23 | 4.2 | 18142 | 17952.6 | 96.61 | 18119 | 17913.27 | 120.72 | 18144 | 17843.43 | 186.72 |
| 51 | 20 | rnd | 18184 | 17966.23 | 144.68 | 18301 | 17954.7 | 187.71 | 18193 | 17878.47 | 195.6 | 18152 | 17867.8 | 191.61 |
| | | 2op | 18017 | 18017 | 0 | 18292 | 17993.73 | 174.64 | 18170 | 17960.7 | 144.76 | 18159 | 17911.9 | 151.85 |
| | 50 | rnd | 18142 | 17938.87 | 147.49 | 18184 | 17940.03 | 148.5 | 18184 | 17951.37 | 177.77 | 18172 | 17894.57 | 192.91 |
| | | 2op | 18017 | 18017 | 0 | 18142 | 17985.47 | 105.41 | 18119 | 17968.97 | 79.12 | 18266 | 17885.5 | 168.18 |

Table A.2075: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21271 | 20965.1 | 157.88 | 21218 | 20978.63 | 147.1 | 21216 | 20996.7 | 128.37 | 21211 | 20932.57 | 172.75 |
| | | 2op | 21166 | 20888.37 | 124.06 | 21215 | 21016.6 | 111.18 | 21164 | 20915.03 | 159.11 | 21192 | 20967.23 | 143.03 |
| | 50 | rnd | 21210 | 20945.43 | 144.43 | 21190 | 21018.4 | 103.84 | 21271 | 20941.43 | 192.13 | 21200 | 20924.5 | 221.02 |
| | | 2op | 21218 | 20926.93 | 121.51 | 21193 | 21057.7 | 72.99 | 21215 | 20944 | 187.29 | 21206 | 20968.97 | 131.51 |
| 51 | 20 | rnd | 21203 | 20908.07 | 156.28 | 21196 | 20960.57 | 173.79 | 21175 | 20989.17 | 129.56 | 21207 | 20937.1 | 168.93 |
| | | 2op | 21088 | 20860.57 | 78.03 | 21193 | 20956.07 | 105.8 | 21154 | 20867.67 | 101.8 | 21218 | 20941.33 | 112.54 |
| | 50 | rnd | 21245 | 20960.63 | 169.22 | 21196 | 20983.73 | 137.91 | 21206 | 20960.97 | 132.48 | 21165 | 20957.47 | 125.29 |
| | | 2op | 21025 | 20851.77 | 53.33 | 21187 | 21000.7 | 85.92 | 21166 | 20907.9 | 108.2 | 21169 | 20929.1 | 117.39 |

Table A.2076: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21209 | 20920.4 | 145.01 | 21172 | 20932.43 | 200.47 | 21138 | 20871.43 | 182.73 | 21211 | 20932.07 | 168.39 |
| | | 2op | 20829 | 20829 | 0 | 20997 | 20834.6 | 30.67 | 20987 | 20879.9 | 73.62 | 21174 | 20921.37 | 91.69 |
| | 50 | rnd | 21212 | 20895.03 | 198.54 | 21212 | 20899.77 | 198.59 | 21177 | 20914.73 | 200.15 | 21205 | 20941.93 | 173.09 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20987 | 20834.23 | 28.85 | 20987 | 20857.3 | 66.14 |
| 51 | 20 | rnd | 21162 | 20911.67 | 162.01 | 21212 | 21001.97 | 132.39 | 21173 | 20941.37 | 152.29 | 21203 | 20954.63 | 152.05 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20829 | 20829 | 0 | 20987 | 20871.8 | 70.23 |
| | 50 | rnd | 21209 | 20928.57 | 180.12 | 21206 | 20917.43 | 214.95 | 21181 | 20990.67 | 118.5 | 21212 | 20942.77 | 177.14 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 1.1 | 20829 | 20828.8 | 1.1 | 20987 | 20850.8 | 54.45 |

Table A.2077: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20920.27 | 201.46 | 21143 | 20943.87 | 146.01 | 21166 | 20893.43 | 192.62 | 21218 | 20949.63 | 213.75 |
| | | 2op | 21211 | 20919.6 | 154.7 | 21207 | 20909.8 | 126.21 | 21207 | 20968.07 | 147.47 | 21199 | 20960.13 | 141.75 |
| | 50 | rnd | 21235 | 20934.17 | 205.33 | 21268 | 21031.47 | 125.92 | 21193 | 20874.27 | 191.72 | 21155 | 20944.53 | 166.48 |
| | | 2op | 21217 | 20962.23 | 134.88 | 21193 | 21034.53 | 87 | 21199 | 20963.17 | 146.19 | 21189 | 20943.67 | 146.35 |
| 51 | 20 | rnd | 21190 | 20905.13 | 197.42 | 21161 | 20983.43 | 121.41 | 21203 | 20915.7 | 208.99 | 21190 | 20949.97 | 170.13 |
| | | 2op | 21052 | 20861.2 | 71.12 | 21193 | 20953.93 | 116.55 | 21052 | 20855.57 | 64.04 | 21174 | 20941.27 | 100.53 |
| | 50 | rnd | 21180 | 20920.33 | 162.35 | 21196 | 21028.27 | 142.82 | 21233 | 20999.77 | 127.25 | 21193 | 20928.47 | 196.4 |
| | | 2op | 21120 | 20897.13 | 99.1 | 21193 | 21009.83 | 88.26 | 21154 | 20933.47 | 104.25 | 21178 | 20946.2 | 97.77 |

Table A.2078: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21210 | 20835.27 | 176.29 | 21212 | 20981.2 | 142.27 | 21212 | 20950.23 | 228.17 | 21165 | 20950.27 | 133.22 |
| | | 2op | 20829 | 20828.8 | 1.1 | 20829 | 20829 | 0 | 21089 | 20865.03 | 73.95 | 21147 | 20932.23 | 89.27 |
| | 50 | rnd | 21198 | 20912.87 | 182.99 | 21218 | 20987.9 | 135.72 | 21184 | 20888.1 | 206.41 | 21160 | 20905.73 | 163.94 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 1.1 | 20985 | 20838.67 | 37.41 | 21037 | 20896.33 | 76.21 |
| 51 | 20 | rnd | 21163 | 20934.03 | 154.81 | 21190 | 20936.33 | 191.67 | 21205 | 20916.6 | 183.26 | 21196 | 20933.03 | 157.19 |
| | | 2op | 20867 | 20830.27 | 6.94 | 20991 | 20834.4 | 29.58 | 20829 | 20829 | 0 | 20987 | 20875.87 | 72.17 |
| | 50 | rnd | 21182 | 20908.83 | 187.72 | 21165 | 20914.2 | 179.56 | 21227 | 20981.93 | 156.73 | 21195 | 20924.23 | 210.45 |
| | | 2op | 20829 | 20829 | 0 | 20829 | 20828.8 | 1.1 | 20829 | 20828.8 | 1.1 | 20987 | 20849.67 | 53 |

Table A.2079: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21215 | 20905.07 | 167.84 | 21217 | 20864.9 | 223.91 | 21160 | 20839.03 | 239.35 | 21169 | 20850.47 | 177.29 |
| | | 2op | 21029 | 20844.4 | 46.94 | 21138 | 20843.27 | 238.64 | 21201 | 20848.8 | 212.74 | 21143 | 20808.1 | 222.14 |
| | 50 | rnd | 21271 | 20966.23 | 153.39 | 21077 | 20834.4 | 182.58 | 21123 | 20782.3 | 225.61 | 21211 | 20789.43 | 203.62 |
| | | 2op | 21025 | 20861.7 | 64.44 | 21207 | 20892.57 | 165.55 | 21122 | 20837.47 | 197.99 | 21107 | 20818.43 | 193.57 |
| 51 | 20 | rnd | 21203 | 20932.83 | 168.95 | 21196 | 20943.83 | 163.61 | 21118 | 20840.37 | 217.01 | 21166 | 20902.67 | 169.49 |
| | | 2op | 20889 | 20831 | 10.95 | 21211 | 20936.93 | 185.96 | 21198 | 20846.83 | 219.7 | 21179 | 20888.93 | 174.68 |
| | 50 | rnd | 21196 | 20957.53 | 157.71 | 21212 | 20994.07 | 130.09 | 21169 | 20862.3 | 152.61 | 21152 | 20864.57 | 197.72 |
| | | 2op | 21193 | 20885.2 | 122.1 | 21199 | 21015.87 | 129.08 | 21187 | 20915 | 163.9 | 21145 | 20818.4 | 228.93 |

Table A.2080: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21215 | 20947.93 | 175.34 | 21156 | 20834.27 | 178.85 | 21195 | 20905.57 | 222.11 | 21169 | 20813.83 | 212.9 |
| | | 2op | 20829 | 20829 | 0 | 21138 | 20907.07 | 154.19 | 21204 | 20885.93 | 210.87 | 21142 | 20875.53 | 165.04 |
| | 50 | rnd | 21218 | 20881.77 | 233.35 | 21220 | 20924.2 | 185.24 | 21157 | 20908.13 | 180.86 | 21192 | 20910.2 | 168.79 |
| | | 2op | 20829 | 20829 | 0 | 21164 | 20917.13 | 132.61 | 21147 | 20944.57 | 141.26 | 21116 | 20877.97 | 162.48 |
| 51 | 20 | rnd | 21203 | 20889.43 | 213.15 | 21199 | 20892.23 | 198.13 | 21268 | 20925.17 | 197.39 | 21093 | 20864.8 | 147.91 |
| | | 2op | 20829 | 20829 | 0 | 21101 | 20865.27 | 135.3 | 21170 | 20922.97 | 150.55 | 21195 | 20866.03 | 221.3 |
| | 50 | rnd | 21203 | 20876.77 | 177.48 | 21179 | 21012.97 | 141.27 | 21151 | 20944.73 | 156.74 | 21169 | 20902.3 | 161.9 |
| | | 2op | 20829 | 20829 | 0 | 21139 | 20876.23 | 87.02 | 21170 | 20924.23 | 121.58 | 21206 | 20820.27 | 189.12 |

Table A.2081: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.1 | 1.84 | 596 | 593.43 | 1.87 | 596 | 593.77 | 1.48 | 596 | 590.73 | 3.1 |
| | | 2op | 596 | 592.87 | 2.87 | 596 | 593.7 | 1.53 | 596 | 593.2 | 1.54 | 595 | 590.87 | 2.57 |
| | 50 | rnd | 595 | 591.7 | 2.94 | 596 | 594.47 | 1.46 | 596 | 594 | 1.53 | 596 | 591.2 | 2.51 |
| | | 2op | 596 | 592.9 | 1.95 | 596 | 594.5 | 1.04 | 596 | 594.57 | 1.14 | 596 | 590.97 | 2.75 |
| 51 | 20 | rnd | 596 | 592.2 | 2.04 | 596 | 594.2 | 1.37 | 596 | 594.83 | 0.87 | 596 | 593.73 | 1.76 |
| | | 2op | 596 | 593.7 | 1.44 | 596 | 594.73 | 1.2 | 596 | 595.07 | 0.58 | 596 | 594.73 | 0.69 |
| | 50 | rnd | 596 | 592.63 | 2.11 | 596 | 594.87 | 1.14 | 596 | 595.07 | 0.83 | 596 | 594 | 1.39 |
| | | 2op | 596 | 593.2 | 2.47 | 596 | 595.07 | 0.58 | 596 | 594.87 | 1.07 | 596 | 594.4 | 1 |

Table A.2082: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.17 | 3.22 | 596 | 593.37 | 1.96 | 596 | 593.67 | 1.9 | 595 | 591.5 | 2.78 |
| | | 2op | 594 | 590.7 | 2.32 | 595 | 594.6 | 1.4 | 595 | 594.07 | 1.28 | 595 | 592.33 | 2.02 |
| | 50 | rnd | 596 | 590.93 | 3.89 | 596 | 592.3 | 2.18 | 596 | 593.57 | 1.92 | 595 | 592.23 | 2.57 |
| | | 2op | 594 | 590.83 | 2.25 | 595 | 594.9 | 0.4 | 595 | 594.9 | 0.4 | 595 | 593.63 | 1.65 |
| 51 | 20 | rnd | 596 | 591.57 | 2.6 | 596 | 592.73 | 2.42 | 596 | 593.2 | 2.38 | 596 | 592.3 | 2.05 |
| | | 2op | 594 | 591.03 | 2.3 | 595 | 594.47 | 1.28 | 596 | 594.93 | 0.45 | 595 | 594.23 | 0.57 |
| | 50 | rnd | 596 | 591.77 | 2.75 | 596 | 591.83 | 2.59 | 596 | 593.23 | 2.51 | 596 | 592.13 | 2.37 |
| | | 2op | 594 | 591.3 | 2.37 | 595 | 594.73 | 0.45 | 595 | 595 | 0 | 595 | 594.17 | 0.53 |

Table A.2083: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 591 | 2.84 | 596 | 593.63 | 1.79 | 596 | 593.03 | 1.75 | 595 | 589.73 | 3.27 |
| | | 2op | 595 | 591.93 | 2.75 | 596 | 593.87 | 1.25 | 596 | 593.1 | 1.97 | 595 | 590.17 | 3.21 |
| | 50 | rnd | 596 | 591.77 | 2.76 | 596 | 594.13 | 1.31 | 596 | 593.77 | 1.41 | 595 | 591 | 2.6 |
| | | 2op | 596 | 593 | 2.12 | 596 | 594.3 | 1.12 | 595 | 593.67 | 1.18 | 596 | 589.8 | 2.85 |
| 51 | 20 | rnd | 596 | 592.17 | 2.8 | 596 | 594.63 | 1.22 | 596 | 594.63 | 1.59 | 596 | 593.53 | 1.83 |
| | | 2op | 595 | 593.5 | 1.59 | 596 | 594.63 | 1.19 | 596 | 594.9 | 0.84 | 596 | 594.97 | 0.49 |
| | 50 | rnd | 596 | 593.03 | 2.34 | 596 | 594.8 | 0.96 | 596 | 594.83 | 0.91 | 596 | 593.4 | 1.89 |
| | | 2op | 596 | 593.4 | 1.85 | 596 | 594.97 | 0.81 | 596 | 595.17 | 0.65 | 596 | 593.8 | 1.54 |

Table A.2084: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.43 | 3.21 | 596 | 593.03 | 2.46 | 595 | 592.77 | 2.45 | 596 | 591.5 | 2.86 |
| | | 2op | 594 | 591.43 | 2.14 | 595 | 594.73 | 0.78 | 595 | 594.1 | 0.84 | 595 | 592.37 | 2.37 |
| | 50 | rnd | 596 | 591.6 | 2.62 | 596 | 593.33 | 2.35 | 595 | 592.83 | 2.13 | 596 | 592.53 | 2.15 |
| | | 2op | 594 | 591.4 | 2.42 | 595 | 594.97 | 0.18 | 595 | 594.93 | 0.25 | 595 | 593.97 | 0.67 |
| 51 | 20 | rnd | 595 | 591.13 | 3.53 | 596 | 591.83 | 2.97 | 596 | 593.37 | 2.28 | 595 | 592.8 | 1.71 |
| | | 2op | 594 | 591.13 | 2.34 | 595 | 594.8 | 0.41 | 595 | 594.9 | 0.31 | 595 | 594.1 | 0.55 |
| | 50 | rnd | 596 | 591.6 | 3.27 | 596 | 591.67 | 2.96 | 596 | 592.33 | 2.41 | 596 | 592.57 | 2.76 |
| | | 2op | 594 | 591.33 | 2.43 | 595 | 594.47 | 0.51 | 595 | 595 | 0 | 595 | 594.2 | 0.48 |

Table A.2085: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 593.13 | 2.01 | 596 | 590.4 | 3.7 | 596 | 589.67 | 3.6 | 595 | 589.43 | 3.29 |
| | | 2op | 596 | 594.17 | 1.26 | 595 | 589.63 | 3.61 | 595 | 589.1 | 3.4 | 595 | 587.77 | 3.51 |
| | 50 | rnd | 596 | 592.87 | 1.89 | 596 | 591 | 4.61 | 595 | 589.87 | 3.99 | 595 | 589.23 | 3.64 |
| | | 2op | 595 | 593.33 | 1.9 | 596 | 590.77 | 5.01 | 595 | 589.8 | 3.08 | 594 | 589.33 | 3.03 |
| 51 | 20 | rnd | 596 | 593.3 | 1.93 | 595 | 588.77 | 5.21 | 595 | 588.93 | 4.43 | 595 | 588.97 | 3.85 |
| | | 2op | 595 | 594.2 | 0.41 | 596 | 589.77 | 4.59 | 596 | 589.9 | 3.43 | 596 | 589.1 | 3.24 |
| | 50 | rnd | 596 | 593.07 | 1.39 | 595 | 591.17 | 3.56 | 595 | 590.33 | 3.11 | 594 | 588.43 | 3.09 |
| | | 2op | 596 | 594.87 | 0.51 | 596 | 592.23 | 3.31 | 595 | 589.83 | 3.92 | 596 | 589.87 | 2.97 |

Table A.2086: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.17 | 2.78 | 593 | 587.8 | 4.33 | 593 | 588.13 | 3.52 | 595 | 588.1 | 4.15 |
| | | 2op | 594 | 593.07 | 1.8 | 595 | 588.67 | 4.61 | 596 | 589 | 2.68 | 595 | 588.2 | 3.94 |
| | 50 | rnd | 596 | 592.53 | 1.93 | 595 | 589.43 | 3.91 | 596 | 588.73 | 4.88 | 595 | 588.67 | 4.14 |
| | | 2op | 594 | 593.1 | 1.6 | 596 | 590.37 | 3.76 | 595 | 589.57 | 3.95 | 595 | 589.1 | 3.95 |
| 51 | 20 | rnd | 596 | 591.6 | 2.88 | 596 | 590.77 | 3.15 | 594 | 588.5 | 5.4 | 596 | 589.33 | 3.34 |
| | | 2op | 595 | 593.6 | 1.16 | 595 | 589.2 | 3.45 | 595 | 589.83 | 3.78 | 593 | 588 | 3.7 |
| | 50 | rnd | 596 | 592.83 | 2.31 | 596 | 589.73 | 4 | 594 | 590.43 | 2.64 | 594 | 587.57 | 4.47 |
| | | 2op | 595 | 593.53 | 1.36 | 595 | 589.83 | 3.16 | 595 | 591.33 | 2.96 | 594 | 587.87 | 3.39 |

Table A.2087: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 772.37 | 3.21 | 777 | 774.37 | 1.81 | 777 | 773.77 | 2.46 | 777 | 771.27 | 2.79 |
| | | 2op | 776 | 770.23 | 3.47 | 777 | 774.67 | 2.07 | 777 | 773.47 | 1.89 | 776 | 769.7 | 3.86 |
| | 50 | rnd | 777 | 771.9 | 3.39 | 777 | 775.23 | 1.22 | 777 | 775.27 | 1.11 | 777 | 772.27 | 3.89 |
| | | 2op | 775 | 771.83 | 2.78 | 777 | 775.6 | 1.3 | 777 | 775.63 | 1.35 | 777 | 771.07 | 3.48 |
| 51 | 20 | rnd | 777 | 773.1 | 2.51 | 777 | 773.63 | 2.33 | 777 | 774.67 | 1.27 | 777 | 773.2 | 2.57 |
| | | 2op | 774 | 768.23 | 3.89 | 777 | 774.17 | 1.56 | 777 | 774.1 | 1.32 | 777 | 772.6 | 1.83 |
| | 50 | rnd | 777 | 773.33 | 2.56 | 777 | 774.97 | 1.27 | 777 | 775.67 | 1.32 | 777 | 774.53 | 1.87 |
| | | 2op | 776 | 771.4 | 2.51 | 777 | 775.43 | 1.48 | 777 | 775.6 | 1.5 | 777 | 773.33 | 2.22 |

Table A.2088: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 767.73 | 6.97 | 777 | 774.17 | 2.21 | 777 | 773.47 | 2.37 | 777 | 770.83 | 7.44 |
| | | 2op | 770 | 768.33 | 1.99 | 777 | 770.2 | 1.65 | 774 | 770.3 | 1.44 | 774 | 769.33 | 2.34 |
| | 50 | rnd | 777 | 768.87 | 5.31 | 777 | 772.1 | 2.78 | 777 | 773.67 | 2.6 | 777 | 770.97 | 5.73 |
| | | 2op | 770 | 767.73 | 2.33 | 774 | 770.03 | 0.81 | 772 | 769.97 | 0.67 | 770 | 769.7 | 0.53 |
| 51 | 20 | rnd | 775 | 768.17 | 6.44 | 777 | 771.53 | 5.98 | 777 | 773.37 | 1.92 | 777 | 770.53 | 7.89 |
| | | 2op | 772 | 768.5 | 2.19 | 774 | 769.97 | 0.85 | 774 | 770.33 | 1.56 | 774 | 770.13 | 1.11 |
| | 50 | rnd | 775 | 769.93 | 4.81 | 777 | 772.1 | 3.45 | 777 | 772.2 | 3.11 | 777 | 773.1 | 3.1 |
| | | 2op | 770 | 767.83 | 2.29 | 770 | 769.73 | 0.45 | 774 | 769.83 | 0.91 | 774 | 769.9 | 0.99 |

Table A.2089: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 770.8 | 5.13 | 777 | 774.3 | 2.04 | 777 | 773.87 | 2.27 | 776 | 768.87 | 5.98 |
| | | 2op | 777 | 771.83 | 3.05 | 777 | 774.73 | 1.86 | 777 | 773.47 | 2.47 | 777 | 769.8 | 4.29 |
| | 50 | rnd | 777 | 771.6 | 3.36 | 777 | 774.9 | 1.24 | 777 | 774.97 | 1.43 | 777 | 771.33 | 3.97 |
| | | 2op | 777 | 770.8 | 5.07 | 777 | 775.33 | 1.42 | 777 | 775.63 | 1.07 | 777 | 771.4 | 3.43 |
| 51 | 20 | rnd | 777 | 772.7 | 2.76 | 777 | 774.4 | 1.83 | 777 | 775 | 1.53 | 777 | 773.27 | 3.1 |
| | | 2op | 775 | 768.07 | 4.65 | 777 | 773.47 | 1.59 | 777 | 774.37 | 1.35 | 777 | 772.63 | 1.47 |
| | 50 | rnd | 776 | 773.9 | 1.63 | 777 | 775.43 | 1.28 | 777 | 776.03 | 0.96 | 777 | 774.3 | 1.91 |
| | | 2op | 777 | 770.27 | 2.88 | 777 | 775 | 1.64 | 777 | 775.6 | 1.63 | 777 | 773.63 | 2.3 |

Table A.2090: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 767.57 | 7.21 | 777 | 773.23 | 3.28 | 777 | 773.37 | 2.44 | 777 | 772.27 | 2.89 |
| | | 2op | 770 | 767.87 | 2.27 | 774 | 769.83 | 1.32 | 772 | 770.07 | 0.74 | 771 | 769.47 | 1.11 |
| | 50 | rnd | 777 | 769.73 | 6.32 | 777 | 771.03 | 8.08 | 777 | 773.9 | 2.76 | 777 | 771.13 | 5.88 |
| | | 2op | 770 | 767.5 | 2.26 | 770 | 769.67 | 0.48 | 772 | 770.07 | 0.74 | 775 | 770.27 | 1.84 |
| 51 | 20 | rnd | 777 | 766.63 | 9.65 | 777 | 770.9 | 4.1 | 777 | 772.73 | 2.45 | 777 | 773.03 | 3.15 |
| | | 2op | 774 | 768.63 | 2.19 | 774 | 769.97 | 0.85 | 777 | 770.33 | 1.52 | 774 | 769.97 | 0.85 |
| | 50 | rnd | 775 | 768.7 | 5.63 | 777 | 770.2 | 5.99 | 777 | 772.4 | 3.35 | 777 | 773.47 | 3.44 |
| | | 2op | 770 | 768 | 2.26 | 770 | 769.7 | 0.47 | 774 | 769.8 | 0.92 | 770 | 769.8 | 0.41 |

Table A.2091: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 771.53 | 2.83 | 777 | 768.17 | 9.74 | 777 | 768.33 | 7.42 | 776 | 766.4 | 10.14 |
| | | 2op | 775 | 770.37 | 1.75 | 777 | 769.7 | 9.17 | 776 | 768.6 | 4.09 | 777 | 767.23 | 8.54 |
| | 50 | rnd | 777 | 772.77 | 2.62 | 776 | 770.17 | 4.93 | 776 | 768.13 | 7.66 | 776 | 767.3 | 8.84 |
| | | 2op | 777 | 772.03 | 2.09 | 777 | 768.7 | 8.57 | 776 | 769.63 | 5.66 | 775 | 767.7 | 8.96 |
| 51 | 20 | rnd | 777 | 772.57 | 2.45 | 776 | 767.1 | 9.21 | 777 | 769.03 | 8.7 | 776 | 768.73 | 5.6 |
| | | 2op | 772 | 769.83 | 0.87 | 776 | 769.1 | 5.2 | 777 | 770.43 | 5.7 | 776 | 770.3 | 3.5 |
| | 50 | rnd | 777 | 774.4 | 1.83 | 775 | 771.5 | 3.3 | 776 | 770.8 | 5.31 | 776 | 769.17 | 6.07 |
| | | 2op | 777 | 771.27 | 1.86 | 777 | 771.8 | 5.99 | 777 | 770.03 | 7.37 | 777 | 767 | 7.8 |

Table A.2092: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 770.53 | 4.77 | 777 | 767.37 | 8.16 | 776 | 769.23 | 7.57 | 775 | 763.47 | 11.81 |
| | | 2op | 770 | 768.6 | 1.63 | 777 | 765.17 | 11.24 | 776 | 765.93 | 10.15 | 776 | 766.27 | 9.67 |
| | 50 | rnd | 777 | 768.77 | 6.6 | 777 | 770.57 | 3.47 | 775 | 768.77 | 8.33 | 776 | 769.47 | 6.24 |
| | | 2op | 770 | 769.17 | 1.37 | 777 | 768.83 | 6.66 | 776 | 768.03 | 7.92 | 777 | 766.13 | 9.22 |
| 51 | 20 | rnd | 775 | 770.57 | 5.73 | 777 | 763.5 | 13.12 | 777 | 768.27 | 7.57 | 776 | 766.7 | 7.63 |
| | | 2op | 770 | 769.57 | 0.94 | 775 | 768.1 | 5.01 | 776 | 765.03 | 10.36 | 777 | 762.97 | 12.48 |
| | 50 | rnd | 775 | 767.87 | 8.27 | 777 | 769.97 | 5.97 | 777 | 770.1 | 4.95 | 777 | 768.13 | 8.07 |
| | | 2op | 770 | 769.5 | 0.51 | 777 | 769.17 | 6.9 | 776 | 768.97 | 3.6 | 775 | 765.67 | 11.32 |

Table A.2093: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 914.37 | 3.33 | 921 | 917.87 | 2.21 | 921 | 916.77 | 2.86 | 919 | 913.4 | 2.82 |
| | | 2op | 919 | 913.53 | 3.55 | 921 | 917.7 | 1.76 | 921 | 916.87 | 2.29 | 919 | 912.4 | 3.49 |
| | 50 | rnd | 919 | 915.23 | 3.55 | 921 | 918.17 | 1.58 | 921 | 918.57 | 1.48 | 921 | 913.93 | 3.22 |
| | | 2op | 921 | 914.8 | 3.12 | 921 | 918.37 | 1.67 | 921 | 918.5 | 1.96 | 919 | 914.77 | 3.04 |
| 51 | 20 | rnd | 921 | 914.73 | 3.19 | 921 | 917.2 | 2.57 | 921 | 917.93 | 2.24 | 921 | 916.77 | 2.61 |
| | | 2op | 919 | 914.5 | 2.47 | 921 | 917.07 | 2.02 | 921 | 918.5 | 1.91 | 921 | 916.53 | 1.78 |
| | 50 | rnd | 921 | 914.97 | 2.86 | 921 | 917.57 | 1.79 | 921 | 917.63 | 2.09 | 921 | 916.47 | 3.14 |
| | | 2op | 921 | 915.3 | 2.97 | 921 | 919.2 | 1.79 | 921 | 920 | 1.46 | 921 | 917.67 | 2.5 |

Table A.2094: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.6 | 2.66 | 921 | 915.53 | 2.99 | 921 | 916.37 | 2.54 | 921 | 916.33 | 2.93 |
| | | 2op | 916 | 912.7 | 3.64 | 918 | 915.93 | 0.98 | 918 | 916.07 | 0.37 | 921 | 915.33 | 2.6 |
| | 50 | rnd | 919 | 913.87 | 5.18 | 921 | 915.4 | 2.81 | 921 | 916 | 2.49 | 921 | 915.63 | 2.92 |
| | | 2op | 916 | 913.13 | 3.56 | 916 | 915.9 | 0.55 | 921 | 916.3 | 1.02 | 916 | 915.73 | 0.91 |
| 51 | 20 | rnd | 919 | 914 | 5.47 | 921 | 916.6 | 2.65 | 921 | 915.83 | 2.88 | 921 | 915.23 | 3.28 |
| | | 2op | 916 | 913.57 | 3.27 | 918 | 916.07 | 0.37 | 918 | 916.03 | 0.76 | 918 | 916.07 | 0.37 |
| | 50 | rnd | 921 | 914.7 | 3.5 | 919 | 915.13 | 2.62 | 921 | 915.27 | 2.57 | 921 | 916.5 | 2.62 |
| | | 2op | 916 | 913.37 | 3.49 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.2095: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.83 | 3.36 | 921 | 917.87 | 1.98 | 921 | 916.57 | 2.54 | 921 | 914.77 | 3.39 |
| | | 2op | 919 | 914.93 | 2.46 | 921 | 917.87 | 2.32 | 921 | 917.5 | 2.99 | 918 | 913.67 | 3.26 |
| | 50 | rnd | 919 | 915.1 | 2.7 | 921 | 917.37 | 1.88 | 921 | 918.07 | 2.15 | 919 | 915.2 | 3.34 |
| | | 2op | 921 | 914.97 | 3.32 | 921 | 918.47 | 1.25 | 921 | 918.1 | 1.83 | 919 | 913.9 | 2.78 |
| 51 | 20 | rnd | 919 | 915.23 | 2.19 | 921 | 917.17 | 2.59 | 921 | 917.03 | 2.16 | 921 | 917.97 | 2.46 |
| | | 2op | 918 | 914.53 | 2.83 | 921 | 917.87 | 2.61 | 921 | 918.63 | 1.71 | 921 | 916.97 | 1.67 |
| | 50 | rnd | 921 | 915.77 | 2.87 | 921 | 917.77 | 1.52 | 921 | 918.47 | 1.72 | 921 | 916.83 | 2.31 |
| | | 2op | 919 | 914.77 | 2.62 | 921 | 918.93 | 1.78 | 921 | 919.37 | 1.45 | 921 | 917.17 | 1.8 |

Table A.2096: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.97 | 3.38 | 921 | 916.17 | 2.95 | 921 | 916.7 | 2.31 | 919 | 915.17 | 2.88 |
| | | 2op | 916 | 913.1 | 3.33 | 918 | 915.93 | 0.94 | 918 | 916.23 | 0.63 | 919 | 915.77 | 2.14 |
| | 50 | rnd | 919 | 913.4 | 5.51 | 919 | 914.67 | 3.12 | 921 | 915.9 | 2.72 | 919 | 916.33 | 2.45 |
| | | 2op | 916 | 912.47 | 4.11 | 918 | 915.93 | 0.69 | 921 | 916.93 | 1.76 | 918 | 916.17 | 0.53 |
| 51 | 20 | rnd | 919 | 914.63 | 3.98 | 921 | 915.6 | 3.54 | 919 | 915.6 | 2.31 | 921 | 916.03 | 3.06 |
| | | 2op | 916 | 913.13 | 3.75 | 916 | 916 | 0 | 916 | 915.77 | 1.28 | 916 | 915.87 | 0.57 |
| | 50 | rnd | 919 | 913.13 | 3.6 | 921 | 915.53 | 2.96 | 919 | 915.53 | 2.73 | 921 | 916.6 | 3.38 |
| | | 2op | 916 | 912.2 | 3.73 | 916 | 916 | 0 | 916 | 916 | 0 | 916 | 916 | 0 |

Table A.2097: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 916.03 | 3.24 | 921 | 913.6 | 4.17 | 921 | 911.6 | 5.15 | 921 | 912.67 | 5.52 |
| | | 2op | 919 | 915.3 | 1.95 | 921 | 912.83 | 4.78 | 919 | 910.73 | 6.69 | 918 | 912.37 | 2.98 |
| | 50 | rnd | 921 | 916.7 | 2.58 | 921 | 913.9 | 6.55 | 919 | 912.77 | 4.21 | 919 | 911.3 | 4.62 |
| | | 2op | 919 | 915.93 | 1.46 | 921 | 915.27 | 3.04 | 921 | 913.17 | 3.22 | 919 | 911.8 | 3.67 |
| 51 | 20 | rnd | 921 | 916.63 | 2.66 | 921 | 914.83 | 4.01 | 919 | 914.53 | 3.26 | 919 | 912.97 | 3.47 |
| | | 2op | 916 | 915.83 | 0.91 | 921 | 915.03 | 6.18 | 918 | 912.87 | 5.49 | 921 | 913.8 | 3.77 |
| | 50 | rnd | 921 | 917.33 | 3.48 | 921 | 915.37 | 3.17 | 921 | 913.23 | 6.55 | 921 | 911.1 | 6.71 |
| | | 2op | 916 | 915.97 | 0.18 | 921 | 914.23 | 4.21 | 919 | 914.4 | 3.09 | 918 | 911.5 | 3.41 |

Table A.2098: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.23 | 3.16 | 921 | 913.73 | 4.51 | 921 | 911.83 | 7.22 | 918 | 909.83 | 8.86 |
| | | 2op | 916 | 915.83 | 0.91 | 919 | 911.9 | 4.63 | 921 | 912.07 | 4.57 | 916 | 910.87 | 6.61 |
| | 50 | rnd | 921 | 914.6 | 3.5 | 919 | 913.63 | 3.08 | 921 | 914.67 | 3.71 | 921 | 911.1 | 8.2 |
| | | 2op | 916 | 916 | 0 | 919 | 913.8 | 3.47 | 919 | 912.67 | 3.86 | 919 | 912.27 | 5.15 |
| 51 | 20 | rnd | 919 | 915.33 | 2.93 | 919 | 912.8 | 4.97 | 919 | 912.57 | 7.03 | 919 | 908.63 | 8.57 |
| | | 2op | 916 | 916 | 0 | 918 | 914.03 | 2.63 | 919 | 913.77 | 3.71 | 918 | 912.4 | 5.85 |
| | 50 | rnd | 919 | 915.3 | 3.36 | 921 | 914.83 | 3.62 | 921 | 911.3 | 9.16 | 919 | 910.7 | 5.62 |
| | | 2op | 916 | 915.87 | 0.73 | 918 | 912.3 | 3.73 | 919 | 911.4 | 6.41 | 919 | 914.2 | 3.24 |

Table A.2099: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1575 | 1560.47 | 7.77 | 1579 | 1561.27 | 7.47 | 1578 | 1560.6 | 8.68 | 1571 | 1553.2 | 9.69 |
| | | 2op | 1572 | 1560.83 | 9.66 | 1573 | 1560.83 | 7.57 | 1571 | 1555.5 | 9.58 | 1571 | 1556.93 | 11.74 |
| | 50 | rnd | 1573 | 1556.83 | 10.44 | 1574 | 1560.33 | 7.93 | 1575 | 1556.23 | 8.24 | 1570 | 1557.97 | 8.84 |
| | | 2op | 1578 | 1560.37 | 7.38 | 1569 | 1557.07 | 6.87 | 1581 | 1555.67 | 11.88 | 1577 | 1555.57 | 10.54 |
| 51 | 20 | rnd | 1571 | 1561.33 | 8.28 | 1575 | 1561.37 | 7.15 | 1577 | 1562.27 | 8.66 | 1580 | 1559.37 | 7.97 |
| | | 2op | 1576 | 1560.17 | 5.76 | 1573 | 1561.17 | 6.3 | 1575 | 1560.57 | 8.08 | 1574 | 1559.17 | 9.7 |
| | 50 | rnd | 1578 | 1562.47 | 8.18 | 1574 | 1560.53 | 7.71 | 1571 | 1559.47 | 7.32 | 1576 | 1559.97 | 8.95 |
| | | 2op | 1572 | 1559.13 | 5.91 | 1575 | 1561.73 | 7.18 | 1574 | 1562.1 | 7.01 | 1571 | 1557.27 | 8.22 |

Table A.2100: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1558.43 | 9.75 | 1577 | 1559.67 | 10.11 | 1580 | 1561.57 | 10.61 | 1575 | 1557.53 | 10.7 |
| | | 2op | 1567 | 1555.63 | 2.95 | 1575 | 1564.3 | 5.18 | 1572 | 1561.27 | 6.83 | 1574 | 1560.83 | 6.24 |
| | 50 | rnd | 1573 | 1560.47 | 7.05 | 1576 | 1563.1 | 6.88 | 1576 | 1558.43 | 9.88 | 1574 | 1556.9 | 11.4 |
| | | 2op | 1560 | 1554.03 | 1.99 | 1576 | 1567.5 | 4.33 | 1574 | 1560.17 | 5.89 | 1575 | 1561.2 | 8.65 |
| 51 | 20 | rnd | 1578 | 1559.1 | 8.77 | 1577 | 1559.83 | 10.21 | 1578 | 1562 | 8.15 | 1575 | 1561.17 | 8.9 |
| | | 2op | 1565 | 1554.77 | 2.82 | 1577 | 1566.63 | 4.86 | 1574 | 1562.73 | 6.23 | 1570 | 1559.53 | 5.35 |
| | 50 | rnd | 1574 | 1556.4 | 10.6 | 1577 | 1561.93 | 9.99 | 1577 | 1563.7 | 8.7 | 1571 | 1558.4 | 8.49 |
| | | 2op | 1558 | 1554.27 | 1.7 | 1573 | 1565.3 | 5.11 | 1575 | 1567.27 | 4.18 | 1570 | 1557.6 | 5.12 |

Table A.2101: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1575 | 1559.83 | 8.38 | 1572 | 1559.2 | 7.86 | 1577 | 1558.03 | 9.47 | 1571 | 1553.83 | 9.73 |
| | | 2op | 1574 | 1558.47 | 8.05 | 1581 | 1560.07 | 8.04 | 1574 | 1553.6 | 10.97 | 1570 | 1555.7 | 9.22 |
| | 50 | rnd | 1578 | 1560.57 | 8.78 | 1572 | 1560.13 | 7.6 | 1572 | 1554.8 | 10.59 | 1571 | 1556.37 | 8.34 |
| | | 2op | 1570 | 1562.57 | 4.02 | 1572 | 1560.03 | 6.73 | 1571 | 1556.7 | 9.2 | 1575 | 1559.07 | 9.18 |
| 51 | 20 | rnd | 1577 | 1561.27 | 7.94 | 1571 | 1561.23 | 6.43 | 1575 | 1559.77 | 10.4 | 1572 | 1557.83 | 9.18 |
| | | 2op | 1572 | 1559.53 | 6.74 | 1573 | 1562.6 | 6.97 | 1573 | 1560.23 | 7.19 | 1572 | 1558.63 | 7.69 |
| | 50 | rnd | 1580 | 1562.63 | 9.1 | 1574 | 1562.17 | 8.39 | 1568 | 1558.7 | 6.58 | 1573 | 1556.37 | 8.79 |
| | | 2op | 1574 | 1562.07 | 5.39 | 1574 | 1560.63 | 7.6 | 1576 | 1563.6 | 6.28 | 1572 | 1560.07 | 7.74 |

Table A.2102: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1557.87 | 11.64 | 1577 | 1560.5 | 9.19 | 1576 | 1562.2 | 8.54 | 1577 | 1560.27 | 9.54 |
| | | 2op | 1560 | 1554.03 | 2.01 | 1571 | 1564.57 | 4.6 | 1568 | 1558.2 | 5.23 | 1570 | 1561.17 | 7.06 |
| | 50 | rnd | 1575 | 1559.27 | 7.93 | 1574 | 1560.47 | 8.27 | 1573 | 1560.87 | 7.3 | 1573 | 1559.87 | 9.66 |
| | | 2op | 1558 | 1554.17 | 1.74 | 1575 | 1567.67 | 3.78 | 1571 | 1561.43 | 6.23 | 1571 | 1560.07 | 6.89 |
| 51 | 20 | rnd | 1577 | 1559.93 | 11.02 | 1574 | 1558.07 | 11.54 | 1574 | 1559.8 | 8.19 | 1576 | 1557.77 | 10.6 |
| | | 2op | 1564 | 1554.97 | 2.93 | 1577 | 1566.57 | 4.19 | 1571 | 1562.23 | 5 | 1572 | 1560 | 5.66 |
| | 50 | rnd | 1572 | 1559.5 | 7.28 | 1572 | 1560.9 | 9.9 | 1572 | 1558.03 | 9.38 | 1578 | 1562.33 | 9.16 |
| | | 2op | 1558 | 1554.43 | 1.7 | 1572 | 1568.17 | 2.48 | 1572 | 1567.23 | 4.63 | 1572 | 1560 | 5.79 |

Table A.2103: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1578 | 1560.83 | 10.13 | 1573 | 1555.27 | 11.2 | 1574 | 1557.27 | 11.14 | 1573 | 1555.97 | 10.23 |
| | | 2op | 1570 | 1561.33 | 5.2 | 1575 | 1555.5 | 12.2 | 1574 | 1552.13 | 13.98 | 1573 | 1555.23 | 10.49 |
| | 50 | rnd | 1577 | 1561.6 | 6.12 | 1578 | 1558.13 | 9.58 | 1570 | 1553.7 | 13.17 | 1572 | 1556.27 | 13.56 |
| | | 2op | 1575 | 1561.27 | 8.67 | 1568 | 1556.87 | 8.48 | 1579 | 1553.6 | 13.01 | 1571 | 1554.9 | 12.19 |
| 51 | 20 | rnd | 1579 | 1560.87 | 8.29 | 1569 | 1551.73 | 10.59 | 1579 | 1554.43 | 11.84 | 1569 | 1555 | 10.45 |
| | | 2op | 1564 | 1557.93 | 3.22 | 1568 | 1557.27 | 11.87 | 1574 | 1555.73 | 9.56 | 1574 | 1556.23 | 7.96 |
| | 50 | rnd | 1572 | 1560.33 | 7.78 | 1573 | 1555.83 | 9.77 | 1574 | 1558.4 | 8.43 | 1572 | 1555 | 11.54 |
| | | 2op | 1571 | 1562.07 | 5.69 | 1571 | 1557.37 | 8.17 | 1572 | 1555.7 | 10.8 | 1570 | 1552.3 | 12.73 |

Table A.2104: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1560.57 | 7.47 | 1575 | 1556.63 | 11.07 | 1573 | 1556.77 | 7.19 | 1574 | 1556.8 | 11.72 |
| | | 2op | 1558 | 1554.07 | 1.44 | 1580 | 1558.77 | 12.53 | 1577 | 1556.77 | 14.6 | 1571 | 1551.13 | 12.71 |
| | 50 | rnd | 1570 | 1558 | 7.91 | 1575 | 1556.47 | 12.32 | 1571 | 1555.9 | 7.37 | 1577 | 1557.43 | 10.75 |
| | | 2op | 1558 | 1555.37 | 1.9 | 1574 | 1557.97 | 8.93 | 1577 | 1558.93 | 9.96 | 1572 | 1556.7 | 11.89 |
| 51 | 20 | rnd | 1574 | 1561.03 | 9.63 | 1574 | 1559.13 | 10.13 | 1576 | 1555.23 | 11.18 | 1571 | 1552 | 10.44 |
| | | 2op | 1564 | 1555.03 | 2.33 | 1580 | 1559.8 | 9.49 | 1571 | 1555.27 | 10.92 | 1573 | 1552.6 | 11.95 |
| | 50 | rnd | 1574 | 1561.97 | 7.21 | 1572 | 1558.03 | 10.78 | 1575 | 1556.83 | 9.79 | 1572 | 1558.47 | 9.96 |
| | | 2op | 1566 | 1556.8 | 3.17 | 1574 | 1560.47 | 8.54 | 1578 | 1558.73 | 10.35 | 1570 | 1554.3 | 12.12 |

Table A.2105: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1553.5 | 5.77 | 1572 | 1557.3 | 8.88 | 1568 | 1553.57 | 8.34 | 1562 | 1550.23 | 8.53 |
| | | 2op | 1569 | 1553.17 | 8.04 | 1570 | 1555 | 8.57 | 1566 | 1552.53 | 9.78 | 1565 | 1549 | 9.68 |
| | 50 | rnd | 1569 | 1557.4 | 6.72 | 1569 | 1555.07 | 8.8 | 1566 | 1552.77 | 8.14 | 1567 | 1552.67 | 8.49 |
| | | 2op | 1567 | 1550.23 | 10.99 | 1569 | 1558.03 | 6.99 | 1569 | 1554.27 | 10.08 | 1564 | 1546.2 | 12.79 |
| 51 | 20 | rnd | 1566 | 1557.1 | 7.39 | 1568 | 1560.07 | 5.72 | 1570 | 1557.7 | 8.05 | 1565 | 1550.63 | 9.1 |
| | | 2op | 1565 | 1551.57 | 9.44 | 1569 | 1556.87 | 7.23 | 1568 | 1557.77 | 7 | 1567 | 1550.4 | 10.57 |
| | 50 | rnd | 1567 | 1554.13 | 7.61 | 1571 | 1558.03 | 7.42 | 1568 | 1560.93 | 5.18 | 1566 | 1552.33 | 8.26 |
| | | 2op | 1568 | 1555.03 | 6.83 | 1569 | 1558.27 | 7.52 | 1569 | 1559.27 | 6.1 | 1566 | 1549.6 | 10.4 |

Table A.2106: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1548.67 | 10.97 | 1570 | 1557.2 | 7.59 | 1570 | 1552.73 | 8.7 | 1568 | 1553.97 | 7.25 |
| | | 2op | 1540 | 1531.9 | 2.94 | 1564 | 1540.87 | 12.59 | 1565 | 1544.57 | 12.24 | 1564 | 1546.73 | 13.01 |
| | 50 | rnd | 1565 | 1546.57 | 10.82 | 1569 | 1557.3 | 10.15 | 1569 | 1558.43 | 8.72 | 1565 | 1553.27 | 7.63 |
| | | 2op | 1540 | 1531.23 | 1.77 | 1566 | 1553.1 | 13.11 | 1566 | 1541.3 | 13.17 | 1567 | 1547.63 | 11.84 |
| 51 | 20 | rnd | 1565 | 1545.3 | 12.32 | 1572 | 1556.3 | 7 | 1569 | 1557.97 | 6.76 | 1568 | 1556.6 | 8.14 |
| | | 2op | 1554 | 1532.87 | 6.02 | 1570 | 1548 | 13.7 | 1566 | 1540.43 | 13.25 | 1565 | 1543.1 | 12.84 |
| | 50 | rnd | 1564 | 1546.83 | 14.01 | 1569 | 1552.93 | 8.01 | 1572 | 1555.93 | 7.99 | 1568 | 1556.2 | 7.46 |
| | | 2op | 1531 | 1530.93 | 0.37 | 1561 | 1538.93 | 11.51 | 1570 | 1544.43 | 12.11 | 1559 | 1539.03 | 9.29 |

Table A.2107: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1556.77 | 7.88 | 1565 | 1554.9 | 8.48 | 1570 | 1550.1 | 11.52 | 1568 | 1547.87 | 10.83 |
| | | 2op | 1567 | 1554.17 | 9.07 | 1569 | 1554.6 | 6.62 | 1568 | 1553.23 | 8.42 | 1566 | 1548.97 | 14.07 |
| | 50 | rnd | 1569 | 1554.83 | 9.44 | 1566 | 1557.33 | 5.71 | 1566 | 1554 | 6.91 | 1567 | 1553.13 | 9.09 |
| | | 2op | 1565 | 1553.5 | 7.16 | 1568 | 1556.13 | 6.95 | 1569 | 1553 | 8.91 | 1563 | 1548.13 | 8.83 |
| 51 | 20 | rnd | 1566 | 1557.43 | 6.08 | 1570 | 1556.93 | 7.53 | 1567 | 1556.4 | 7.49 | 1565 | 1554.73 | 6.96 |
| | | 2op | 1566 | 1552.67 | 10.41 | 1569 | 1555.57 | 7.95 | 1570 | 1558.13 | 6.85 | 1568 | 1553.7 | 8.88 |
| | 50 | rnd | 1570 | 1558.87 | 6.31 | 1570 | 1557.53 | 6.25 | 1570 | 1559.73 | 6.46 | 1568 | 1554.73 | 9.43 |
| | | 2op | 1572 | 1556.6 | 10.19 | 1569 | 1557.03 | 6.98 | 1569 | 1557.93 | 7.23 | 1568 | 1551.3 | 10.01 |

Table A.2108: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1545.27 | 9.99 | 1569 | 1557.37 | 9.46 | 1566 | 1555.13 | 8.45 | 1571 | 1555 | 8.04 |
| | | 2op | 1552 | 1532.5 | 4.37 | 1566 | 1545.2 | 13.86 | 1567 | 1546.33 | 13.01 | 1569 | 1549.73 | 10.33 |
| | 50 | rnd | 1561 | 1546.73 | 10.48 | 1568 | 1558.5 | 6.81 | 1569 | 1555.13 | 9.87 | 1569 | 1555.03 | 10.17 |
| | | 2op | 1540 | 1531.33 | 1.65 | 1569 | 1556.87 | 9.58 | 1561 | 1535.6 | 9.46 | 1564 | 1547.3 | 10.9 |
| 51 | 20 | rnd | 1569 | 1543.03 | 14.14 | 1565 | 1555.03 | 7.5 | 1569 | 1555.53 | 9.13 | 1568 | 1556.27 | 8.78 |
| | | 2op | 1557 | 1532.63 | 6.25 | 1565 | 1546.53 | 13.32 | 1570 | 1543.93 | 13.81 | 1565 | 1545.2 | 11.76 |
| | 50 | rnd | 1566 | 1550.57 | 10.96 | 1567 | 1552.2 | 10.33 | 1570 | 1556.67 | 9.8 | 1564 | 1550.83 | 9.44 |
| | | 2op | 1540 | 1531.3 | 1.64 | 1565 | 1540.53 | 11.44 | 1568 | 1544.93 | 14.61 | 1564 | 1539.6 | 10.53 |

Table A.2109: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1569 | 1557.13 | 9.22 | 1567 | 1545.77 | 14.15 | 1562 | 1547.17 | 8.62 | 1562 | 1545.93 | 12.32 |
| | | 2op | 1569 | 1552.53 | 11.14 | 1570 | 1550.2 | 8.79 | 1564 | 1548.27 | 10.75 | 1569 | 1546 | 12.34 |
| | 50 | rnd | 1571 | 1556.33 | 8.58 | 1563 | 1549 | 9.95 | 1564 | 1545.2 | 11.91 | 1564 | 1548.53 | 9.43 |
| | | 2op | 1569 | 1557.03 | 9.6 | 1563 | 1546.07 | 11.1 | 1564 | 1546.17 | 14.13 | 1569 | 1549.37 | 10.96 |
| 51 | 20 | rnd | 1572 | 1558.43 | 8.32 | 1566 | 1546.63 | 13.26 | 1568 | 1551.27 | 10.19 | 1567 | 1545.07 | 11.49 |
| | | 2op | 1564 | 1556.57 | 5.49 | 1566 | 1546.77 | 10.2 | 1561 | 1545.97 | 12.29 | 1567 | 1546.43 | 10.72 |
| | 50 | rnd | 1569 | 1557.27 | 7.91 | 1567 | 1549.47 | 9.23 | 1566 | 1547.7 | 12.8 | 1569 | 1548.97 | 9.67 |
| | | 2op | 1566 | 1558.73 | 4.05 | 1572 | 1549.13 | 12.31 | 1565 | 1550.03 | 7.68 | 1565 | 1548.33 | 10.04 |

Table A.2110: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1547.2 | 9.73 | 1567 | 1548.87 | 9.42 | 1567 | 1547.4 | 12.57 | 1573 | 1550 | 10.29 |
| | | 2op | 1541 | 1531.33 | 1.83 | 1570 | 1550.5 | 11 | 1564 | 1549.53 | 10.39 | 1566 | 1548.87 | 10.98 |
| | 50 | rnd | 1565 | 1549.97 | 8.26 | 1565 | 1548.77 | 10.33 | 1564 | 1548.57 | 10.46 | 1564 | 1549.5 | 12.44 |
| | | 2op | 1531 | 1531 | 0 | 1566 | 1549.73 | 10.75 | 1569 | 1545.53 | 11.56 | 1568 | 1550.47 | 12.72 |
| 51 | 20 | rnd | 1565 | 1551.77 | 12.12 | 1567 | 1551.03 | 9.83 | 1566 | 1551.9 | 10.43 | 1566 | 1545.83 | 10.32 |
| | | 2op | 1531 | 1531 | 0 | 1564 | 1550.27 | 11.67 | 1566 | 1546.77 | 12.08 | 1568 | 1546.17 | 12.56 |
| | 50 | rnd | 1569 | 1553.03 | 10.49 | 1565 | 1553.2 | 9.17 | 1567 | 1546.6 | 12.16 | 1573 | 1546.77 | 13.81 |
| | | 2op | 1531 | 1531 | 0 | 1568 | 1543.97 | 13.04 | 1567 | 1549.8 | 11.72 | 1567 | 1545.6 | 10.77 |

Table A.2111: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1551.2 | 7.45 | 1563 | 1551.23 | 6.88 | 1565 | 1552.4 | 7.63 | 1563 | 1551.3 | 6.69 |
| | | 2op | 1568 | 1549.8 | 10.11 | 1563 | 1553.07 | 7.34 | 1568 | 1549.2 | 10.38 | 1565 | 1551.03 | 8.69 |
| | 50 | rnd | 1566 | 1552.13 | 8.66 | 1563 | 1551.17 | 8.51 | 1564 | 1549.5 | 9.53 | 1564 | 1547.93 | 10.32 |
| | | 2op | 1566 | 1553.13 | 8.63 | 1568 | 1551.27 | 8.13 | 1565 | 1550.63 | 8.84 | 1564 | 1551.4 | 7.97 |
| 51 | 20 | rnd | 1562 | 1553.3 | 6.14 | 1567 | 1554.07 | 7.46 | 1567 | 1554.83 | 6.22 | 1565 | 1552.27 | 7.2 |
| | | 2op | 1564 | 1552.27 | 7.2 | 1567 | 1555.13 | 5.8 | 1566 | 1555.53 | 5.93 | 1561 | 1550.57 | 6.12 |
| | 50 | rnd | 1565 | 1552.1 | 5.64 | 1567 | 1553.17 | 7.53 | 1568 | 1554.07 | 6.99 | 1566 | 1548.57 | 8.39 |
| | | 2op | 1563 | 1553.83 | 4.39 | 1568 | 1554 | 7.59 | 1568 | 1553.9 | 6.17 | 1565 | 1552.47 | 9.87 |

Table A.2112: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1559 | 1548.17 | 8.53 | 1566 | 1554.4 | 6.38 | 1567 | 1551.93 | 6.98 | 1566 | 1551.93 | 7.93 |
| | | 2op | 1553 | 1548.67 | 1.49 | 1555 | 1548.33 | 2.45 | 1561 | 1550.33 | 4.1 | 1563 | 1551.37 | 6.82 |
| | 50 | rnd | 1562 | 1548.7 | 9.44 | 1567 | 1553.2 | 6.68 | 1566 | 1551.93 | 8.86 | 1565 | 1552.2 | 8.5 |
| | | 2op | 1548 | 1547.5 | 2.11 | 1556 | 1548.93 | 2.2 | 1557 | 1548.6 | 2.19 | 1566 | 1550.47 | 6.91 |
| 51 | 20 | rnd | 1565 | 1547.3 | 8.23 | 1565 | 1552.8 | 9.35 | 1567 | 1551.9 | 8.97 | 1562 | 1551.2 | 8.06 |
| | | 2op | 1557 | 1548.37 | 1.67 | 1558 | 1548.33 | 2.75 | 1557 | 1548.6 | 1.92 | 1563 | 1551.87 | 5.75 |
| | 50 | rnd | 1565 | 1549.17 | 9.08 | 1565 | 1552.7 | 6.54 | 1568 | 1551.33 | 7.16 | 1570 | 1554.43 | 8.2 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1559 | 1550.7 | 3.94 |

Table A.2113: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1552.03 | 6.7 | 1565 | 1551.73 | 6.89 | 1565 | 1549.73 | 8.25 | 1558 | 1546.93 | 7.83 |
| | | 2op | 1570 | 1551.5 | 10.39 | 1567 | 1552.23 | 8.83 | 1564 | 1551.5 | 8.41 | 1565 | 1550.37 | 8.08 |
| | 50 | rnd | 1564 | 1553.1 | 5.98 | 1563 | 1550.5 | 7.1 | 1567 | 1550.07 | 8.76 | 1570 | 1552.3 | 9.06 |
| | | 2op | 1568 | 1550.27 | 11.31 | 1568 | 1552.1 | 9.25 | 1568 | 1550.63 | 8.68 | 1563 | 1547.17 | 9.72 |
| 51 | 20 | rnd | 1565 | 1551.5 | 9.83 | 1567 | 1555.13 | 8.11 | 1562 | 1551.33 | 6.98 | 1570 | 1552.73 | 6.64 |
| | | 2op | 1568 | 1553.07 | 6.17 | 1564 | 1552.5 | 6.66 | 1567 | 1550.9 | 7.58 | 1566 | 1553.33 | 7.31 |
| | 50 | rnd | 1568 | 1555.13 | 6.95 | 1570 | 1554 | 8.25 | 1564 | 1553.77 | 7.91 | 1568 | 1550.47 | 6.9 |
| | | 2op | 1568 | 1553.33 | 7.88 | 1568 | 1555.6 | 7.56 | 1568 | 1552.93 | 8.06 | 1564 | 1549.4 | 8.7 |

Table A.2114: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1568 | 1548.8 | 9.68 | 1566 | 1552.5 | 7.12 | 1567 | 1551 | 9.65 | 1570 | 1553.83 | 7.34 |
| | | 2op | 1560 | 1549.07 | 3 | 1557 | 1548.27 | 2.85 | 1564 | 1551 | 4.46 | 1565 | 1552.07 | 8.3 |
| | 50 | rnd | 1561 | 1548.07 | 7.09 | 1565 | 1551.23 | 7.23 | 1567 | 1551.07 | 8.8 | 1570 | 1550.9 | 9.48 |
| | | 2op | 1553 | 1548.17 | 0.91 | 1553 | 1548.37 | 1.07 | 1564 | 1548.9 | 4.47 | 1566 | 1551.43 | 8.13 |
| 51 | 20 | rnd | 1566 | 1546.97 | 8.34 | 1566 | 1552.57 | 7.86 | 1568 | 1552.6 | 7.93 | 1570 | 1548.3 | 10.64 |
| | | 2op | 1553 | 1548.1 | 2.54 | 1556 | 1549.17 | 2.36 | 1557 | 1548.7 | 2.61 | 1561 | 1550.53 | 4.58 |
| | 50 | rnd | 1561 | 1548.43 | 8.23 | 1566 | 1552.43 | 6.02 | 1568 | 1552.73 | 7.26 | 1564 | 1553.4 | 7.44 |
| | | 2op | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1552 | 1548.27 | 0.87 | 1559 | 1550.1 | 3.45 |

Table A.2115: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1568 | 1555.23 | 8.8 | 1563 | 1548.67 | 8.01 | 1562 | 1548.57 | 8.04 | 1562 | 1546.93 | 10.05 |
| | | 2op | 1562 | 1549.9 | 5.09 | 1566 | 1547.9 | 9 | 1566 | 1546.5 | 11.82 | 1570 | 1550.33 | 10.1 |
| | 50 | rnd | 1567 | 1552.07 | 7.09 | 1565 | 1547.43 | 11.41 | 1567 | 1548.07 | 8.76 | 1559 | 1543.57 | 12.52 |
| | | 2op | 1564 | 1552.27 | 6.5 | 1562 | 1545.43 | 10.61 | 1565 | 1546.33 | 11.52 | 1562 | 1544.87 | 11.94 |
| 51 | 20 | rnd | 1565 | 1552.37 | 7.58 | 1563 | 1549.97 | 9.3 | 1564 | 1546.97 | 10.5 | 1564 | 1545.87 | 11.63 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1562 | 1549.83 | 8.15 | 1564 | 1549 | 11.09 | 1563 | 1547.57 | 8.92 |
| | 50 | rnd | 1567 | 1550.3 | 7.13 | 1564 | 1548.17 | 9.47 | 1564 | 1547.07 | 10.5 | 1560 | 1547.9 | 10.18 |
| | | 2op | 1559 | 1549.53 | 2.61 | 1568 | 1550.33 | 11.81 | 1567 | 1551.93 | 9.12 | 1566 | 1548.43 | 11.82 |

Table A.2116: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1549.7 | 7.64 | 1570 | 1548.43 | 11.76 | 1567 | 1549.17 | 8.11 | 1560 | 1547.33 | 9.34 |
| | | 2op | 1548 | 1548 | 0 | 1562 | 1548.53 | 8.93 | 1562 | 1548.03 | 10.03 | 1564 | 1544.63 | 11.42 |
| | 50 | rnd | 1564 | 1548.73 | 7.89 | 1563 | 1549.4 | 9.49 | 1565 | 1547.97 | 10.25 | 1566 | 1549.13 | 10.52 |
| | | 2op | 1548 | 1548 | 0 | 1561 | 1549.83 | 6.19 | 1559 | 1548.73 | 6.03 | 1561 | 1545.13 | 8.76 |
| 51 | 20 | rnd | 1561 | 1548.33 | 6.43 | 1564 | 1547.23 | 11.02 | 1562 | 1548.83 | 8.03 | 1566 | 1546.13 | 10.32 |
| | | 2op | 1548 | 1548 | 0 | 1565 | 1547.63 | 10.92 | 1563 | 1548.6 | 10.04 | 1563 | 1548.7 | 7.61 |
| | 50 | rnd | 1567 | 1550.93 | 7.92 | 1563 | 1548.3 | 9.46 | 1566 | 1548.8 | 10.22 | 1557 | 1543.1 | 11.99 |
| | | 2op | 1548 | 1548 | 0 | 1562 | 1550.3 | 6.4 | 1570 | 1548.83 | 9.21 | 1564 | 1545.17 | 11.18 |

Table A.2117: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2764 | 2747.1 | 12.51 | 2767 | 2746.2 | 13.3 | 2762 | 2744.93 | 11.86 | 2764 | 2740.73 | 12.02 |
| | | 2op | 2775 | 2742.9 | 12.68 | 2772 | 2748.67 | 13.38 | 2780 | 2743.33 | 14.69 | 2772 | 2743.47 | 17.31 |
| | 50 | rnd | 2768 | 2746.33 | 10.64 | 2771 | 2747.2 | 13.44 | 2765 | 2746.63 | 10.64 | 2770 | 2740.53 | 15.15 |
| | | 2op | 2767 | 2747.93 | 11.56 | 2765 | 2744.23 | 13.54 | 2773 | 2746.67 | 13.8 | 2777 | 2742.87 | 14.46 |
| 51 | 20 | rnd | 2771 | 2747.97 | 9.47 | 2782 | 2752.9 | 10.92 | 2772 | 2749.7 | 11.96 | 2769 | 2743.5 | 11.25 |
| | | 2op | 2775 | 2752.97 | 10.93 | 2779 | 2754.13 | 10.77 | 2767 | 2751 | 9.51 | 2762 | 2748.77 | 8.68 |
| | 50 | rnd | 2781 | 2749.77 | 12.53 | 2767 | 2745.27 | 13.24 | 2761 | 2747.83 | 11.14 | 2770 | 2746.7 | 13.32 |
| | | 2op | 2780 | 2753.3 | 12.82 | 2768 | 2750.23 | 11.17 | 2784 | 2752.13 | 14.34 | 2768 | 2745.8 | 10.64 |

Table A.2118: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2746.53 | 10.38 | 2780 | 2752.43 | 10.73 | 2773 | 2747.33 | 13.16 | 2765 | 2740.73 | 10.84 |
| | | 2op | 2778 | 2763.87 | 5.45 | 2778 | 2765.5 | 6.54 | 2773 | 2756.07 | 10.37 | 2770 | 2750.37 | 11.83 |
| | 50 | rnd | 2771 | 2745.57 | 11.38 | 2765 | 2746.03 | 10.99 | 2767 | 2750.67 | 10.09 | 2767 | 2744.83 | 11.03 |
| | | 2op | 2778 | 2763.73 | 6.89 | 2779 | 2764.87 | 4.74 | 2778 | 2757.47 | 11.66 | 2774 | 2754.07 | 12.52 |
| 51 | 20 | rnd | 2766 | 2743.9 | 12.64 | 2771 | 2751.1 | 14.4 | 2770 | 2747.93 | 11.52 | 2766 | 2745.37 | 14.59 |
| | | 2op | 2771 | 2762.7 | 7.47 | 2772 | 2763.5 | 5.1 | 2777 | 2762.8 | 7.54 | 2778 | 2759.57 | 7.89 |
| | 50 | rnd | 2762 | 2740.1 | 17.46 | 2775 | 2747.87 | 15.06 | 2769 | 2748.7 | 12.52 | 2767 | 2744.57 | 14.38 |
| | | 2op | 2775 | 2763.8 | 3.87 | 2774 | 2763.57 | 3.37 | 2774 | 2764.17 | 5.23 | 2777 | 2761.03 | 8.56 |

Table A.2119: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2773 | 2747.6 | 13.29 | 2774 | 2745.3 | 15.05 | 2760 | 2740.17 | 13.04 | 2766 | 2745.7 | 13.17 |
| | | 2op | 2773 | 2749.3 | 12.98 | 2774 | 2746.4 | 13.33 | 2775 | 2747.57 | 13.68 | 2764 | 2742.27 | 11.61 |
| | 50 | rnd | 2761 | 2747.43 | 8.99 | 2766 | 2742.6 | 12.79 | 2768 | 2747.6 | 14.13 | 2768 | 2743.47 | 13.93 |
| | | 2op | 2766 | 2747.47 | 9.27 | 2769 | 2747.57 | 12.23 | 2767 | 2746.53 | 12.22 | 2770 | 2742.23 | 12.01 |
| 51 | 20 | rnd | 2763 | 2745.63 | 9.65 | 2776 | 2748.9 | 12.91 | 2774 | 2748 | 11.22 | 2767 | 2745.8 | 12.67 |
| | | 2op | 2770 | 2752.1 | 10.26 | 2775 | 2751.7 | 10.05 | 2775 | 2750.53 | 11.72 | 2765 | 2745 | 11.76 |
| | 50 | rnd | 2765 | 2749.57 | 10.04 | 2769 | 2746.97 | 12.8 | 2763 | 2744.4 | 12.58 | 2771 | 2741.33 | 14.58 |
| | | 2op | 2776 | 2753.77 | 12.67 | 2770 | 2753.17 | 10.05 | 2778 | 2748.93 | 12.66 | 2762 | 2744.17 | 13.99 |

Table A.2120: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2767 | 2742.73 | 16.18 | 2772 | 2747.6 | 14.6 | 2772 | 2747.8 | 13.39 | 2770 | 2750.37 | 13.06 |
| | | 2op | 2778 | 2762.9 | 7.11 | 2777 | 2761.6 | 8.54 | 2778 | 2755.2 | 10.56 | 2767 | 2747.6 | 13.19 |
| | 50 | rnd | 2778 | 2748.63 | 12.7 | 2773 | 2746.9 | 13.3 | 2765 | 2749.13 | 7.46 | 2767 | 2746.57 | 15.24 |
| | | 2op | 2778 | 2763.13 | 3.48 | 2778 | 2765.53 | 6.04 | 2779 | 2763.07 | 7.51 | 2776 | 2754.67 | 11.14 |
| 51 | 20 | rnd | 2773 | 2745.93 | 14.59 | 2775 | 2751 | 12.44 | 2774 | 2749.23 | 12.99 | 2775 | 2749.77 | 13.44 |
| | | 2op | 2771 | 2762.97 | 2.65 | 2771 | 2763.6 | 4.12 | 2773 | 2763.27 | 5.46 | 2772 | 2756.4 | 10.2 |
| | 50 | rnd | 2775 | 2740.9 | 11.85 | 2773 | 2745.67 | 19.17 | 2772 | 2748.47 | 14.2 | 2773 | 2746.63 | 11.25 |
| | | 2op | 2771 | 2763.13 | 2.65 | 2773 | 2763.87 | 4.01 | 2772 | 2763.7 | 4.81 | 2773 | 2758.57 | 11.39 |

Table A.2121: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2767 | 2750.93 | 14.5 | 2764 | 2740.87 | 16.95 | 2764 | 2740.37 | 15.56 | 2760 | 2743.97 | 11.59 |
| | | 2op | 2772 | 2752.67 | 11.46 | 2755 | 2738.23 | 12.21 | 2769 | 2739.67 | 13.97 | 2767 | 2743.9 | 14.16 |
| | 50 | rnd | 2764 | 2750.13 | 7.44 | 2768 | 2741.5 | 17.42 | 2765 | 2741.3 | 14.52 | 2768 | 2740.6 | 11.43 |
| | | 2op | 2767 | 2749.53 | 11.59 | 2768 | 2744.23 | 11.7 | 2763 | 2741.47 | 9.92 | 2775 | 2743.2 | 12.64 |
| 51 | 20 | rnd | 2769 | 2752.4 | 12.18 | 2761 | 2740.87 | 12.85 | 2764 | 2738.67 | 12.76 | 2769 | 2743.13 | 13.58 |
| | | 2op | 2775 | 2762.9 | 6.46 | 2769 | 2739 | 16.84 | 2763 | 2743.73 | 13.36 | 2773 | 2745.03 | 14.64 |
| | 50 | rnd | 2775 | 2752.3 | 14.17 | 2770 | 2743.63 | 12.84 | 2774 | 2741.83 | 16.71 | 2765 | 2741.17 | 12.85 |
| | | 2op | 2779 | 2761.73 | 10.42 | 2771 | 2739.73 | 13.02 | 2772 | 2743.47 | 10.38 | 2759 | 2740.8 | 11.31 |

Table A.2122: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2767 | 2744.8 | 13.39 | 2763 | 2741.9 | 15.32 | 2775 | 2741.43 | 13.1 | 2766 | 2740.63 | 16.37 |
| | | 2op | 2773 | 2762.8 | 3.14 | 2776 | 2744.67 | 15.55 | 2776 | 2741.67 | 13.52 | 2770 | 2740.47 | 14.39 |
| | 50 | rnd | 2771 | 2742.13 | 11.67 | 2764 | 2741.37 | 11.82 | 2771 | 2742.07 | 11.87 | 2779 | 2742.47 | 16.31 |
| | | 2op | 2769 | 2762.23 | 1.38 | 2767 | 2743.13 | 14.29 | 2776 | 2747 | 14.16 | 2762 | 2740.73 | 11.11 |
| 51 | 20 | rnd | 2767 | 2742.37 | 16.16 | 2776 | 2744.43 | 17.43 | 2769 | 2741.87 | 15.05 | 2772 | 2741.9 | 16.84 |
| | | 2op | 2765 | 2761.83 | 1.6 | 2773 | 2745.8 | 14.58 | 2775 | 2744.87 | 14.89 | 2763 | 2737.7 | 12.89 |
| | 50 | rnd | 2764 | 2741.63 | 14.9 | 2776 | 2745.13 | 14.25 | 2765 | 2744.6 | 11.41 | 2770 | 2742.3 | 12.59 |
| | | 2op | 2762 | 2762 | 0 | 2773 | 2748.97 | 13.56 | 2778 | 2744.6 | 12.06 | 2769 | 2739.4 | 16.25 |

Table A.2123: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2839 | 2817.53 | 14.39 | 2843 | 2818.2 | 14.27 | 2838 | 2813.77 | 16.11 | 2842 | 2816.23 | 12.32 |
| | | 2op | 2838 | 2812.6 | 13.26 | 2835 | 2813.97 | 13.07 | 2839 | 2815.33 | 15.33 | 2842 | 2812.07 | 14.34 |
| | 50 | rnd | 2838 | 2819.43 | 11.66 | 2839 | 2817.4 | 12.83 | 2843 | 2817 | 13.9 | 2831 | 2807.6 | 13.97 |
| | | 2op | 2835 | 2812.8 | 13.95 | 2833 | 2812.57 | 12.73 | 2841 | 2816.63 | 12.62 | 2828 | 2807.27 | 13.19 |
| 51 | 20 | rnd | 2849 | 2820.13 | 11.95 | 2837 | 2821.03 | 12.18 | 2840 | 2817.87 | 10.23 | 2840 | 2818.13 | 12.74 |
| | | 2op | 2837 | 2815.73 | 12.14 | 2846 | 2817.83 | 14.1 | 2835 | 2815.8 | 14.02 | 2837 | 2816.37 | 13.08 |
| | 50 | rnd | 2836 | 2818 | 12.11 | 2836 | 2818.17 | 11.86 | 2842 | 2815.77 | 11.57 | 2848 | 2818 | 14.4 |
| | | 2op | 2837 | 2816.5 | 12.43 | 2838 | 2815.4 | 10.24 | 2841 | 2814.93 | 13.3 | 2842 | 2818.87 | 13.3 |

Table A.2124: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2836 | 2814.97 | 12.36 | 2841 | 2818.27 | 10.08 | 2841 | 2817.9 | 12.66 | 2838 | 2817.57 | 13.91 |
| | | 2op | 2827 | 2808.23 | 6.62 | 2829 | 2810.87 | 9.22 | 2835 | 2809.73 | 10.27 | 2834 | 2814.9 | 9.45 |
| | 50 | rnd | 2840 | 2816.17 | 17.15 | 2839 | 2817.33 | 13.22 | 2843 | 2817.33 | 11.84 | 2839 | 2812.87 | 9.1 |
| | | 2op | 2818 | 2806.7 | 4.6 | 2834 | 2809.17 | 7.48 | 2835 | 2813.3 | 9.91 | 2839 | 2811.87 | 12.85 |
| 51 | 20 | rnd | 2834 | 2814.7 | 13.86 | 2842 | 2820.43 | 10.49 | 2846 | 2819.83 | 11.36 | 2840 | 2816.27 | 15.41 |
| | | 2op | 2818 | 2809.87 | 4.99 | 2819 | 2807.8 | 5.25 | 2843 | 2813.9 | 11.45 | 2836 | 2816.17 | 11.34 |
| | 50 | rnd | 2827 | 2809.9 | 11.15 | 2837 | 2819.33 | 11.52 | 2834 | 2815.83 | 11.7 | 2844 | 2817.3 | 14.52 |
| | | 2op | 2821 | 2807.63 | 4.37 | 2818 | 2809.13 | 4.49 | 2819 | 2809.77 | 5.42 | 2841 | 2811.07 | 13.94 |

Table A.2125: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2840 | 2817.33 | 14.37 | 2846 | 2816.5 | 12.73 | 2837 | 2812.2 | 12.47 | 2837 | 2813.93 | 13.26 |
| | | 2op | 2840 | 2815.57 | 15.34 | 2839 | 2812.87 | 12.2 | 2845 | 2816.07 | 12.93 | 2828 | 2811.2 | 11.9 |
| | 50 | rnd | 2835 | 2817.27 | 12.64 | 2833 | 2816.83 | 13.26 | 2840 | 2814.13 | 11.88 | 2836 | 2808.2 | 15.62 |
| | | 2op | 2846 | 2818.97 | 12.2 | 2841 | 2814.17 | 16.2 | 2834 | 2814.63 | 12.95 | 2839 | 2816.33 | 14.37 |
| 51 | 20 | rnd | 2843 | 2818.73 | 11.57 | 2846 | 2820.17 | 11.82 | 2848 | 2817.03 | 11.2 | 2844 | 2817.03 | 12.94 |
| | | 2op | 2837 | 2815.6 | 10.04 | 2839 | 2817 | 12.25 | 2841 | 2816.87 | 13.6 | 2834 | 2811.77 | 15.01 |
| | 50 | rnd | 2836 | 2818.6 | 8.95 | 2838 | 2811.47 | 12.99 | 2838 | 2820.8 | 9.75 | 2846 | 2819.13 | 13.59 |
| | | 2op | 2840 | 2820.27 | 10.99 | 2839 | 2816.83 | 12.85 | 2841 | 2818.37 | 12.47 | 2832 | 2814.73 | 12.77 |

Table A.2126: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2845 | 2816.87 | 12.21 | 2844 | 2819.33 | 12.54 | 2841 | 2819.73 | 17.7 | 2840 | 2817.77 | 14.11 |
| | | 2op | 2830 | 2807.9 | 8.75 | 2838 | 2809.43 | 11.31 | 2840 | 2813.9 | 11.69 | 2843 | 2817 | 10.38 |
| | 50 | rnd | 2836 | 2817.47 | 9.3 | 2838 | 2819.4 | 8.86 | 2843 | 2821.5 | 12.33 | 2837 | 2817.83 | 8.91 |
| | | 2op | 2822 | 2807.1 | 5.24 | 2828 | 2811.37 | 7.8 | 2840 | 2813.73 | 10.82 | 2841 | 2813.7 | 11.58 |
| 51 | 20 | rnd | 2836 | 2812.13 | 14.29 | 2840 | 2818.6 | 11.98 | 2844 | 2818.6 | 14.54 | 2840 | 2819.97 | 11.06 |
| | | 2op | 2820 | 2809.33 | 5.83 | 2830 | 2810.33 | 7.37 | 2826 | 2811.33 | 8.58 | 2845 | 2817.1 | 12.07 |
| | 50 | rnd | 2838 | 2810.97 | 12.67 | 2839 | 2816.1 | 12.47 | 2842 | 2820.63 | 12.89 | 2834 | 2819.43 | 11.04 |
| | | 2op | 2816 | 2806.9 | 4.31 | 2825 | 2810.17 | 5.41 | 2823 | 2810.3 | 6.89 | 2841 | 2812.5 | 14.1 |

Table A.2127: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2836 | 2818.3 | 10.55 | 2835 | 2810.63 | 13.19 | 2839 | 2814.57 | 13.3 | 2838 | 2814.03 | 13.87 |
| | | 2op | 2840 | 2819.97 | 10.56 | 2838 | 2814.57 | 12.65 | 2829 | 2808.6 | 13.88 | 2833 | 2811.33 | 16.94 |
| | 50 | rnd | 2843 | 2818.8 | 14.6 | 2836 | 2811.77 | 12.69 | 2839 | 2813.27 | 16.39 | 2839 | 2817.63 | 11.33 |
| | | 2op | 2842 | 2817.83 | 11.94 | 2835 | 2814.63 | 12.8 | 2831 | 2813.7 | 10.96 | 2830 | 2809.3 | 15.2 |
| 51 | 20 | rnd | 2836 | 2821.23 | 9.36 | 2842 | 2813.03 | 11.87 | 2840 | 2812.2 | 12.96 | 2838 | 2812.57 | 12.91 |
| | | 2op | 2832 | 2808.47 | 8.47 | 2836 | 2808.43 | 15.1 | 2837 | 2810.53 | 14.18 | 2835 | 2813.43 | 11.46 |
| | 50 | rnd | 2837 | 2823.13 | 10.28 | 2833 | 2814.33 | 11.79 | 2843 | 2816.17 | 12.74 | 2832 | 2809.47 | 13.98 |
| | | 2op | 2841 | 2817.97 | 12.43 | 2837 | 2810.87 | 12.59 | 2828 | 2812.27 | 13.55 | 2833 | 2811.57 | 12.47 |

Table A.2128: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2838 | 2813.77 | 16.77 | 2834 | 2812.87 | 15.38 | 2833 | 2815.23 | 12.6 | 2841 | 2810.77 | 14.51 |
| | | 2op | 2814 | 2807.37 | 4.65 | 2842 | 2815.2 | 14.85 | 2846 | 2815.77 | 14.99 | 2837 | 2815.07 | 13.92 |
| | 50 | rnd | 2839 | 2812.4 | 16.01 | 2838 | 2816.47 | 14.53 | 2842 | 2813.83 | 14.07 | 2840 | 2812.1 | 13.12 |
| | | 2op | 2816 | 2807.73 | 3.83 | 2833 | 2814.9 | 11.1 | 2836 | 2816.3 | 11.99 | 2839 | 2810.63 | 16.62 |
| 51 | 20 | rnd | 2836 | 2814 | 12.43 | 2838 | 2809.83 | 14.67 | 2840 | 2815.27 | 11.99 | 2842 | 2820 | 12.19 |
| | | 2op | 2824 | 2808.4 | 4.92 | 2841 | 2816.33 | 14.01 | 2840 | 2813.53 | 14.94 | 2834 | 2812.33 | 13.85 |
| | 50 | rnd | 2836 | 2815.93 | 10.11 | 2839 | 2816 | 12.26 | 2841 | 2814.13 | 17.22 | 2835 | 2813.13 | 12.6 |
| | | 2op | 2810 | 2806.2 | 2.94 | 2834 | 2812.57 | 11.26 | 2839 | 2810.77 | 17.1 | 2835 | 2813.83 | 13.59 |

Table A.2129: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2708 | 2688.83 | 10.86 | 2710 | 2687.57 | 14.05 | 2708 | 2687.17 | 8.7 | 2709 | 2687.13 | 13.52 |
| | | 2op | 2709 | 2692.7 | 10.37 | 2707 | 2687.57 | 10.64 | 2706 | 2685.53 | 10.72 | 2707 | 2685.6 | 12.78 |
| | 50 | rnd | 2706 | 2687.63 | 11.11 | 2705 | 2685.8 | 12.21 | 2710 | 2686.33 | 12.63 | 2711 | 2683.63 | 15.5 |
| | | 2op | 2714 | 2690.63 | 12.95 | 2712 | 2687.1 | 9.94 | 2709 | 2686.5 | 11.9 | 2702 | 2683.3 | 12.11 |
| 51 | 20 | rnd | 2711 | 2691.43 | 10.29 | 2707 | 2691.47 | 9.44 | 2714 | 2691.33 | 12.13 | 2711 | 2688.4 | 12.06 |
| | | 2op | 2716 | 2694.3 | 13.66 | 2706 | 2690.2 | 8.42 | 2714 | 2687.83 | 12.93 | 2707 | 2688.1 | 13.41 |
| | 50 | rnd | 2704 | 2692.67 | 7.88 | 2711 | 2688.33 | 13.04 | 2710 | 2687.57 | 12.44 | 2713 | 2688.03 | 13.37 |
| | | 2op | 2711 | 2694.57 | 9.19 | 2707 | 2690.4 | 8.54 | 2708 | 2691.5 | 9.72 | 2711 | 2691.4 | 10.26 |

Table A.2130: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2709 | 2685.83 | 12.47 | 2715 | 2690.67 | 14.15 | 2714 | 2687.67 | 15.39 | 2715 | 2687.63 | 13.12 |
| | | 2op | 2708 | 2693.47 | 6.2 | 2712 | 2697.9 | 6.18 | 2707 | 2691.7 | 8.75 | 2712 | 2691.07 | 9.77 |
| | 50 | rnd | 2708 | 2686.77 | 13.69 | 2710 | 2692.37 | 11.52 | 2713 | 2689.37 | 11.57 | 2709 | 2691.83 | 10.78 |
| | | 2op | 2706 | 2693.43 | 6.66 | 2709 | 2699.83 | 4.86 | 2712 | 2695.17 | 8.54 | 2709 | 2690.87 | 11.37 |
| 51 | 20 | rnd | 2706 | 2686.9 | 11.67 | 2710 | 2689.97 | 13.28 | 2714 | 2692.8 | 13.04 | 2717 | 2690.87 | 12.84 |
| | | 2op | 2702 | 2695.7 | 3.97 | 2715 | 2697.4 | 6.09 | 2709 | 2695.87 | 6.33 | 2711 | 2692.67 | 11.69 |
| | 50 | rnd | 2708 | 2683.23 | 13.61 | 2719 | 2688.47 | 17.77 | 2709 | 2689.87 | 12.92 | 2712 | 2688.4 | 12.44 |
| | | 2op | 2700 | 2694.33 | 4.51 | 2706 | 2696.17 | 3.56 | 2706 | 2697.3 | 5.87 | 2716 | 2696.53 | 8.45 |

Table A.2131: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2710 | 2688.3 | 11.73 | 2707 | 2684.67 | 12.1 | 2707 | 2686.57 | 13.1 | 2705 | 2686.03 | 11.01 |
| | | 2op | 2710 | 2687.37 | 15.5 | 2709 | 2687.03 | 12.96 | 2703 | 2686.57 | 11.11 | 2705 | 2686.17 | 12.97 |
| | 50 | rnd | 2706 | 2688.63 | 10.43 | 2712 | 2687.57 | 10.92 | 2701 | 2686.53 | 10.65 | 2711 | 2688.17 | 13.46 |
| | | 2op | 2710 | 2690 | 12.51 | 2710 | 2687.4 | 11.51 | 2711 | 2689.37 | 12.49 | 2706 | 2683.67 | 12.91 |
| 51 | 20 | rnd | 2710 | 2691.13 | 9.9 | 2714 | 2692.9 | 9.16 | 2716 | 2688.2 | 16.02 | 2708 | 2689.8 | 12.2 |
| | | 2op | 2715 | 2692.9 | 11.21 | 2709 | 2693.73 | 10.93 | 2707 | 2692.57 | 8.26 | 2709 | 2687.87 | 12.36 |
| | 50 | rnd | 2708 | 2689.07 | 10.51 | 2714 | 2690.83 | 12.59 | 2708 | 2692.4 | 10.28 | 2712 | 2684.17 | 14.8 |
| | | 2op | 2707 | 2691.43 | 11.1 | 2713 | 2687.8 | 12.68 | 2708 | 2690.93 | 8.4 | 2713 | 2688.97 | 13.06 |

Table A.2132: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2713 | 2682.27 | 13.74 | 2717 | 2691.83 | 12.2 | 2713 | 2688.87 | 14.32 | 2717 | 2690.43 | 10.23 |
| | | 2op | 2706 | 2694.27 | 6.09 | 2710 | 2695.87 | 6.31 | 2709 | 2695.03 | 8.02 | 2718 | 2694.5 | 9.23 |
| | 50 | rnd | 2709 | 2687.7 | 12.87 | 2709 | 2689.07 | 9.99 | 2707 | 2690.9 | 11.73 | 2709 | 2685.73 | 11.22 |
| | | 2op | 2705 | 2694.8 | 5.27 | 2716 | 2697.9 | 7.14 | 2707 | 2695.83 | 8.63 | 2711 | 2693.07 | 12.67 |
| 51 | 20 | rnd | 2710 | 2685.53 | 12.29 | 2714 | 2692.33 | 13.65 | 2704 | 2689.3 | 10.06 | 2705 | 2687.17 | 15.79 |
| | | 2op | 2703 | 2694.53 | 6.74 | 2712 | 2699.37 | 5.86 | 2710 | 2696.67 | 8.35 | 2716 | 2696.8 | 9.46 |
| | 50 | rnd | 2709 | 2682.03 | 13.63 | 2709 | 2690.43 | 11.9 | 2715 | 2690.57 | 11.65 | 2714 | 2691.77 | 13.23 |
| | | 2op | 2703 | 2692.13 | 6.47 | 2704 | 2696.1 | 4.69 | 2714 | 2697.2 | 7.14 | 2711 | 2694.97 | 9.96 |

Table A.2133: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2717 | 2689.47 | 12.99 | 2705 | 2683.8 | 12.92 | 2708 | 2687.6 | 12.6 | 2709 | 2685.8 | 9.26 |
| | | 2op | 2717 | 2694.13 | 11.61 | 2707 | 2684.2 | 11.84 | 2708 | 2687.03 | 12.05 | 2713 | 2687.37 | 12.74 |
| | 50 | rnd | 2719 | 2692.57 | 10.16 | 2714 | 2683.47 | 13.22 | 2702 | 2683.83 | 12.72 | 2705 | 2682.13 | 15.14 |
| | | 2op | 2708 | 2693.37 | 8.92 | 2710 | 2687.1 | 12.38 | 2709 | 2682 | 14.78 | 2705 | 2684.7 | 14.64 |
| 51 | 20 | rnd | 2713 | 2691.63 | 12.02 | 2707 | 2685.07 | 11.06 | 2704 | 2685.17 | 14.34 | 2702 | 2685.03 | 11.62 |
| | | 2op | 2708 | 2697.4 | 4.91 | 2713 | 2686.97 | 11.68 | 2701 | 2686.3 | 10.58 | 2705 | 2687.2 | 13.75 |
| | 50 | rnd | 2709 | 2693.73 | 10.47 | 2706 | 2687.07 | 11.5 | 2708 | 2685.5 | 12.38 | 2716 | 2687.7 | 12.86 |
| | | 2op | 2710 | 2696.53 | 9.82 | 2713 | 2687.2 | 13.96 | 2696 | 2680.7 | 14.16 | 2708 | 2686.43 | 11.53 |

Table A.2134: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2682.13 | 11.87 | 2715 | 2689.2 | 10.15 | 2709 | 2691.53 | 13.07 | 2707 | 2682.17 | 10.25 |
| | | 2op | 2703 | 2695.73 | 4.31 | 2705 | 2689.2 | 10.26 | 2708 | 2686.73 | 12.47 | 2710 | 2685.93 | 11.14 |
| | 50 | rnd | 2702 | 2685.2 | 10.11 | 2720 | 2689.6 | 13.56 | 2712 | 2688.6 | 12.49 | 2715 | 2684.5 | 12.36 |
| | | 2op | 2700 | 2694.57 | 2.34 | 2708 | 2688.4 | 9.1 | 2702 | 2688.57 | 10.82 | 2715 | 2685.57 | 16.64 |
| 51 | 20 | rnd | 2705 | 2682.3 | 11.64 | 2717 | 2687.37 | 11.87 | 2709 | 2690.4 | 10.53 | 2703 | 2686.37 | 10.12 |
| | | 2op | 2702 | 2695.27 | 3.77 | 2702 | 2687.2 | 9.52 | 2712 | 2687.97 | 13.12 | 2706 | 2687.03 | 12.82 |
| | 50 | rnd | 2699 | 2687.03 | 9.32 | 2711 | 2691.03 | 13.6 | 2712 | 2685.53 | 15.7 | 2708 | 2686.13 | 14.17 |
| | | 2op | 2696 | 2695.13 | 0.35 | 2712 | 2690.33 | 11.73 | 2705 | 2688.4 | 13.17 | 2709 | 2680.97 | 15.23 |

Table A.2135: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17892 | 17812.47 | 36.74 | 17873 | 17812.73 | 33.41 | 17883 | 17806.6 | 32.26 | 17869 | 17795.8 | 37.09 |
| | | 2op | 17882 | 17809.03 | 35.22 | 17862 | 17800.43 | 37.88 | 17886 | 17795.27 | 41.74 | 17893 | 17806.1 | 37.21 |
| | 50 | rnd | 17872 | 17807.27 | 37.64 | 17892 | 17808.1 | 36.02 | 17899 | 17805.3 | 38.18 | 17887 | 17800.07 | 39.82 |
| | | 2op | 17896 | 17815.27 | 35.84 | 17919 | 17817.77 | 38.86 | 17863 | 17801 | 32.4 | 17878 | 17790.9 | 41.86 |
| 51 | 20 | rnd | 17871 | 17820.1 | 29.35 | 17901 | 17810.13 | 48.38 | 17877 | 17794 | 52.18 | 17863 | 17807.97 | 35.74 |
| | | 2op | 17900 | 17821.5 | 33.9 | 17912 | 17820.83 | 38.78 | 17891 | 17827.57 | 34.07 | 17869 | 17797.1 | 35.09 |
| | 50 | rnd | 17919 | 17833.8 | 31.64 | 17883 | 17806.67 | 34.73 | 17887 | 17810.57 | 42.41 | 17869 | 17813.8 | 35.22 |
| | | 2op | 17887 | 17824.13 | 25.67 | 17943 | 17826.23 | 43.78 | 17863 | 17818.5 | 26.71 | 17873 | 17818.53 | 28.36 |

Table A.2136: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17883 | 17821.53 | 27.53 | 17901 | 17835 | 33.62 | 17901 | 17830.37 | 36.1 | 17867 | 17808.73 | 37.04 |
| | | 2op | 17878 | 17836.03 | 17.59 | 17899 | 17857.07 | 21.83 | 17896 | 17848.07 | 26.31 | 17889 | 17831.93 | 35.81 |
| | 50 | rnd | 17901 | 17830.4 | 35.78 | 17879 | 17832.63 | 28.87 | 17895 | 17841.97 | 34.42 | 17883 | 17823.87 | 37.48 |
| | | 2op | 17873 | 17835.2 | 20.47 | 17927 | 17851.63 | 28.93 | 17916 | 17851.57 | 32.76 | 17921 | 17835.13 | 36.84 |
| 51 | 20 | rnd | 17903 | 17827.63 | 38.42 | 17898 | 17834.5 | 33.96 | 17922 | 17833.9 | 38.75 | 17913 | 17836.5 | 29.6 |
| | | 2op | 17896 | 17846.43 | 18.57 | 17914 | 17849.93 | 23.91 | 17919 | 17858.17 | 28.3 | 17920 | 17859.43 | 32.48 |
| | 50 | rnd | 17896 | 17817.8 | 33.03 | 17901 | 17821.3 | 36.78 | 17936 | 17837.7 | 36.58 | 17914 | 17837.07 | 37.75 |
| | | 2op | 17899 | 17838.17 | 19.43 | 17905 | 17851.63 | 22.15 | 17905 | 17854.93 | 24.14 | 17920 | 17858.77 | 26.26 |

Table A.2137: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17869 | 17808 | 34.56 | 17887 | 17800.67 | 36.38 | 17877 | 17808.57 | 34.9 | 17888 | 17797.57 | 44.09 |
| | | 2op | 17914 | 17811.7 | 37.28 | 17897 | 17815.93 | 43.6 | 17872 | 17797.7 | 38.94 | 17889 | 17814.5 | 33.43 |
| | 50 | rnd | 17876 | 17805 | 40.27 | 17880 | 17802.43 | 32.1 | 17857 | 17800.7 | 32.51 | 17870 | 17798.63 | 33.13 |
| | | 2op | 17884 | 17817.67 | 38.82 | 17867 | 17805.23 | 30.33 | 17886 | 17801.93 | 42.96 | 17896 | 17819.77 | 40.66 |
| 51 | 20 | rnd | 17870 | 17812.53 | 40.31 | 17885 | 17820.47 | 37.65 | 17904 | 17821.03 | 37.8 | 17889 | 17811.3 | 42.63 |
| | | 2op | 17888 | 17820.57 | 37.61 | 17891 | 17818.33 | 42.05 | 17915 | 17816.67 | 39.9 | 17873 | 17812.1 | 33.19 |
| | 50 | rnd | 17883 | 17825.27 | 37.05 | 17882 | 17825.93 | 31.46 | 17890 | 17817.2 | 32.95 | 17863 | 17802.53 | 30.34 |
| | | 2op | 17893 | 17819.27 | 27.04 | 17895 | 17824.57 | 32.71 | 17910 | 17811.73 | 36.37 | 17842 | 17793.57 | 28.52 |

Table A.2138: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17907 | 17827.77 | 40.92 | 17919 | 17846.6 | 33.02 | 17901 | 17833.47 | 36.78 | 17899 | 17818.6 | 37.94 |
| | | 2op | 17876 | 17847.5 | 14.65 | 17949 | 17864.6 | 28.58 | 17912 | 17856.97 | 27.5 | 17879 | 17830.17 | 29.93 |
| | 50 | rnd | 17915 | 17830.83 | 38.7 | 17922 | 17837.07 | 31.9 | 17911 | 17837.97 | 32.82 | 17895 | 17830.47 | 35.1 |
| | | 2op | 17917 | 17837.57 | 27.61 | 17928 | 17857.57 | 28.16 | 17909 | 17865.9 | 21.77 | 17896 | 17840.27 | 30.49 |
| 51 | 20 | rnd | 17923 | 17829.23 | 40.95 | 17885 | 17824.33 | 35.63 | 17888 | 17823.07 | 31.9 | 17903 | 17842.97 | 32.57 |
| | | 2op | 17893 | 17844.3 | 22.77 | 17893 | 17852.53 | 19.74 | 17899 | 17856.13 | 27.9 | 17939 | 17856.37 | 32.43 |
| | 50 | rnd | 17917 | 17826.9 | 41.86 | 17943 | 17833.93 | 44.83 | 17900 | 17830.8 | 37.74 | 17943 | 17852.17 | 44.84 |
| | | 2op | 17870 | 17835.87 | 21.68 | 17906 | 17847.8 | 23.48 | 17907 | 17848.8 | 28.36 | 17938 | 17855.77 | 32.2 |

Table A.2139: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17882 | 17824.03 | 38.96 | 17898 | 17791.37 | 42.74 | 17846 | 17786.6 | 37.44 | 17868 | 17812.37 | 38.99 |
| | | 2op | 17882 | 17811.93 | 29.43 | 17867 | 17785.87 | 45.41 | 17869 | 17788.27 | 39.61 | 17871 | 17790.5 | 39.23 |
| | 50 | rnd | 17913 | 17828.4 | 38.44 | 17871 | 17790.27 | 36.87 | 17853 | 17794.83 | 35.53 | 17860 | 17789.63 | 44.24 |
| | | 2op | 17891 | 17816.87 | 32.62 | 17893 | 17801.77 | 40.16 | 17852 | 17784.07 | 35.62 | 17907 | 17802.3 | 46.3 |
| 51 | 20 | rnd | 17879 | 17829.53 | 30.12 | 17893 | 17787 | 45.28 | 17916 | 17812.3 | 40.79 | 17882 | 17814.2 | 43.46 |
| | | 2op | 17881 | 17839.87 | 24.92 | 17860 | 17791 | 44.06 | 17900 | 17799.3 | 39.62 | 17877 | 17799.5 | 36.62 |
| | 50 | rnd | 17919 | 17831.37 | 41.53 | 17875 | 17799.17 | 43.37 | 17873 | 17798.67 | 33.64 | 17872 | 17797.43 | 43.21 |
| | | 2op | 17902 | 17835.2 | 34.87 | 17875 | 17801.37 | 40.68 | 17887 | 17812.07 | 34.15 | 17879 | 17805.6 | 43.83 |

Table A.2140: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17888 | 17832.7 | 36.61 | 17866 | 17793.77 | 39.56 | 17863 | 17801.4 | 34.95 | 17869 | 17805.57 | 33.24 |
| | | 2op | 17885 | 17842.43 | 23.87 | 17891 | 17808.17 | 40.78 | 17876 | 17793.1 | 33.26 | 17867 | 17787.23 | 48.49 |
| | 50 | rnd | 17890 | 17816.8 | 33.66 | 17863 | 17802.13 | 32.26 | 17864 | 17791.43 | 41.69 | 17852 | 17794.77 | 29.98 |
| | | 2op | 17874 | 17837.57 | 17.89 | 17897 | 17809.57 | 43.67 | 17891 | 17803.77 | 37.65 | 17865 | 17808.03 | 31 |
| 51 | 20 | rnd | 17856 | 17807.6 | 32.44 | 17877 | 17803.53 | 37.68 | 17887 | 17797.93 | 33.37 | 17893 | 17794.17 | 46.18 |
| | | 2op | 17884 | 17844.13 | 21.43 | 17883 | 17814.17 | 33.79 | 17894 | 17810.27 | 40.36 | 17884 | 17806.5 | 37.81 |
| | 50 | rnd | 17901 | 17820.37 | 33.26 | 17887 | 17811.07 | 29.81 | 17863 | 17796.7 | 41.73 | 17881 | 17794.9 | 38.88 |
| | | 2op | 17866 | 17834.4 | 17.04 | 17877 | 17813.83 | 37.2 | 17860 | 17794 | 38.74 | 17886 | 17811.33 | 41.56 |

Table A.2141: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22205 | 22104.07 | 44.5 | 22119 | 22061.3 | 38.83 | 22168 | 22074.7 | 46.52 | 22170 | 22090.2 | 47.32 |
| | | 2op | 22156 | 22090.63 | 40.98 | 22167 | 22072.3 | 50.97 | 22156 | 22071.9 | 47.56 | 22144 | 22078.27 | 37.55 |
| | 50 | rnd | 22201 | 22082.6 | 47.09 | 22134 | 22075.7 | 42.4 | 22132 | 22074.4 | 42.31 | 22159 | 22098.97 | 34 |
| | | 2op | 22178 | 22091.5 | 44.88 | 22155 | 22078.7 | 36.96 | 22166 | 22067.2 | 43.91 | 22174 | 22090.9 | 42.48 |
| 51 | 20 | rnd | 22185 | 22100.23 | 30.99 | 22152 | 22090.2 | 35.13 | 22168 | 22085.2 | 41.28 | 22166 | 22082.93 | 46.09 |
| | | 2op | 22197 | 22105.7 | 41.78 | 22158 | 22091.23 | 36.83 | 22119 | 22068.1 | 37.63 | 22180 | 22088.37 | 43.01 |
| | 50 | rnd | 22181 | 22107.23 | 42.88 | 22167 | 22089.37 | 36.48 | 22198 | 22091.03 | 50.41 | 22202 | 22084.97 | 54.17 |
| | | 2op | 22145 | 22099.2 | 30.3 | 22180 | 22103.1 | 47.47 | 22195 | 22097.2 | 50.52 | 22158 | 22081.7 | 44.86 |

Table A.2142: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22194 | 22106.67 | 46.37 | 22161 | 22109.07 | 34.92 | 22191 | 22115.9 | 40.57 | 22171 | 22091.37 | 40.68 |
| | | 2op | 22207 | 22151.47 | 24.94 | 22199 | 22158.77 | 27.73 | 22222 | 22157 | 40.74 | 22172 | 22112.3 | 43.08 |
| | 50 | rnd | 22175 | 22097.37 | 49.37 | 22226 | 22120.43 | 49.33 | 22236 | 22117.93 | 44.21 | 22187 | 22108.8 | 36.73 |
| | | 2op | 22218 | 22147.4 | 28.88 | 22234 | 22157.27 | 27.56 | 22213 | 22158.87 | 35 | 22177 | 22120.37 | 36.48 |
| 51 | 20 | rnd | 22175 | 22098.3 | 41.05 | 22178 | 22115.97 | 41.55 | 22214 | 22119.7 | 32.65 | 22214 | 22121.1 | 45.48 |
| | | 2op | 22212 | 22150.23 | 27.89 | 22215 | 22156.73 | 28.48 | 22223 | 22165.47 | 29.63 | 22219 | 22147.73 | 35.64 |
| | 50 | rnd | 22211 | 22093.27 | 49.59 | 22201 | 22112.33 | 40.72 | 22187 | 22113.03 | 38.99 | 22174 | 22114.8 | 38.35 |
| | | 2op | 22191 | 22145.07 | 27.14 | 22197 | 22147.47 | 32.27 | 22210 | 22163.57 | 24.66 | 22239 | 22163.4 | 29.8 |

Table A.2143: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22178 | 22101.7 | 42.17 | 22189 | 22086.57 | 42.69 | 22152 | 22077.8 | 39.27 | 22181 | 22078.1 | 50.59 |
| | | 2op | 22144 | 22079.2 | 35.98 | 22207 | 22082.5 | 47.5 | 22147 | 22071.43 | 39.76 | 22180 | 22077.23 | 44.86 |
| | 50 | rnd | 22172 | 22091.4 | 44.11 | 22157 | 22089.57 | 44.72 | 22156 | 22077.93 | 41.11 | 22144 | 22070.6 | 45.01 |
| | | 2op | 22166 | 22070.97 | 37.86 | 22134 | 22078.5 | 30.32 | 22141 | 22071.8 | 40.07 | 22158 | 22064.9 | 52.44 |
| 51 | 20 | rnd | 22167 | 22102.4 | 41.83 | 22182 | 22091.7 | 45.07 | 22174 | 22096.9 | 37.56 | 22170 | 22083.93 | 43.57 |
| | | 2op | 22199 | 22100.27 | 54.04 | 22171 | 22096.4 | 37.92 | 22153 | 22075.23 | 46.27 | 22164 | 22068.03 | 49.36 |
| | 50 | rnd | 22151 | 22092.67 | 37.38 | 22174 | 22087.33 | 40.13 | 22145 | 22081.53 | 43.42 | 22149 | 22069.53 | 46.68 |
| | | 2op | 22167 | 22100.27 | 50.14 | 22182 | 22107.8 | 46.03 | 22174 | 22071.6 | 38.34 | 22145 | 22082.63 | 46.24 |

Table A.2144: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22188 | 22115.33 | 38.95 | 22194 | 22128.97 | 39.41 | 22186 | 22117.47 | 31.2 | 22174 | 22088.57 | 49.48 |
| | | 2op | 22211 | 22156.7 | 25.97 | 22196 | 22163.63 | 23.28 | 22243 | 22150.83 | 34.62 | 22208 | 22132.13 | 37.65 |
| | 50 | rnd | 22176 | 22093.3 | 43.12 | 22198 | 22107.03 | 44.64 | 22200 | 22112.97 | 36.85 | 22189 | 22119 | 37.32 |
| | | 2op | 22195 | 22159.73 | 23.53 | 22210 | 22150.9 | 29.1 | 22249 | 22165.57 | 34.78 | 22205 | 22119.83 | 40.02 |
| 51 | 20 | rnd | 22222 | 22112.7 | 39.32 | 22193 | 22118.57 | 38.11 | 22196 | 22122.27 | 44.08 | 22204 | 22121.57 | 38.65 |
| | | 2op | 22232 | 22156.93 | 28.23 | 22240 | 22154.8 | 26.27 | 22219 | 22168.2 | 25.16 | 22261 | 22138.23 | 45.41 |
| | 50 | rnd | 22172 | 22095.4 | 44.23 | 22184 | 22109.8 | 31.5 | 22200 | 22118.97 | 34.67 | 22198 | 22132.27 | 40 |
| | | 2op | 22209 | 22144.67 | 30.52 | 22216 | 22149.73 | 30.02 | 22234 | 22164.33 | 29.39 | 22225 | 22153.23 | 36.11 |

Table A.2145: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22181 | 22102.53 | 43.73 | 22174 | 22059.8 | 54.1 | 22154 | 22062.53 | 49.22 | 22152 | 22077.17 | 37.72 |
| | | 2op | 22202 | 22097.3 | 47.1 | 22131 | 22064.2 | 42.08 | 22158 | 22063.1 | 50.49 | 22162 | 22086.13 | 44.79 |
| | 50 | rnd | 22162 | 22098.57 | 32.67 | 22152 | 22073.93 | 47.5 | 22185 | 22079.8 | 46.64 | 22203 | 22071.73 | 52.47 |
| | | 2op | 22145 | 22094.3 | 30.45 | 22130 | 22062.3 | 42.52 | 22128 | 22075.97 | 34.85 | 22149 | 22079.2 | 40.23 |
| 51 | 20 | rnd | 22201 | 22115.43 | 43.29 | 22201 | 22103.67 | 44.44 | 22190 | 22075.07 | 48.38 | 22123 | 22049.2 | 45.46 |
| | | 2op | 22176 | 22123.9 | 40.72 | 22180 | 22097.7 | 48.48 | 22167 | 22075.87 | 47.01 | 22154 | 22064 | 43.99 |
| | 50 | rnd | 22192 | 22105.83 | 33.56 | 22192 | 22102.73 | 41.43 | 22185 | 22068.3 | 48.57 | 22208 | 22055 | 45.77 |
| | | 2op | 22197 | 22133.53 | 31.74 | 22197 | 22097.7 | 43.63 | 22167 | 22076.2 | 42.54 | 22161 | 22074.77 | 47.28 |

Table A.2146: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22190 | 22106.33 | 43.77 | 22160 | 22074.67 | 47.28 | 22137 | 22070.47 | 43 | 22163 | 22079.3 | 39.06 |
| | | 2op | 22204 | 22151.8 | 26.06 | 22186 | 22068.33 | 54.4 | 22172 | 22080.23 | 45.41 | 22143 | 22070.03 | 44.05 |
| | 50 | rnd | 22163 | 22095 | 39.45 | 22185 | 22086 | 62.88 | 22181 | 22083.73 | 49.3 | 22191 | 22073.93 | 46.53 |
| | | 2op | 22205 | 22155.93 | 30.45 | 22166 | 22086.53 | 41.66 | 22147 | 22074.9 | 49.23 | 22188 | 22085 | 44.9 |
| 51 | 20 | rnd | 22179 | 22119 | 34.67 | 22171 | 22097.67 | 46.1 | 22131 | 22083.07 | 35.71 | 22181 | 22078.17 | 54.38 |
| | | 2op | 22222 | 22147.63 | 32.79 | 22169 | 22077.63 | 36.25 | 22183 | 22065.53 | 48.93 | 22128 | 22066.73 | 34.79 |
| | 50 | rnd | 22187 | 22074.13 | 53.19 | 22187 | 22093.33 | 44.94 | 22181 | 22086.93 | 44.24 | 22155 | 22075.1 | 44.17 |
| | | 2op | 22196 | 22147 | 25.87 | 22162 | 22100.27 | 37.51 | 22182 | 22074.9 | 41.86 | 22141 | 22073.43 | 41.73 |

Table A.2147: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24773 | 24673.1 | 45.73 | 24777 | 24679 | 37.7 | 24779 | 24686.27 | 45.04 | 24786 | 24681.8 | 55.98 |
| | | 2op | 24822 | 24689.3 | 62.46 | 24798 | 24679.33 | 59.04 | 24805 | 24675.97 | 52.76 | 24783 | 24684.57 | 44.52 |
| | 50 | rnd | 24788 | 24680.63 | 54.44 | 24764 | 24672.27 | 43.74 | 24761 | 24684.33 | 46.65 | 24785 | 24682.1 | 52.14 |
| | | 2op | 24761 | 24682.07 | 45.63 | 24794 | 24685 | 40.39 | 24752 | 24673.6 | 42.18 | 24770 | 24694.13 | 33.54 |
| 51 | 20 | rnd | 24829 | 24709.93 | 50.48 | 24806 | 24699.5 | 44.12 | 24790 | 24684.03 | 52.91 | 24790 | 24681.57 | 56.87 |
| | | 2op | 24759 | 24690.07 | 40.69 | 24774 | 24692.87 | 45.75 | 24760 | 24686.23 | 40.1 | 24766 | 24685.73 | 49.66 |
| | 50 | rnd | 24740 | 24679.13 | 39.82 | 24814 | 24691.6 | 48.13 | 24794 | 24691.57 | 49.91 | 24761 | 24679.63 | 45.82 |
| | | 2op | 24774 | 24698.8 | 35.47 | 24787 | 24689.73 | 45.75 | 24792 | 24685.97 | 45.94 | 24765 | 24681.1 | 46.02 |

Table A.2148: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24813 | 24737.03 | 34.8 | 24820 | 24724.9 | 50.15 | 24844 | 24733.67 | 50.88 | 24777 | 24700.07 | 52.45 |
| | | 2op | 24778 | 24722.37 | 32.39 | 24827 | 24751.1 | 38.21 | 24799 | 24728.17 | 47.45 | 24787 | 24702.9 | 53.27 |
| | 50 | rnd | 24808 | 24701.03 | 58.45 | 24798 | 24710.5 | 39.86 | 24823 | 24737.5 | 35.95 | 24855 | 24735.67 | 45.64 |
| | | 2op | 24813 | 24711.93 | 42.45 | 24791 | 24729.17 | 36.62 | 24810 | 24731.83 | 39.87 | 24790 | 24718.3 | 37.33 |
| 51 | 20 | rnd | 24807 | 24727.5 | 41.45 | 24803 | 24734.37 | 39.64 | 24831 | 24735.47 | 35.53 | 24806 | 24729.77 | 43.43 |
| | | 2op | 24793 | 24724.07 | 38.77 | 24795 | 24725.4 | 33.38 | 24800 | 24742 | 29.88 | 24785 | 24718.8 | 39.04 |
| | 50 | rnd | 24761 | 24700.57 | 44.98 | 24801 | 24703.23 | 45.56 | 24812 | 24721.47 | 45.67 | 24808 | 24729.3 | 45.7 |
| | | 2op | 24759 | 24714.13 | 25.58 | 24806 | 24733.33 | 35.97 | 24794 | 24728.87 | 29.66 | 24820 | 24744.9 | 36.69 |

Table A.2149: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24790 | 24683.97 | 51.08 | 24784 | 24687.2 | 53.79 | 24786 | 24660.87 | 59.51 | 24815 | 24682.5 | 58.36 |
| | | 2op | 24749 | 24677.87 | 41.49 | 24759 | 24670.83 | 38.19 | 24748 | 24667.5 | 49.35 | 24770 | 24691.57 | 44.81 |
| | 50 | rnd | 24776 | 24688.07 | 56.02 | 24766 | 24670.5 | 47.26 | 24753 | 24687.33 | 41.26 | 24767 | 24680.13 | 47.66 |
| | | 2op | 24783 | 24687.53 | 50.83 | 24761 | 24686.4 | 54.25 | 24763 | 24683.2 | 42.7 | 24796 | 24692.6 | 62.41 |
| 51 | 20 | rnd | 24767 | 24687 | 41 | 24793 | 24697.57 | 66.42 | 24781 | 24692.57 | 45.73 | 24778 | 24684.77 | 46.77 |
| | | 2op | 24797 | 24694.53 | 43.84 | 24770 | 24689.57 | 45.95 | 24775 | 24681 | 47.64 | 24801 | 24703.53 | 53.69 |
| | 50 | rnd | 24796 | 24704.47 | 51.17 | 24812 | 24700.73 | 41.96 | 24761 | 24682.97 | 48.27 | 24756 | 24675.67 | 45.02 |
| | | 2op | 24792 | 24687.73 | 38.9 | 24837 | 24708.9 | 50.33 | 24761 | 24682.4 | 39.42 | 24781 | 24689.03 | 38.97 |

Table A.2150: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24799 | 24716.13 | 53.47 | 24831 | 24757.13 | 38.33 | 24807 | 24727.2 | 39.88 | 24787 | 24695.43 | 47.04 |
| | | 2op | 24784 | 24726.13 | 31.04 | 24795 | 24732.43 | 29.74 | 24803 | 24735.73 | 34.77 | 24819 | 24699.23 | 54.44 |
| | 50 | rnd | 24770 | 24698.57 | 36.61 | 24812 | 24719.57 | 49.73 | 24830 | 24729.67 | 39.23 | 24808 | 24711.57 | 52.21 |
| | | 2op | 24795 | 24708.6 | 40.95 | 24836 | 24738.2 | 35.53 | 24812 | 24745.27 | 35.1 | 24799 | 24718.63 | 44.24 |
| 51 | 20 | rnd | 24799 | 24717.37 | 37.28 | 24840 | 24723.4 | 47.62 | 24817 | 24723.03 | 43.85 | 24808 | 24731.97 | 41.25 |
| | | 2op | 24788 | 24711.1 | 29.32 | 24823 | 24730.53 | 39.9 | 24777 | 24725.03 | 26.1 | 24823 | 24731.37 | 33.53 |
| | 50 | rnd | 24820 | 24715.5 | 43.93 | 24837 | 24728 | 48.34 | 24832 | 24716.67 | 55.31 | 24820 | 24708.7 | 42.38 |
| | | 2op | 24764 | 24699.8 | 31.21 | 24817 | 24731 | 40.91 | 24792 | 24735.4 | 33.34 | 24790 | 24735.5 | 37.6 |

Table A.2151: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24821 | 24706.67 | 48.75 | 24761 | 24675.87 | 51.37 | 24729 | 24660.17 | 44.24 | 24784 | 24675.83 | 58.56 |
| | | 2op | 24785 | 24685.03 | 42.71 | 24740 | 24659.7 | 55.45 | 24745 | 24661.97 | 52.94 | 24755 | 24675.37 | 48.98 |
| | 50 | rnd | 24794 | 24703.37 | 47.62 | 24769 | 24677.17 | 45.44 | 24791 | 24665.87 | 48.43 | 24773 | 24677.73 | 54.18 |
| | | 2op | 24774 | 24694.8 | 54.2 | 24751 | 24662.33 | 48.7 | 24774 | 24679.97 | 45.07 | 24804 | 24669 | 57.41 |
| 51 | 20 | rnd | 24781 | 24713.8 | 34.54 | 24764 | 24706.5 | 34.9 | 24785 | 24678 | 53.15 | 24755 | 24686.83 | 42.74 |
| | | 2op | 24759 | 24700.97 | 32.8 | 24759 | 24700.97 | 32.8 | 24734 | 24666.37 | 40.57 | 24811 | 24664.67 | 52.3 |
| | 50 | rnd | 24766 | 24710.2 | 33.24 | 24766 | 24710.2 | 33.24 | 24725 | 24659.67 | 41.05 | 24739 | 24664.17 | 42.1 |
| | | 2op | 24795 | 24707.97 | 35.63 | 24795 | 24710.37 | 36.92 | 24765 | 24667.03 | 43.57 | 24770 | 24672.83 | 45.07 |

Table A.2152: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24854 | 24723.5 | 44.06 | 24808 | 24674.43 | 55.87 | 24787 | 24663.6 | 38.47 | 24750 | 24666.7 | 46.71 |
| | | 2op | 24782 | 24724.23 | 28.01 | 24768 | 24668.8 | 50.8 | 24763 | 24666.23 | 49.87 | 24774 | 24669.3 | 49.09 |
| | 50 | rnd | 24764 | 24694.57 | 41.28 | 24782 | 24683.6 | 47.15 | 24766 | 24678.8 | 43.17 | 24817 | 24673.57 | 59.96 |
| | | 2op | 24765 | 24708.7 | 31.76 | 24798 | 24672.83 | 52.97 | 24777 | 24676.43 | 53.22 | 24793 | 24674.3 | 59.05 |
| 51 | 20 | rnd | 24803 | 24713.63 | 37.83 | 24776 | 24687.73 | 39.44 | 24742 | 24679.97 | 40.45 | 24787 | 24680.23 | 52.91 |
| | | 2op | 24791 | 24718.2 | 35.94 | 24763 | 24689.6 | 42.61 | 24789 | 24675.33 | 57.4 | 24736 | 24656.27 | 47.19 |
| | 50 | rnd | 24760 | 24696.47 | 34.99 | 24770 | 24693.4 | 39.6 | 24755 | 24679.63 | 44.74 | 24715 | 24657.17 | 48.57 |
| | | 2op | 24773 | 24704.27 | 34.29 | 24793 | 24685.7 | 45.93 | 24779 | 24682.03 | 51.72 | 24777 | 24680.27 | 48.17 |

Table A.2153: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48140 | 47889.87 | 94.47 | 48054 | 47894.1 | 78.03 | 48100 | 47881.43 | 96.89 | 48076 | 47904.73 | 76.44 |
| | | 2op | 48007 | 47909.7 | 69.8 | 48080 | 47885.37 | 78.46 | 48029 | 47897.37 | 77.38 | 48065 | 47890.73 | 78.19 |
| | 50 | rnd | 48077 | 47924.5 | 76.41 | 48011 | 47903.87 | 53.6 | 48006 | 47891.5 | 67.27 | 48076 | 47893.57 | 81.8 |
| | | 2op | 48081 | 47912.47 | 92.08 | 48033 | 47887.4 | 86.99 | 47994 | 47870.57 | 72.97 | 48015 | 47897.7 | 77.23 |
| 51 | 20 | rnd | 48122 | 47922.63 | 85.48 | 48149 | 47908.9 | 70.39 | 48097 | 47898.67 | 85.86 | 48034 | 47896.07 | 76.1 |
| | | 2op | 48042 | 47920.17 | 58.8 | 48011 | 47883.5 | 70.22 | 48060 | 47920.2 | 73.52 | 47994 | 47875.23 | 64.5 |
| | 50 | rnd | 48144 | 47937.7 | 74.24 | 48086 | 47929.37 | 82.51 | 48025 | 47884.17 | 72.78 | 48044 | 47893.53 | 67.08 |
| | | 2op | 48073 | 47944.7 | 71.18 | 48070 | 47927.33 | 68.73 | 48074 | 47893.5 | 78.2 | 48042 | 47881.97 | 67.56 |

Table A.2154: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48142 | 47980.63 | 78.81 | 48122 | 47988.53 | 87.91 | 48149 | 47995.67 | 63.32 | 48089 | 47940.7 | 70.38 |
| | | 2op | 48123 | 48008.87 | 49.14 | 48118 | 48024.17 | 49.58 | 48205 | 48032.8 | 72.97 | 48136 | 47971.13 | 83.38 |
| | 50 | rnd | 48112 | 47960.27 | 73.88 | 48106 | 47987.63 | 64.64 | 48115 | 47985.43 | 69.67 | 48111 | 47970.77 | 68.75 |
| | | 2op | 48126 | 47997.17 | 53.69 | 48197 | 48029.73 | 56.59 | 48172 | 48068.2 | 56.38 | 48099 | 47999.6 | 52.1 |
| 51 | 20 | rnd | 48127 | 47961.23 | 79.58 | 48161 | 47999.03 | 61.16 | 48092 | 47991.6 | 62.25 | 48181 | 47992.9 | 75.13 |
| | | 2op | 48119 | 48008.03 | 47.43 | 48126 | 48035.57 | 59.73 | 48221 | 48050.23 | 59.63 | 48104 | 48023.4 | 47.03 |
| | 50 | rnd | 48099 | 47955.93 | 73.04 | 48093 | 47970.67 | 69.48 | 48089 | 47998.9 | 65.15 | 48157 | 47982.97 | 58.59 |
| | | 2op | 48093 | 47983.47 | 57.65 | 48128 | 48009.7 | 57.78 | 48183 | 48035.63 | 72.45 | 48142 | 48030.4 | 57.95 |

Table A.2155: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48045 | 47886.47 | 76.22 | 48006 | 47884.37 | 64.87 | 48003 | 47864.5 | 78.45 | 48172 | 47902.13 | 92.76 |
| | | 2op | 48108 | 47916.67 | 85.28 | 48105 | 47886.97 | 88.68 | 47990 | 47881.13 | 70.97 | 48066 | 47906.53 | 67.65 |
| | 50 | rnd | 48086 | 47912.6 | 84.82 | 48035 | 47889.63 | 78.19 | 48069 | 47892.87 | 71.85 | 48044 | 47903.9 | 85.64 |
| | | 2op | 48126 | 47880.93 | 80.81 | 48024 | 47881.83 | 63.72 | 47974 | 47884.73 | 61.15 | 48043 | 47895.33 | 87.85 |
| 51 | 20 | rnd | 48132 | 47943.23 | 85.74 | 48017 | 47917.67 | 65.65 | 48022 | 47851.23 | 75.06 | 48046 | 47898.77 | 74.93 |
| | | 2op | 48057 | 47930.3 | 81.24 | 48041 | 47916.77 | 72.27 | 48003 | 47887.2 | 70.78 | 48095 | 47907.63 | 65.21 |
| | 50 | rnd | 48072 | 47949.77 | 71.3 | 48111 | 47924.9 | 89.11 | 48101 | 47919.93 | 91.15 | 48043 | 47878.6 | 104.79 |
| | | 2op | 48036 | 47940.07 | 53.56 | 48058 | 47948.3 | 80.88 | 48005 | 47887.2 | 69.84 | 48002 | 47865.53 | 75.77 |

Table A.2156: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48112 | 47979.83 | 80.95 | 48209 | 48010.23 | 78.91 | 48164 | 48005.6 | 85.35 | 48166 | 47976.1 | 78.1 |
| | | 2op | 48140 | 48017.97 | 52.63 | 48168 | 48022.27 | 65.09 | 48164 | 48025.27 | 54.99 | 48092 | 47938.23 | 75.38 |
| | 50 | rnd | 48108 | 47976.93 | 67.82 | 48121 | 48003.5 | 56.7 | 48173 | 48006 | 62.87 | 48114 | 47973.4 | 82.42 |
| | | 2op | 48155 | 47984.1 | 60.5 | 48195 | 48014.4 | 79.91 | 48188 | 48052.47 | 64.87 | 48118 | 47983.27 | 69.7 |
| 51 | 20 | rnd | 48088 | 47981.7 | 67.5 | 48117 | 47967.27 | 70.18 | 48145 | 48012.93 | 59.06 | 48145 | 48001.2 | 61.28 |
| | | 2op | 48121 | 48015.87 | 53.43 | 48160 | 48034.23 | 64.2 | 48205 | 48034.93 | 60.32 | 48170 | 48022.17 | 82.13 |
| | 50 | rnd | 48122 | 47950.9 | 70.07 | 48099 | 47969.77 | 63.22 | 48130 | 47986.7 | 63.64 | 48157 | 48013.27 | 86.55 |
| | | 2op | 48123 | 47999.97 | 60.59 | 48170 | 48030.8 | 57.3 | 48085 | 48014.57 | 53.16 | 48128 | 48022.13 | 60.82 |

Table A.2157: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48096 | 47920.53 | 75.26 | 48096 | 47920.53 | 75.26 | 48017 | 47855.87 | 75.08 | 48088 | 47869.13 | 83.32 |
| | | 2op | 48112 | 47918 | 72.46 | 48112 | 47918 | 72.46 | 47999 | 47844.7 | 86.48 | 47996 | 47866.47 | 79.72 |
| | 50 | rnd | 48076 | 47928.8 | 73.54 | 48076 | 47928.8 | 73.54 | 48006 | 47864.87 | 70.62 | 48017 | 47864.57 | 76.86 |
| | | 2op | 48067 | 47935.53 | 83.82 | 48067 | 47935.53 | 83.82 | 48040 | 47872.77 | 79.61 | 48014 | 47877.67 | 68.34 |
| 51 | 20 | rnd | 48095 | 47964.87 | 71.36 | 48095 | 47964.87 | 71.36 | 48063 | 47839.7 | 89 | 47970 | 47869 | 79.64 |
| | | 2op | 48048 | 47956.93 | 52.83 | 48048 | 47956.93 | 52.83 | 48054 | 47881.53 | 87.54 | 48048 | 47888.83 | 78.35 |
| | 50 | rnd | 48092 | 47949.93 | 77.01 | 48092 | 47949.93 | 77.01 | 48064 | 47882.13 | 86.83 | 48027 | 47853.7 | 81.23 |
| | | 2op | 48100 | 47934.87 | 89.34 | 48100 | 47934.87 | 89.34 | 48038 | 47882.7 | 81.23 | 48025 | 47886.9 | 64.72 |

Table A.2158: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48142 | 47990.3 | 74.1 | 48020 | 47875.8 | 82.93 | 48121 | 47877.03 | 92.43 | 48038 | 47888.37 | 67.83 |
| | | 2op | 48112 | 48014.53 | 52.74 | 48079 | 47877.17 | 89.34 | 48075 | 47872.93 | 70.38 | 47966 | 47846.6 | 96.66 |
| | 50 | rnd | 48084 | 47962.13 | 61.27 | 47970 | 47860.3 | 73.8 | 47976 | 47871.27 | 65.61 | 47973 | 47861.4 | 73.38 |
| | | 2op | 48157 | 47999.53 | 75.29 | 48071 | 47896.43 | 83.46 | 48029 | 47860.8 | 87.3 | 47960 | 47881.03 | 61.56 |
| 51 | 20 | rnd | 48128 | 47986.8 | 70.7 | 48068 | 47899.53 | 83.98 | 48016 | 47860.4 | 72.88 | 48032 | 47888.1 | 84.61 |
| | | 2op | 48221 | 48035.37 | 60.7 | 48007 | 47880.33 | 70.07 | 48051 | 47864.63 | 83.2 | 48042 | 47867.3 | 72.28 |
| | 50 | rnd | 48132 | 47960.5 | 82.23 | 48018 | 47881.17 | 73.07 | 48019 | 47887.83 | 78.14 | 48084 | 47895.67 | 85.39 |
| | | 2op | 48072 | 47990.43 | 57.77 | 48030 | 47899.53 | 71.39 | 48020 | 47852.67 | 70.71 | 47989 | 47867.27 | 70.98 |

Table A.2159: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56130 | 55991 | 74.38 | 56139 | 55970.47 | 73.08 | 56270 | 55991.83 | 107.1 | 56207 | 56042.37 | 74.2 |
| | | 2op | 56130 | 56019.4 | 73.1 | 56167 | 56005.67 | 89.31 | 56205 | 55973.8 | 85.56 | 56155 | 55989.7 | 79.41 |
| | 50 | rnd | 56164 | 56024.97 | 63.79 | 56200 | 55984.43 | 101.77 | 56128 | 55974.17 | 71.76 | 56168 | 56007.23 | 68.47 |
| | | 2op | 56192 | 56026.27 | 83.46 | 56113 | 55980.93 | 69.05 | 56127 | 55983.83 | 80.06 | 56173 | 55998.5 | 74.15 |
| 51 | 20 | rnd | 56199 | 55999.97 | 88.37 | 56195 | 56007.37 | 95.14 | 56082 | 55980.27 | 76.48 | 56087 | 55954.73 | 85.16 |
| | | 2op | 56209 | 56023.37 | 77.16 | 56145 | 56002.83 | 85.31 | 56111 | 55984.8 | 76.68 | 56138 | 56018.53 | 65.95 |
| | 50 | rnd | 56159 | 56008.6 | 87.09 | 56175 | 56044 | 71.33 | 56122 | 55991.5 | 85.59 | 56187 | 55978.73 | 99.69 |
| | | 2op | 56174 | 56031.2 | 86.91 | 56241 | 56052.63 | 83.28 | 56132 | 55994.43 | 82.74 | 56170 | 55976.53 | 94.57 |

Table A.2160: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56200 | 56072.87 | 97.69 | 56314 | 56144.43 | 67 | 56281 | 56143.6 | 80.92 | 56215 | 56043.8 | 79.55 |
| | | 2op | 56304 | 56085.8 | 77.4 | 56207 | 56121.37 | 57.79 | 56270 | 56153.57 | 75.53 | 56292 | 56102.37 | 77.87 |
| | 50 | rnd | 56275 | 56049.47 | 86.4 | 56214 | 56092.97 | 75.53 | 56257 | 56128.3 | 78.43 | 56283 | 56089.9 | 84.67 |
| | | 2op | 56246 | 56068.73 | 71.38 | 56233 | 56097.43 | 65.22 | 56274 | 56149.5 | 65.75 | 56289 | 56112.87 | 74.86 |
| 51 | 20 | rnd | 56232 | 56075.23 | 79.87 | 56271 | 56120.3 | 63.21 | 56332 | 56138.53 | 77.78 | 56245 | 56082.47 | 75.47 |
| | | 2op | 56162 | 56075 | 62.99 | 56206 | 56079.3 | 61.71 | 56252 | 56143.43 | 66.74 | 56319 | 56153.63 | 76.42 |
| | 50 | rnd | 56203 | 56051.23 | 73.18 | 56223 | 56093.3 | 68.63 | 56209 | 56072.4 | 57.52 | 56291 | 56142.37 | 87.28 |
| | | 2op | 56161 | 56047.37 | 66.15 | 56234 | 56078.43 | 73.3 | 56214 | 56109.93 | 57.84 | 56300 | 56137.43 | 76.07 |

Table A.2161: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56134 | 55979.33 | 91.3 | 56133 | 56002.87 | 63.96 | 56128 | 55990.5 | 85.97 | 56158 | 56015.47 | 72.28 |
| | | 2op | 56164 | 55979.7 | 96.78 | 56185 | 55996.73 | 92.2 | 56224 | 55960.03 | 108.39 | 56133 | 55977.83 | 72.34 |
| | 50 | rnd | 56142 | 56000.63 | 69.08 | 56106 | 55987.4 | 65.68 | 56199 | 55974.27 | 73.83 | 56208 | 56001.47 | 89.98 |
| | | 2op | 56222 | 56020.3 | 77.39 | 56170 | 55978.03 | 94.7 | 56114 | 55986.87 | 77.88 | 56254 | 56015.6 | 85.45 |
| 51 | 20 | rnd | 56170 | 56020.6 | 75.25 | 56170 | 56006.17 | 86.23 | 56214 | 55969.6 | 99.59 | 56182 | 55967.2 | 88.96 |
| | | 2op | 56185 | 56016.93 | 79.55 | 56203 | 56018.83 | 93.51 | 56131 | 55971 | 85.67 | 56177 | 55974.03 | 74.75 |
| | 50 | rnd | 56226 | 56024.83 | 86.46 | 56166 | 55999.37 | 92.47 | 56122 | 55987.33 | 73.48 | 56165 | 55996.03 | 76.41 |
| | | 2op | 56154 | 56028.73 | 95.1 | 56158 | 56023.1 | 70.95 | 56185 | 55987.07 | 84.39 | 56221 | 55977.97 | 76 |

Table A.2162: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56226 | 56082.23 | 72.26 | 56257 | 56130.97 | 56.19 | 56236 | 56127.33 | 62.6 | 56240 | 56038.5 | 92.89 |
| | | 2op | 56230 | 56085.7 | 74.19 | 56219 | 56111.03 | 60.73 | 56306 | 56145.67 | 74.23 | 56200 | 56063.5 | 82.45 |
| | 50 | rnd | 56235 | 56101.27 | 68.93 | 56277 | 56106.97 | 85.03 | 56297 | 56118.2 | 72.01 | 56181 | 56048.4 | 67.86 |
| | | 2op | 56248 | 56085.17 | 61.64 | 56245 | 56101.93 | 65.74 | 56326 | 56153.23 | 71.03 | 56263 | 56093.67 | 78.63 |
| 51 | 20 | rnd | 56236 | 56096.67 | 71.42 | 56249 | 56081.1 | 77.39 | 56239 | 56099.93 | 69.5 | 56256 | 56116.67 | 65.58 |
| | | 2op | 56254 | 56096.93 | 67.03 | 56222 | 56119.97 | 53.97 | 56248 | 56138.73 | 56.6 | 56281 | 56160.97 | 71.31 |
| | 50 | rnd | 56251 | 56074.97 | 84.09 | 56259 | 56068.33 | 78.53 | 56238 | 56131.8 | 54.68 | 56306 | 56135.97 | 68.6 |
| | | 2op | 56154 | 56059.73 | 50.11 | 56295 | 56099.4 | 69.81 | 56252 | 56107.37 | 69.47 | 56261 | 56149.27 | 62.08 |

Table A.2163: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56135 | 56004.4 | 66.59 | 56135 | 56004.4 | 66.59 | 56151 | 55938.6 | 88.01 | 56129 | 55957.07 | 79.92 |
| | | 2op | 56202 | 56011.6 | 88.3 | 56202 | 56011.6 | 88.3 | 56154 | 55959.47 | 105.83 | 56135 | 55963.1 | 62.15 |
| | 50 | rnd | 56176 | 56002.7 | 98.01 | 56176 | 56002.7 | 98.01 | 56142 | 55948.2 | 95.13 | 56044 | 55909.77 | 83.33 |
| | | 2op | 56155 | 56012.67 | 92.88 | 56155 | 56012.67 | 92.88 | 56094 | 55935.7 | 77.14 | 56124 | 55960.5 | 89.53 |
| 51 | 20 | rnd | 56202 | 56008.57 | 91.75 | 56202 | 56008.57 | 91.75 | 56144 | 55946.33 | 84.17 | 56108 | 55966.23 | 94.95 |
| | | 2op | 56256 | 56051.57 | 94.64 | 56256 | 56051.57 | 94.64 | 56248 | 55955.17 | 110.53 | 56129 | 55948.9 | 98.16 |
| | 50 | rnd | 56231 | 56029.33 | 88.16 | 56231 | 56029.33 | 88.16 | 56160 | 55931.03 | 101.23 | 56145 | 55952 | 72.79 |
| | | 2op | 56192 | 56022.33 | 79.52 | 56192 | 56022.33 | 79.52 | 56189 | 55976.93 | 111.19 | 56090 | 55951.6 | 84.13 |

Table A.2164: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56240 | 56098.2 | 81.88 | 56131 | 55974.03 | 88.75 | 56091 | 55974.57 | 70.77 | 56158 | 55978.1 | 78.48 |
| | | 2op | 56174 | 56085.03 | 50.11 | 56100 | 55946.73 | 83.88 | 56162 | 56007.8 | 87.6 | 56094 | 55972.3 | 69.77 |
| | 50 | rnd | 56224 | 56077.77 | 76.16 | 56243 | 55983.7 | 97.15 | 56150 | 55990.03 | 87.96 | 56147 | 55956.53 | 87.96 |
| | | 2op | 56187 | 56055.73 | 64.34 | 56181 | 55973.5 | 108.15 | 56081 | 55961.07 | 63.22 | 56196 | 55988.2 | 93 |
| 51 | 20 | rnd | 56232 | 56082.5 | 88.33 | 56179 | 55993.83 | 96.41 | 56132 | 55970.37 | 74.25 | 56187 | 55958 | 95 |
| | | 2op | 56170 | 56053.3 | 64.35 | 56122 | 55970.8 | 85.51 | 56176 | 55968.73 | 86.79 | 56138 | 55961.77 | 79.6 |
| | 50 | rnd | 56211 | 56077.97 | 81.24 | 56166 | 55972.63 | 74.19 | 56092 | 55952.67 | 61.37 | 56094 | 55930.83 | 91.01 |
| | | 2op | 56163 | 56052.53 | 61.39 | 56221 | 56004.07 | 85.28 | 56184 | 55970.6 | 91.7 | 56124 | 55982.27 | 68.27 |

Table A.2165: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

### A.6.4 Fourth Set of Results

**Results With No Post Optimization and No Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47328 | 47223.07 | 62.12 | 47343 | 47206.77 | 61.74 | 47394 | 47211.87 | 80.39 | 47344 | 47225.17 | 77.3 |
| | | 2op | 47367 | 47307.3 | 29.62 | 47359 | 47280.23 | 21.13 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47337 | 47228.8 | 72.62 | 47443 | 47284.9 | 62.51 | 47336 | 47210.63 | 75.73 | 47321 | 47177.3 | 66.83 |
| | | 2op | 47399 | 47329.33 | 29.56 | 47368 | 47305 | 30 | 47325 | 47275.7 | 9.31 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47345 | 47230.7 | 74.53 | 47421 | 47308.03 | 53 | 47338 | 47206.13 | 72.12 | 47341 | 47208.73 | 87.12 |
| | | 2op | 47395 | 47316.93 | 33.89 | 47412 | 47335.6 | 37.79 | 47365 | 47279.37 | 20.61 | 47274 | 47274 | 0 |
| | 50 | rnd | 47322 | 47245.77 | 62.29 | 47442 | 47333.13 | 56.8 | 47386 | 47245.73 | 69.47 | 47359 | 47243.27 | 86.58 |
| | | 2op | 47401 | 47322.47 | 30.49 | 47430 | 47364.13 | 27.05 | 47344 | 47276.33 | 12.78 | 47274 | 47274 | 0 |

Table A.2166: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47307 | 47106.07 | 124.64 | 47270 | 47086 | 112.64 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47343 | 47294.93 | 21.32 | 47290 | 47274.97 | 3.29 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47279 | 47095.23 | 120.12 | 47366 | 47151.2 | 118.27 | 47287 | 47272.47 | 11.11 | 47274 | 47274 | 0 |
| | | 2op | 47354 | 47305.23 | 19.48 | 47363 | 47294 | 24.52 | 47287 | 47274.43 | 2.37 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47350 | 47186.67 | 100.25 | 47363 | 47240.63 | 76.18 | 47392 | 47145.37 | 120.77 | 47274 | 47274 | 0 |
| | | 2op | 47385 | 47294.9 | 23.54 | 47364 | 47311.13 | 23.24 | 47285 | 47274.67 | 2.55 | 47274 | 47274 | 0 |
| | 50 | rnd | 47291 | 47170.13 | 86.81 | 47457 | 47280.93 | 101.34 | 47356 | 47150.27 | 118.47 | 47274 | 47274 | 0 |
| | | 2op | 47355 | 47303.73 | 22.05 | 47388 | 47341.07 | 24.77 | 47284 | 47274.33 | 1.83 | 47274 | 47274 | 0 |

Table A.2167: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47329 | 47207.83 | 66.03 | 47344 | 47241.63 | 67.08 | 47365 | 47205.9 | 76.91 | 47429 | 47206.93 | 96.41 |
| | | 2op | 47390 | 47319.7 | 34 | 47360 | 47283.57 | 22.98 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47397 | 47227.57 | 51.81 | 47416 | 47268.07 | 77 | 47345 | 47172.8 | 89.31 | 47310 | 47174.8 | 86.64 |
| | | 2op | 47398 | 47334.07 | 34.58 | 47398 | 47314.33 | 38.84 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47336 | 47248.33 | 61.89 | 47388 | 47310.8 | 47.3 | 47340 | 47203.67 | 70.03 | 47356 | 47180.4 | 112.18 |
| | | 2op | 47377 | 47307.37 | 32.86 | 47414 | 47340.7 | 32.72 | 47357 | 47276.77 | 15.15 | 47274 | 47274 | 0 |
| | 50 | rnd | 47386 | 47252.1 | 59.59 | 47401 | 47337.93 | 43.3 | 47402 | 47253.6 | 67.49 | 47409 | 47242 | 77.51 |
| | | 2op | 47408 | 47322.27 | 35.97 | 47426 | 47366 | 25 | 47359 | 47283.93 | 22.75 | 47274 | 47274 | 0 |

Table A.2168: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47282 | 47131.1 | 97.9 | 47302 | 47094.2 | 122.56 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47382 | 47301.63 | 26.11 | 47305 | 47277.23 | 8.66 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47354 | 47110.8 | 121.2 | 47350 | 47136.83 | 122.8 | 47274 | 47253.6 | 67.1 | 47274 | 47274 | 0 |
| | | 2op | 47379 | 47308.87 | 26.88 | 47392 | 47294.33 | 30.32 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47332 | 47161.27 | 86.45 | 47375 | 47230.47 | 78.87 | 47292 | 47153.7 | 76.35 | 47274 | 47274 | 0 |
| | | 2op | 47333 | 47294.8 | 20.27 | 47408 | 47317.7 | 30.75 | 47317 | 47275.43 | 7.85 | 47274 | 47274 | 0 |
| | 50 | rnd | 47301 | 47145.13 | 108.85 | 47440 | 47299.63 | 89.96 | 47358 | 47127.93 | 126.28 | 47274 | 47271.8 | 12.05 |
| | | 2op | 47356 | 47305.17 | 21.48 | 47426 | 47351.63 | 27.85 | 47340 | 47278.53 | 13.12 | 47274 | 47274 | 0 |

Table A.2169: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47320 | 47218.1 | 55.34 | 47355 | 47220.3 | 69.19 | 47354 | 47209.63 | 74.77 | 47362 | 47197.83 | 71.68 |
| | | 2op | 47371 | 47318.43 | 26.16 | 47366 | 47297.97 | 29.51 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47312 | 47240.9 | 47.77 | 47374 | 47220.6 | 66.15 | 47328 | 47223.47 | 65.37 | 47330 | 47211.03 | 88.71 |
| | | 2op | 47407 | 47336.87 | 31.21 | 47401 | 47315.2 | 35.65 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47340 | 47229.83 | 58.71 | 47352 | 47227.23 | 57.61 | 47320 | 47183.97 | 72.58 | 47399 | 47213.5 | 87.51 |
| | | 2op | 47381 | 47333.47 | 22.11 | 47383 | 47330.9 | 26.7 | 47313 | 47275.3 | 7.12 | 47274 | 47274 | 0 |
| | 50 | rnd | 47365 | 47285.43 | 45.94 | 47384 | 47269 | 67.37 | 47353 | 47243.83 | 70.32 | 47304 | 47183.93 | 91.43 |
| | | 2op | 47381 | 47339.6 | 24.24 | 47426 | 47330.27 | 37.84 | 47290 | 47274.53 | 2.92 | 47274 | 47274 | 0 |

Table A.2170: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47346 | 47171.27 | 94.15 | 47323 | 47134.57 | 96.5 | 47274 | 47265.97 | 44 | 47274 | 47274 | 0 |
| | | 2op | 47348 | 47302.23 | 21.82 | 47348 | 47289.4 | 21.97 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47406 | 47218.33 | 99.5 | 47385 | 47193.9 | 103.48 | 47274 | 47252.83 | 55.15 | 47274 | 47274 | 0 |
| | | 2op | 47353 | 47317.77 | 20.88 | 47331 | 47296.7 | 19.94 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47359 | 47264.33 | 50.92 | 47341 | 47251.27 | 53.17 | 47419 | 47233.7 | 94.18 | 47274 | 47274 | 0 |
| | | 2op | 47390 | 47334.43 | 26.3 | 47379 | 47327.07 | 27.93 | 47284 | 47274.33 | 1.83 | 47274 | 47274 | 0 |
| | 50 | rnd | 47412 | 47300.03 | 52.84 | 47395 | 47277.5 | 54.89 | 47367 | 47189.37 | 75.36 | 47274 | 47274 | 0 |
| | | 2op | 47443 | 47340.57 | 36.25 | 47436 | 47317.9 | 43.92 | 47290 | 47274.53 | 2.92 | 47274 | 47274 | 0 |

Table A.2171: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151322 | 151152.63 | 125.35 | 151271 | 151147.33 | 116.02 | 151231 | 151110.33 | 160.91 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151169.1 | 51.02 | 151291 | 151166.2 | 60.73 | 151255 | 151124.43 | 146.59 | 151171 | 151150.7 | 3.83 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151279 | 151120.77 | 125.61 | 151216 | 151149.03 | 53.11 | 151291 | 151149.17 | 112.13 | 151228 | 151151.3 | 21.59 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151249 | 151138.93 | 45.97 | 151229 | 151160.2 | 48.91 | 151279 | 151161.67 | 53.54 | 151215 | 151086.2 | 177.9 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2172: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151224 | 150907.87 | 334.57 | 151256 | 151153.53 | 19.35 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151210 | 150947.57 | 269.13 | 151249 | 151037.9 | 283.29 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151244 | 150969.93 | 305.05 | 151249 | 150890.73 | 368.58 | 151150 | 151147.2 | 15.34 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151070.87 | 201.37 | 151295 | 151061.53 | 238.86 | 151227 | 151117.5 | 117.12 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2173: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151288 | 151139.57 | 118.36 | 151260 | 151139.43 | 113.88 | 151220 | 151145.6 | 28.64 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151272 | 151151.3 | 47.2 | 151237 | 151156.8 | 51.07 | 151226 | 151121.77 | 149.72 | 151150 | 151149.8 | 1.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151262 | 151142.3 | 117.27 | 151293 | 151153.13 | 64.68 | 151229 | 151087.33 | 184.83 | 151259 | 151153 | 34.39 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151236 | 151140.43 | 47.58 | 151249 | 151160.63 | 43.71 | 151273 | 151173.67 | 47.23 | 151223 | 151125.5 | 110.01 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2174: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151275 | 151065.8 | 202.88 | 151245 | 151128.6 | 108.42 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151220 | 150989.1 | 280.14 | 151267 | 151039.07 | 309.08 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151280 | 151023.7 | 289.64 | 151306 | 151071 | 235.96 | 151170 | 151129.17 | 117.94 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151233 | 151037.53 | 208.2 | 151237 | 151040.83 | 268.83 | 151172 | 151046.43 | 256.19 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2175: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151241 | 151159.63 | 44.85 | 151263 | 151159.03 | 49.54 | 151228 | 151133.9 | 107.77 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151165.7 | 46.99 | 151217 | 151126.1 | 104.71 | 151297 | 151119.27 | 178.83 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151240 | 151146.23 | 49.16 | 151245 | 151157.07 | 45.82 | 151256 | 151169.07 | 57.18 | 151150 | 151149.27 | 4.02 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151299 | 151167.47 | 51.98 | 151259 | 151159.23 | 58.32 | 151222 | 151151.7 | 43.52 | 151295 | 151147.47 | 38.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2176: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151265 | 151111.93 | 171.47 | 151255 | 151095.3 | 202.53 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151077 | 282.8 | 151227 | 150968.7 | 306.24 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151290 | 151109.23 | 210.85 | 151290 | 151112.23 | 210.97 | 151249 | 151105.17 | 170.81 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151228 | 151081.07 | 207.51 | 151235 | 151076.93 | 207.62 | 151266 | 151093.37 | 218.88 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2177: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167325 | 166955.17 | 205.51 | 167284 | 166868.83 | 248.66 | 167320 | 166836.37 | 259.86 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167309 | 166965.7 | 180.76 | 167416 | 167042.27 | 237.21 | 167304 | 166918.57 | 180.5 | 167256 | 166586.87 | 187.24 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167332 | 166960.43 | 228.42 | 167331 | 167031.3 | 182.67 | 167335 | 166817.03 | 263.63 | 167127 | 166653.47 | 228.62 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167363 | 166965.77 | 172.33 | 167351 | 167124.5 | 175.11 | 167282 | 166869.1 | 247.93 | 167235 | 166857.63 | 212.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2178: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167083 | 166465.67 | 294.78 | 166879 | 166513.23 | 271.97 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166980 | 166376 | 300.81 | 166903 | 166410.9 | 325.13 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167096 | 166520.43 | 344.98 | 166930 | 166509.13 | 287.68 | 166880 | 166536.73 | 153.41 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166921 | 166499.1 | 317.34 | 166768 | 166518.6 | 227.41 | 166911 | 166501.33 | 291.39 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2179: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167387 | 166917.97 | 218.43 | 167216 | 166874.57 | 199.53 | 167287 | 166731.03 | 229.52 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167403 | 166940.03 | 232.47 | 167337 | 166942.97 | 216.17 | 167350 | 166823.83 | 198.99 | 167018 | 166578.4 | 143.63 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167395 | 166992.37 | 185.38 | 167318 | 167002.63 | 203.72 | 167292 | 166878.47 | 208.76 | 167126 | 166740 | 227.78 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167314 | 166955.27 | 193.81 | 167404 | 167183.33 | 141.43 | 167284 | 166907.6 | 217.01 | 167156 | 166867.97 | 194.35 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2180: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166930 | 166544.23 | 300.66 | 166749 | 166470.63 | 256.37 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166976 | 166466.13 | 344.2 | 166876 | 166408 | 317.92 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 166952 | 166532.33 | 267.19 | 166967 | 166482.87 | 267.92 | 166751 | 166491.67 | 152.46 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166964 | 166578.67 | 336.85 | 167015 | 166527.3 | 314.2 | 166894 | 166541.67 | 217.32 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2181: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167318 | 167006.8 | 203.65 | 167301 | 166973.4 | 193.54 | 167368 | 166960.43 | 219.45 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167360 | 167025 | 183.2 | 167395 | 167012.03 | 227 | 167321 | 166876.83 | 170.75 | 166815 | 166529.83 | 53.86 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167330 | 167008.57 | 155.69 | 167315 | 167009.43 | 169.14 | 167234 | 166925.63 | 200.5 | 166974 | 166549.3 | 111.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167373 | 167032.73 | 199.07 | 167413 | 167015.2 | 192.34 | 167363 | 166940.4 | 227.5 | 167245 | 166841.43 | 222.73 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2182: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166934 | 166528.37 | 295.43 | 166921 | 166517.4 | 318.91 | 166773 | 166526.6 | 49.18 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167029 | 166545.23 | 326.64 | 166862 | 166544.97 | 217.39 | 166929 | 166544.03 | 81.85 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167068 | 166723.37 | 199.72 | 167124 | 166727.47 | 199.16 | 167149 | 166739.63 | 193.94 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167016 | 166713.73 | 187.05 | 167016 | 166715.1 | 187.35 | 166922 | 166696.03 | 179.51 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2183: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163162 | 162964 | 82.69 | 163168 | 162983 | 90.22 | 163195 | 162993.23 | 89.87 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163191 | 162980.97 | 85.15 | 163085 | 162956.7 | 69.52 | 163112 | 162984.5 | 79.44 | 163118 | 162973.13 | 71.26 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163151 | 162984.43 | 88.72 | 163150 | 163015.8 | 69.48 | 163093 | 162972.6 | 73.01 | 163182 | 162988.37 | 71.15 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163078 | 162971.73 | 65.78 | 163073 | 162981.23 | 66.59 | 163126 | 162949.43 | 92.28 | 163120 | 162980.43 | 70.72 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2184: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163097 | 162964.47 | 81.77 | 163080 | 162929.63 | 89.01 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163171 | 162939.33 | 118.26 | 163114 | 162934.1 | 84.08 | 163089 | 162980.57 | 50.75 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163106 | 162983.1 | 75.81 | 163120 | 162955.2 | 111.5 | 163086 | 162917.43 | 101.17 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163129 | 162970.5 | 111.37 | 163141 | 162953.2 | 108.07 | 163177 | 162928.1 | 105.23 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2185: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163148 | 162965.5 | 68.67 | 163119 | 162971.9 | 75.51 | 163068 | 162973.47 | 45.34 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163098 | 162965.7 | 64.09 | 163095 | 162948 | 70.81 | 163100 | 162993.53 | 71.77 | 163083 | 162990.17 | 29.74 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163099 | 162990.73 | 76.52 | 163182 | 162995.73 | 73.74 | 163133 | 162968.67 | 70.55 | 163083 | 162969.97 | 56.31 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163155 | 162973.47 | 112.53 | 163103 | 162966.57 | 94.87 | 163093 | 162941.97 | 80.95 | 163116 | 162976.83 | 80.34 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2186: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163070 | 162932.63 | 94.57 | 163100 | 162920.9 | 117.33 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163067 | 162925.13 | 113.67 | 163068 | 162937.23 | 102.08 | 163082 | 162960.2 | 81.58 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163120 | 162971.23 | 65.97 | 163085 | 162952.1 | 71.66 | 163092 | 162950.57 | 71.54 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162945.23 | 109.16 | 163167 | 162943.3 | 86.03 | 163075 | 162940.57 | 108.62 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2187: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163134 | 162978.3 | 80.52 | 163117 | 162984.67 | 79.61 | 163118 | 162947.5 | 78.29 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162973.1 | 87.98 | 163093 | 162997.8 | 56.61 | 163144 | 162984.17 | 77.96 | 163065 | 162961.67 | 114.09 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163161 | 162984.13 | 75.67 | 163133 | 162975.77 | 66.1 | 163154 | 162991.3 | 82.11 | 163104 | 162981.7 | 36.81 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163118 | 162985.87 | 71.3 | 163108 | 162979.93 | 91.08 | 163143 | 162997.37 | 64.08 | 163177 | 162976.97 | 111.1 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2188: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163047 | 162938.13 | 99.39 | 163116 | 162950.73 | 91.84 | 163056 | 162912.03 | 86.1 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163075 | 162970.9 | 64.49 | 163101 | 162944.57 | 78.29 | 163081 | 162948.13 | 78.24 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163043 | 162914.07 | 85.06 | 163043 | 162914.07 | 85.06 | 163047 | 162929.43 | 100.07 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163150 | 162967.63 | 89 | 163150 | 162967.63 | 89 | 163144 | 162920.8 | 93.27 | 162995 | 162986.37 | 10.35 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2189: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179884 | 179702.27 | 91.18 | 179868 | 179681.67 | 88.27 | 179865 | 179629.23 | 78.58 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179973 | 179737.87 | 97.25 | 179892 | 179717.17 | 94.65 | 179862 | 179682.43 | 102.86 | 179822 | 179620.43 | 44.13 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179881 | 179721.77 | 85.33 | 179893 | 179678.23 | 111.08 | 179921 | 179699.43 | 100.01 | 179866 | 179653 | 86.12 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179846 | 179703.67 | 74.2 | 179961 | 179702.6 | 121.55 | 179869 | 179711.2 | 73.49 | 179975 | 179703.97 | 96.23 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2190: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179812 | 179677.5 | 88.01 | 179815 | 179690.97 | 76.49 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179878 | 179699.8 | 92.46 | 179860 | 179671.17 | 101.55 | 179839 | 179625.2 | 78.25 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179922 | 179737.67 | 99.98 | 179841 | 179684.13 | 97.48 | 179856 | 179686.1 | 79.61 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179874 | 179707.1 | 86.07 | 179970 | 179709.27 | 120.48 | 179901 | 179686.87 | 90.38 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2191: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179865 | 179702.3 | 101.36 | 179891 | 179687.47 | 96.02 | 179937 | 179673.83 | 102.83 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179885 | 179702.5 | 87.81 | 179920 | 179702.07 | 87.97 | 179898 | 179707.27 | 87.84 | 179734 | 179615.7 | 53.58 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179913 | 179738.73 | 87.62 | 179952 | 179730.4 | 92.83 | 180023 | 179712.1 | 102.42 | 179785 | 179645.03 | 55.96 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179949 | 179706.1 | 104.97 | 179836 | 179674.03 | 89.98 | 179931 | 179711.4 | 82.88 | 179932 | 179705.83 | 98.77 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2192: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179843 | 179698.07 | 83.7 | 179907 | 179688.4 | 91.56 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179870 | 179732.7 | 74.4 | 179892 | 179698.73 | 85 | 179872 | 179655.6 | 71.1 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179927 | 179724.2 | 85.27 | 179900 | 179686.1 | 111.9 | 179888 | 179681.8 | 86.82 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179833 | 179681.07 | 92.49 | 179848 | 179702.13 | 84.07 | 179920 | 179682.33 | 85.62 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2193: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179831 | 179719 | 80.84 | 179996 | 179707.37 | 90.83 | 179910 | 179710.17 | 85.27 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179854 | 179739.67 | 62.47 | 179911 | 179696.83 | 124.46 | 179854 | 179703.67 | 89.17 | 179759 | 179612.07 | 27.75 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179843 | 179709.4 | 89.13 | 179841 | 179686.77 | 81.47 | 179959 | 179708.97 | 82.57 | 179733 | 179613.83 | 26.73 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179845 | 179687.6 | 85.28 | 179877 | 179694.7 | 102.34 | 179952 | 179712.87 | 103.4 | 179879 | 179657.97 | 76.54 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2194: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179816 | 179685.17 | 86.78 | 179882 | 179677.47 | 89.57 | 179828 | 179676.57 | 87.56 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179901 | 179693.7 | 103.67 | 179958 | 179710.83 | 110.59 | 179872 | 179665.33 | 94.3 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179879 | 179695.03 | 85.52 | 179879 | 179695.03 | 85.52 | 179858 | 179678.13 | 98.57 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179916 | 179710.17 | 93.31 | 179916 | 179710.17 | 93.31 | 179827 | 179686.13 | 90.2 | 179642 | 179609.13 | 8.16 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2195: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343123 | 342867.97 | 134.26 | 343158 | 342851.93 | 215.75 | 343012 | 342805.37 | 114.07 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343171 | 342878.6 | 134.05 | 343131 | 342833.07 | 243.58 | 343099 | 342755.8 | 290.48 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343011 | 342846 | 122.13 | 343203 | 342882.63 | 168.5 | 343022 | 342814.7 | 173.26 | 342915 | 342771.93 | 34.32 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343120 | 342896.7 | 96.94 | 343118 | 342872.3 | 137.17 | 343084 | 342881.3 | 179.5 | 343110 | 342726.5 | 234.13 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2196: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343090 | 342627.93 | 408.14 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343130 | 342584.93 | 446.18 | 342835 | 342694.9 | 241.36 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343107 | 342631.63 | 402.65 | 343032 | 342629.67 | 374.91 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342996 | 342643.97 | 288.44 | 343092 | 342626.77 | 384.89 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2197: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343109 | 342870 | 117.2 | 343163 | 342796.17 | 306.15 | 343051 | 342799.57 | 106.84 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343100 | 342903.2 | 107.83 | 343049 | 342828.03 | 216.63 | 343173 | 342797.07 | 225.63 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343049 | 342871.6 | 102.32 | 343156 | 342873.77 | 154.27 | 343126 | 342818.87 | 208.11 | 343007 | 342786.9 | 66 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343181 | 342884.13 | 133.46 | 343066 | 342787.4 | 276.02 | 343136 | 342845.23 | 256.17 | 343090 | 342820 | 223.44 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2198: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343093 | 342585.37 | 392.07 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343091 | 342580.7 | 393.26 | 342861 | 342717.93 | 190.04 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343064 | 342596.8 | 428.76 | 343168 | 342543.17 | 452.8 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343111 | 342806 | 235.38 | 343034 | 342764.27 | 252.67 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2199: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343125 | 342898.8 | 104.66 | 343129 | 342886.23 | 152.23 | 343091 | 342732.27 | 283.51 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343147 | 342945.97 | 91.11 | 343169 | 342926.93 | 94.31 | 343118 | 342760.43 | 244.79 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343118 | 342905 | 141.81 | 343092 | 342881.43 | 154.54 | 343208 | 342836.2 | 264.59 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343114 | 342874.8 | 108.34 | 343126 | 342884.17 | 100.63 | 343089 | 342893.83 | 133.37 | 342936 | 342760.27 | 70.6 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2200: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343140 | 342504.6 | 458.31 | 343140 | 342511.6 | 464.4 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342994 | 342546.4 | 432.62 | 342994 | 342524.03 | 428.31 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343079 | 342748.17 | 305.22 | 343079 | 342748.17 | 305.22 | 343067 | 342714.33 | 229.44 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343074 | 342683 | 321.63 | 343074 | 342683 | 321.63 | 343073 | 342567.6 | 373.35 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2201: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226223 | 225146.3 | 706.13 | 226756 | 225249.67 | 895.19 | 226217 | 224996.4 | 643.26 | 226451 | 225242.47 | 790.03 |
| | | 2op | 226435 | 225692.5 | 250.67 | 226609 | 225591.47 | 226.61 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226629 | 224966.53 | 876.61 | 226304 | 225159.87 | 611.93 | 226616 | 225261.5 | 622.12 | 227086 | 225248.2 | 898.4 |
| | | 2op | 226415 | 225765.93 | 282.23 | 226281 | 225709.87 | 276.35 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226717 | 225011.93 | 778.71 | 226523 | 225191.5 | 604.25 | 226529 | 225150.3 | 700.12 | 226476 | 225048.53 | 676.18 |
| | | 2op | 226364 | 225742.3 | 325.1 | 226698 | 226053.63 | 403.4 | 226370 | 225592.23 | 228.89 | 225517 | 225517 | 0 |
| | 50 | rnd | 226542 | 225019.7 | 902.9 | 227430 | 225435.2 | 834.72 | 226510 | 225319.83 | 825 | 226693 | 225005.33 | 850.79 |
| | | 2op | 226768 | 225740.7 | 388.93 | 226610 | 226198.87 | 228.9 | 226537 | 225579.07 | 284.59 | 225517 | 225517 | 0 |

Table A.2202: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226996 | 225609.1 | 777.28 | 226232 | 225428.2 | 624.03 | 226732 | 225243.57 | 791.22 | 226468 | 225211 | 738.34 |
| | | 2op | 225929 | 225689.5 | 168.95 | 225838 | 225579.17 | 111.17 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227306 | 225533.03 | 728.74 | 226685 | 225460.73 | 660.99 | 226798 | 225190.73 | 780.58 | 227269 | 225514.2 | 941.39 |
| | | 2op | 225955 | 225686.4 | 156.41 | 225860 | 225601.2 | 118.81 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226731 | 225767.6 | 541.65 | 226801 | 225674.03 | 651.28 | 226681 | 225080.2 | 863.45 | 226622 | 225269.9 | 790.65 |
| | | 2op | 225929 | 225634.53 | 143.46 | 226003 | 225694.13 | 157.11 | 225707 | 225527.37 | 40.48 | 225517 | 225517 | 0 |
| | 50 | rnd | 226929 | 225621.77 | 621.84 | 227096 | 225735.3 | 674.97 | 226665 | 225218.77 | 654.89 | 226606 | 225125.97 | 887.35 |
| | | 2op | 225946 | 225692.97 | 132.11 | 225935 | 225818.47 | 110.35 | 225770 | 225536.6 | 61.75 | 225517 | 225517 | 0 |

Table A.2203: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226793 | 225139.63 | 1001.81 | 226537 | 225078.2 | 852.16 | 227010 | 225286.23 | 869.92 | 226654 | 225032 | 824.1 |
| | | 2op | 226736 | 225879.97 | 351.65 | 226291 | 225677.63 | 264.55 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226635 | 225297.83 | 592.26 | 226531 | 225231.33 | 670.52 | 227570 | 225494.2 | 831.67 | 226312 | 224948.63 | 929.61 |
| | | 2op | 226844 | 225861.63 | 326.95 | 226879 | 225775.93 | 391.87 | 226233 | 225540.87 | 130.72 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226733 | 225230.2 | 829.31 | 226558 | 225145.87 | 625.6 | 227135 | 225109.67 | 734.67 | 226609 | 224999.33 | 851.49 |
| | | 2op | 226624 | 225759.37 | 343.29 | 226690 | 225967.23 | 363.35 | 226840 | 225565.07 | 241.63 | 225517 | 225517 | 0 |
| | 50 | rnd | 226840 | 225052.83 | 919.62 | 226399 | 225157.37 | 848.99 | 226733 | 225232.13 | 824.8 | 226723 | 225197.03 | 752.23 |
| | | 2op | 226314 | 225776.33 | 291.33 | 226599 | 226212.7 | 236.64 | 226512 | 225692.87 | 304.03 | 225517 | 225517 | 0 |

Table A.2204: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226800 | 225777.93 | 669.02 | 226883 | 225452.97 | 659.6 | 226884 | 225486.57 | 681.11 | 226456 | 225038.6 | 690.35 |
| | | 2op | 225944 | 225671.97 | 156.64 | 225893 | 225538.53 | 72.96 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226594 | 225473.73 | 679.68 | 226792 | 225332.27 | 867.95 | 226874 | 225221.33 | 865.92 | 226134 | 225097.23 | 671.09 |
| | | 2op | 225924 | 225652.53 | 145.45 | 225827 | 225566.07 | 87.28 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226995 | 225674.43 | 706.2 | 226910 | 225675.73 | 728.05 | 227383 | 225329.27 | 649.72 | 226387 | 224877.07 | 969.09 |
| | | 2op | 225938 | 225651.77 | 134.24 | 225928 | 225685.73 | 143.4 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226858 | 225619.2 | 733.42 | 227052 | 225898.43 | 545.47 | 226840 | 225303.27 | 830.97 | 226633 | 225154.33 | 873.97 |
| | | 2op | 225927 | 225640.23 | 131.56 | 226135 | 225853.5 | 122.14 | 225673 | 225524.43 | 29.96 | 225517 | 225517 | 0 |

Table A.2205: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226265 | 225139.13 | 907.65 | 226527 | 225163.07 | 818.68 | 226664 | 225134.2 | 705.25 | 226698 | 224937.13 | 928.79 |
| | | 2op | 226619 | 225921.17 | 361.33 | 226611 | 225848.3 | 399.77 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226916 | 225157.43 | 794.01 | 226946 | 225065.6 | 977.93 | 226991 | 225203.4 | 759.85 | 226308 | 225023.83 | 788.33 |
| | | 2op | 226297 | 225872.63 | 313.82 | 226824 | 225974.77 | 345.74 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226835 | 225063.9 | 956.07 | 226337 | 225302 | 606.61 | 226484 | 225193.8 | 721.83 | 226480 | 225165.97 | 649.12 |
| | | 2op | 226887 | 226052.8 | 345.08 | 226887 | 226081.2 | 348.63 | 226601 | 225643.23 | 286.56 | 225517 | 225517 | 0 |
| | 50 | rnd | 227229 | 225155.07 | 701.74 | 226317 | 224887.9 | 852.86 | 226318 | 224949.2 | 814.2 | 226531 | 225310.23 | 714.46 |
| | | 2op | 226424 | 225893.7 | 323.94 | 226404 | 225992.37 | 282.95 | 226181 | 225632.73 | 237.05 | 225517 | 225517 | 0 |

Table A.2206: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226625 | 225703.5 | 606.47 | 227184 | 225442.7 | 716.28 | 226376 | 225252.13 | 637.37 | 226380 | 225086.17 | 767.64 |
| | | 2op | 225935 | 225644.33 | 137.74 | 225899 | 225609.63 | 122.15 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226986 | 225585.1 | 738.77 | 226106 | 225214.93 | 570.02 | 226885 | 225224.7 | 760.07 | 226501 | 225059.43 | 923.67 |
| | | 2op | 225929 | 225692.77 | 121.26 | 225929 | 225642.9 | 115.64 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 227242 | 225664.73 | 771.81 | 226745 | 225561.6 | 717.26 | 226836 | 225405.2 | 677.18 | 226772 | 225165.97 | 702.34 |
| | | 2op | 226912 | 225917.4 | 338.49 | 226912 | 225905.13 | 331.17 | 225595 | 225520.5 | 14.91 | 225517 | 225517 | 0 |
| | 50 | rnd | 227216 | 225787.63 | 645.19 | 226692 | 225639.73 | 635.14 | 226708 | 225228.57 | 740.64 | 226709 | 225336.23 | 651.35 |
| | | 2op | 226628 | 225930.73 | 225.39 | 226609 | 225851.93 | 259.03 | 225726 | 225529.77 | 46.88 | 225517 | 225517 | 0 |

Table A.2207: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440918 | 438629 | 1318.13 | 441469 | 438664.9 | 1332.21 | 442079 | 438477.23 | 1231.64 | 441312 | 438675.77 | 1234.51 |
| | | 2op | 438680 | 437898.77 | 407.68 | 438642 | 437497 | 284.6 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440961 | 438194.43 | 1246.16 | 440185 | 438430.83 | 1093.63 | 440555 | 438831.67 | 1175.19 | 440145 | 438339.8 | 1030.8 |
| | | 2op | 438887 | 437776.27 | 381.84 | 438278 | 437560.6 | 288.92 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440731 | 438155.2 | 1211.97 | 440331 | 437968.07 | 1240.61 | 440297 | 438560.2 | 1280.21 | 440544 | 438110.77 | 1305.49 |
| | | 2op | 438599 | 437765.77 | 375.07 | 438735 | 437604.47 | 363.02 | 437775 | 437410.57 | 68.83 | 437398 | 437398 | 0 |
| | 50 | rnd | 440419 | 438128 | 1275.49 | 441245 | 438556.2 | 1341.44 | 440917 | 438656.43 | 1118.17 | 441191 | 438825.5 | 1259.97 |
| | | 2op | 438507 | 437879.73 | 308.96 | 439035 | 437880.13 | 425.06 | 438297 | 437455.4 | 218.67 | 437398 | 437398 | 0 |

Table A.2208: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441176 | 439074.67 | 1245.8 | 440158 | 438712.2 | 1060.76 | 440394 | 438436.23 | 1329.59 | 440646 | 438355.07 | 1545.38 |
| | | 2op | 437809 | 437537.37 | 143.04 | 437537 | 437413.9 | 41.87 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 442534 | 439621.03 | 1323.37 | 440344 | 438630.4 | 1012.1 | 440614 | 438473.77 | 1252.12 | 440874 | 438311.43 | 1338.47 |
| | | 2op | 437939 | 437544.03 | 154.26 | 437713 | 437431.3 | 84.63 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441150 | 438630.17 | 1260.54 | 440626 | 438958.3 | 1010.62 | 440790 | 438355.53 | 1008.75 | 440361 | 438273.67 | 1262.72 |
| | | 2op | 437794 | 437530.2 | 147.01 | 437810 | 437451.83 | 107.49 | 437403 | 437398.17 | 0.91 | 437398 | 437398 | 0 |
| | 50 | rnd | 440943 | 438896.5 | 1106.07 | 442189 | 439431.13 | 1176.81 | 440309 | 438753.63 | 1123.12 | 440197 | 438220.8 | 1002.45 |
| | | 2op | 437908 | 437602 | 141.05 | 437868 | 437574.4 | 147.92 | 437548 | 437403.7 | 27.52 | 437398 | 437398 | 0 |

Table A.2209: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441351 | 438668.23 | 1013.9 | 440984 | 438451.27 | 1320.04 | 440118 | 437911.5 | 1366.12 | 440021 | 438344.5 | 1234.66 |
| | | 2op | 438989 | 437979.8 | 477.85 | 438417 | 437454.47 | 219.59 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440850 | 438402.37 | 1208 | 441680 | 438671.1 | 1321.64 | 441063 | 438393.83 | 1376.42 | 440051 | 437912.63 | 1163.38 |
| | | 2op | 438962 | 438031.43 | 425.33 | 438971 | 437554.67 | 387.13 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441685 | 438500.1 | 1376.79 | 440565 | 438375.43 | 1277.26 | 440377 | 438126.37 | 1154.28 | 440247 | 437981.77 | 1429.8 |
| | | 2op | 438548 | 437765.37 | 382.13 | 439390 | 437702.33 | 490.22 | 438357 | 437429.97 | 175.09 | 437398 | 437398 | 0 |
| | 50 | rnd | 441622 | 438744.37 | 1111.44 | 440908 | 438393.37 | 1245.36 | 441200 | 438677.77 | 1105.43 | 439938 | 437871.27 | 1325.81 |
| | | 2op | 438576 | 437859.53 | 307.65 | 438527 | 437628.3 | 339.94 | 437825 | 437412.23 | 77.96 | 437398 | 437398 | 0 |

Table A.2210: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441181 | 439134.67 | 1079.74 | 440735 | 438621.47 | 1293.47 | 440863 | 438490.27 | 1225.79 | 440676 | 438381.8 | 1197.4 |
| | | 2op | 437852 | 437568.37 | 134.86 | 437570 | 437405.87 | 33.13 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441189 | 438896.6 | 1201.57 | 441734 | 438719.7 | 1192.22 | 440772 | 438543.47 | 1177.38 | 440469 | 438434.07 | 989.61 |
| | | 2op | 437826 | 437589.53 | 135.26 | 437471 | 437409.93 | 24.87 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440894 | 439201.53 | 1121.24 | 441494 | 438866.8 | 1315.87 | 441451 | 438835.27 | 1385.4 | 440889 | 438600.53 | 1244.5 |
| | | 2op | 437897 | 437524.87 | 153.48 | 437856 | 437449.37 | 106.29 | 437668 | 437407 | 49.3 | 437398 | 437398 | 0 |
| | 50 | rnd | 442159 | 439196.77 | 1062.91 | 441521 | 439415.87 | 1096.98 | 441119 | 438673.43 | 1249.69 | 440396 | 438418.2 | 1077.26 |
| | | 2op | 437864 | 437569.67 | 126.99 | 437835 | 437470.7 | 124.74 | 437428 | 437399 | 5.48 | 437398 | 437398 | 0 |

Table A.2211: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440597 | 438306.7 | 1310.83 | 440494 | 438604.3 | 967.29 | 441978 | 438503.93 | 1117.13 | 440304 | 437982.37 | 1291.64 |
| | | 2op | 438481 | 437936.3 | 316.67 | 438481 | 437751.67 | 340.4 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440755 | 438672.93 | 1195.54 | 441008 | 438401.87 | 1613.41 | 441365 | 438503.73 | 1436.87 | 441129 | 438344.37 | 1304.22 |
| | | 2op | 438750 | 438070.27 | 360.37 | 438533 | 437920.2 | 356.93 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440678 | 438557.27 | 1140.44 | 440678 | 438681.77 | 1213.44 | 440925 | 438557.57 | 1344.76 | 440166 | 438301.8 | 929.55 |
| | | 2op | 439240 | 437945.6 | 372.02 | 438664 | 437881.3 | 306.67 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440295 | 438491.47 | 1164.55 | 441003 | 438446.8 | 1426.4 | 441429 | 438650.3 | 1323.07 | 440472 | 438328.1 | 1180.34 |
| | | 2op | 438806 | 437967.03 | 330.47 | 438989 | 437950.27 | 369.01 | 438193 | 437440 | 165.61 | 437398 | 437398 | 0 |

Table A.2212: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441543 | 439175.13 | 1257.27 | 441406 | 439304.47 | 1272.41 | 441532 | 438532.9 | 1635.93 | 441010 | 438329.03 | 1551.12 |
| | | 2op | 437901 | 437609.33 | 131.18 | 437758 | 437508.27 | 116.61 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441295 | 438976.47 | 1144.66 | 441165 | 438937.73 | 1123.51 | 440169 | 438402.27 | 1285.38 | 440042 | 438236.13 | 1041.71 |
| | | 2op | 437859 | 437670.33 | 108.41 | 437789 | 437557 | 108.99 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441037 | 439430.83 | 928.56 | 441021 | 439382.47 | 958.13 | 441367 | 438384.5 | 1546.44 | 440312 | 438623.57 | 1300.69 |
| | | 2op | 439509 | 437786.27 | 463.66 | 439509 | 437752.87 | 467.61 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441676 | 439197.47 | 1244.99 | 441627 | 439120.1 | 1238.29 | 441712 | 439130.9 | 1121.55 | 440590 | 438385.07 | 1244.08 |
| | | 2op | 439692 | 437866.33 | 588.8 | 439642 | 437792.2 | 597.3 | 437521 | 437403.6 | 23.64 | 437398 | 437398 | 0 |

Table A.2213: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115876 | 114810.13 | 502.7 | 115553 | 114666.33 | 450.23 | 116248 | 114811.33 | 564.26 | 115420 | 114584.37 | 517.36 |
| | | 2op | 116327 | 115525.47 | 221.84 | 115802 | 115485.33 | 151.71 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115431 | 114772.17 | 426.02 | 115621 | 114661.17 | 423.71 | 115768 | 114871.47 | 532.51 | 115601 | 114849.4 | 560.44 |
| | | 2op | 115767 | 115456.6 | 186.34 | 116023 | 115537.6 | 200.88 | 115547 | 115501.8 | 72.39 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115953 | 114702.17 | 648.28 | 115653 | 114806.33 | 595.07 | 115619 | 114648.23 | 488.37 | 115930 | 114819.53 | 502.83 |
| | | 2op | 115633 | 115437.33 | 123.2 | 115893 | 115570.1 | 177.56 | 115633 | 115411.53 | 142.09 | 115514 | 115514 | 0 |
| | 50 | rnd | 115690 | 114774.6 | 475.75 | 115402 | 114729.97 | 437.25 | 115654 | 114830.5 | 497.95 | 115717 | 114705.07 | 560.4 |
| | | 2op | 115803 | 115507.73 | 142.89 | 116424 | 115750 | 237.71 | 115858 | 115508.63 | 147.62 | 115514 | 115514 | 0 |

Table A.2214: *j*02459_7: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115759 | 114898.37 | 432.88 | 115993 | 114837 | 498.14 | 115744 | 114827.03 | 664.09 | 115808 | 114876.57 | 555.67 |
| | | 2op | 115872 | 115568.97 | 69.69 | 115561 | 115520.8 | 13.34 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116082 | 115123.2 | 524.4 | 115883 | 115302.53 | 455.99 | 116177 | 114916.83 | 607.58 | 115754 | 114670.17 | 543.26 |
| | | 2op | 115629 | 115560.6 | 39.02 | 115723 | 115560.87 | 60.56 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115893 | 115019.97 | 504.71 | 116152 | 115091.47 | 420.23 | 115825 | 114932.17 | 582.72 | 115753 | 114843.43 | 563.73 |
| | | 2op | 116009 | 115577.77 | 103.94 | 115882 | 115644.77 | 75.45 | 115582 | 115519.17 | 16.7 | 115514 | 115514 | 0 |
| | 50 | rnd | 115997 | 115017.5 | 549.84 | 116185 | 115235.3 | 489.49 | 115735 | 114895.93 | 470.18 | 115490 | 114664.33 | 445.38 |
| | | 2op | 115685 | 115578.53 | 48.59 | 115812 | 115726.53 | 47.1 | 115588 | 115525.2 | 21.41 | 115514 | 115514 | 0 |

Table A.2215: *j*02459_7: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115650 | 114856.67 | 517.37 | 115592 | 114918.4 | 501.3 | 115774 | 114999.83 | 392.1 | 115283 | 114585.63 | 557.15 |
| | | 2op | 115647 | 115496.53 | 132.75 | 115690 | 115491.97 | 110.25 | 115514 | 115510.53 | 18.99 | 115514 | 115514 | 0 |
| | 50 | rnd | 115678 | 114754.07 | 457.41 | 115604 | 114849.77 | 502.5 | 115742 | 114600.03 | 499.21 | 115724 | 114705.97 | 525.73 |
| | | 2op | 116039 | 115483.67 | 209.74 | 116035 | 115553.33 | 242.13 | 115670 | 115509.27 | 79.91 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115911 | 114854.23 | 616.39 | 115789 | 114770.7 | 541.7 | 115503 | 114763.7 | 509.22 | 116175 | 114743.03 | 640.99 |
| | | 2op | 115933 | 115472.4 | 181.3 | 116399 | 115691.43 | 283.42 | 115654 | 115493.9 | 105.78 | 115514 | 115514 | 0 |
| | 50 | rnd | 115862 | 114884.67 | 534.74 | 115233 | 114636.3 | 490.59 | 115908 | 114864.9 | 572.34 | 115851 | 114823.7 | 513.33 |
| | | 2op | 116025 | 115445.3 | 202.6 | 116438 | 115787.1 | 169.6 | 116023 | 115499.03 | 162.76 | 115514 | 115514 | 0 |

Table A.2216: *j*02459_7: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115876 | 115151.33 | 475.34 | 115658 | 114834.7 | 524.08 | 115976 | 114843.4 | 494.71 | 115737 | 114668.2 | 426.4 |
| | | 2op | 115654 | 115557.9 | 41.36 | 115565 | 115519.5 | 12.7 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115930 | 115248.17 | 427.25 | 115705 | 114995.77 | 422.36 | 115983 | 114698.7 | 565.81 | 115778 | 114784.53 | 549.5 |
| | | 2op | 115688 | 115570.4 | 48.76 | 115646 | 115535.6 | 34.55 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116034 | 115084.33 | 463.09 | 115898 | 115137.57 | 550 | 115956 | 115050.97 | 596.66 | 115713 | 114743.93 | 547.53 |
| | | 2op | 115650 | 115566.53 | 44.09 | 115731 | 115638.7 | 53.65 | 115551 | 115515.97 | 7.74 | 115514 | 115514 | 0 |
| | 50 | rnd | 116178 | 115065.47 | 528.63 | 116544 | 115353.2 | 545.96 | 116026 | 115063.3 | 424.42 | 115847 | 114731.13 | 466.18 |
| | | 2op | 115971 | 115569.63 | 84.82 | 115825 | 115727.47 | 51.17 | 115591 | 115520.7 | 16.59 | 115514 | 115514 | 0 |

Table A.2217: *j02459_7*: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115900 | 114874.4 | 361.1 | 116164 | 114883.77 | 561.08 | 115381 | 114658.13 | 463.67 | 115460 | 114632.77 | 620.94 |
| | | 2op | 116308 | 115500.4 | 211.57 | 115770 | 115448.47 | 146.03 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115594 | 114785.73 | 419.62 | 115638 | 114585.3 | 579.84 | 115831 | 114763.43 | 480.57 | 115837 | 114792.47 | 608.15 |
| | | 2op | 115698 | 115469.03 | 178.1 | 116004 | 115483.5 | 192.33 | 115514 | 115510.93 | 11.72 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116113 | 114961.07 | 501.78 | 115860 | 114984.4 | 510.54 | 115365 | 114724.63 | 473.9 | 115856 | 114623.7 | 539.41 |
| | | 2op | 115855 | 115523.9 | 187.29 | 116333 | 115537.3 | 241.98 | 116077 | 115469.37 | 180.16 | 115514 | 115514 | 0 |
| | 50 | rnd | 116050 | 114910.47 | 597.04 | 116036 | 115024.8 | 540.22 | 115592 | 114641.5 | 534.9 | 115604 | 114842.9 | 548.75 |
| | | 2op | 116052 | 115567.37 | 202.25 | 115858 | 115524.77 | 192.65 | 115645 | 115487.77 | 81.48 | 115514 | 115514 | 0 |

Table A.2218: *j02459_7*: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115984 | 115011.3 | 505.8 | 116164 | 115154.4 | 507.56 | 115682 | 114727.33 | 433.13 | 115682 | 114816.4 | 533.12 |
| | | 2op | 116330 | 115608.03 | 200.47 | 116026 | 115575.47 | 125.58 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115567 | 114902.77 | 385.56 | 115759 | 114984.87 | 492.47 | 115645 | 114961.23 | 392.1 | 115617 | 114781.03 | 453.88 |
| | | 2op | 115685 | 115569.7 | 83.23 | 115685 | 115550.8 | 93.89 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116024 | 115197 | 411.59 | 116020 | 115157.07 | 391.39 | 115990 | 115036.43 | 495.04 | 115913 | 114669.37 | 709.08 |
| | | 2op | 116182 | 115522.17 | 245.08 | 116182 | 115514.37 | 248 | 115606 | 115517.07 | 16.8 | 115514 | 115514 | 0 |
| | 50 | rnd | 116141 | 115168.03 | 397.77 | 116097 | 115222.47 | 519.38 | 116207 | 115159.93 | 588.85 | 116174 | 114855.43 | 727.06 |
| | | 2op | 116455 | 115843.53 | 311.12 | 116454 | 115825.77 | 316.74 | 115558 | 115516.63 | 8.72 | 115514 | 115514 | 0 |

Table A.2219: *j02459_7*: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38492 | 38181.7 | 174.35 | 38482 | 38151.33 | 220.5 | 38581 | 38256.53 | 240.69 | 38531 | 38211.8 | 225.03 |
| | | 2op | 38420 | 38356.53 | 71.77 | 38437 | 38410.57 | 8.83 | 38557 | 38305.23 | 109.24 | 38224 | 38224 | 0 |
| | 50 | rnd | 38559 | 38177.03 | 217.62 | 38527 | 38146.5 | 249.66 | 38580 | 38145.57 | 279.67 | 38588 | 38197.73 | 176.85 |
| | | 2op | 38409 | 38383.83 | 42.62 | 38442 | 38424.57 | 14.6 | 38524 | 38401.57 | 39.38 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38566 | 38264.03 | 204.69 | 38579 | 38243.8 | 214.33 | 38577 | 38187.07 | 245.88 | 38580 | 38151.07 | 275.96 |
| | | 2op | 38414 | 38378.97 | 55.09 | 38442 | 38424.77 | 14.35 | 38418 | 38403.77 | 10.63 | 38409 | 38259.93 | 73.25 |
| | 50 | rnd | 38681 | 38242.53 | 203.26 | 38656 | 38295.63 | 210.6 | 38677 | 38202.77 | 223.89 | 38542 | 38224.7 | 201.97 |
| | | 2op | 38434 | 38382.63 | 42.41 | 38442 | 38430.97 | 13.6 | 38529 | 38411.7 | 23.79 | 38519 | 38324.87 | 92.83 |

Table A.2220: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38553 | 38331.27 | 142.3 | 38680 | 38326.37 | 137.39 | 38593 | 38214 | 160.2 | 38526 | 38147.33 | 234.82 |
| | | 2op | 38442 | 38360.53 | 72.35 | 38434 | 38406.63 | 10.01 | 38366 | 38255.5 | 48.74 | 38224 | 38224 | 0 |
| | 50 | rnd | 38585 | 38327 | 156.95 | 38666 | 38383.6 | 172.13 | 38548 | 38279.4 | 159.01 | 38534 | 38166.03 | 215.66 |
| | | 2op | 38420 | 38383.33 | 43.96 | 38441 | 38422 | 13.82 | 38397 | 38338.3 | 39.67 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38516 | 38236.9 | 187.37 | 38648 | 38352.93 | 147.13 | 38611 | 38334.97 | 186.05 | 38586 | 38252.83 | 226.28 |
| | | 2op | 38437 | 38385.53 | 58.31 | 38469 | 38430.33 | 15.09 | 38417 | 38386.53 | 19.54 | 38304 | 38232.13 | 21.18 |
| | 50 | rnd | 38576 | 38310.63 | 184.35 | 38634 | 38382.63 | 157.91 | 38656 | 38371.73 | 175.06 | 38638 | 38235.3 | 196.05 |
| | | 2op | 38442 | 38373.13 | 60.85 | 38524 | 38438.4 | 18.88 | 38412 | 38397.87 | 9.49 | 38364 | 38264.2 | 42.86 |

Table A.2221: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38658 | 38232.1 | 192.45 | 38647 | 38221.33 | 209.93 | 38567 | 38128.33 | 284.34 | 38686 | 38216.17 | 224.51 |
| | | 2op | 38413 | 38366 | 68.07 | 38441 | 38412.87 | 13.73 | 38441 | 38271.2 | 80.57 | 38224 | 38224 | 0 |
| | 50 | rnd | 38485 | 38125.9 | 236.6 | 38649 | 38198.93 | 234.3 | 38563 | 38228.93 | 232.99 | 38619 | 38200.03 | 248.5 |
| | | 2op | 38413 | 38368.3 | 65.65 | 38442 | 38420.2 | 13.72 | 38524 | 38397.07 | 37.54 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38527 | 38210.5 | 237.24 | 38606 | 38244.83 | 218.17 | 38567 | 38175.63 | 222.14 | 38486 | 38199.9 | 182.12 |
| | | 2op | 38436 | 38374.4 | 61.25 | 38442 | 38420.53 | 13.46 | 38432 | 38405.97 | 13.59 | 38411 | 38253.03 | 66.24 |
| | 50 | rnd | 38657 | 38218.8 | 236.38 | 38601 | 38249.43 | 187.41 | 38539 | 38183 | 231.85 | 38633 | 38182 | 226.91 |
| | | 2op | 38414 | 38369.6 | 61.25 | 38442 | 38429.5 | 11.93 | 38437 | 38412.03 | 14.01 | 38530 | 38312.9 | 101.16 |

Table A.2222: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38659 | 38286.97 | 190.6 | 38572 | 38355.5 | 165.67 | 38664 | 38216.73 | 212.35 | 38537 | 38174.77 | 228.22 |
| | | 2op | 38409 | 38357.83 | 70.48 | 38434 | 38401.6 | 15.23 | 38366 | 38250.23 | 49.11 | 38224 | 38224 | 0 |
| | 50 | rnd | 38537 | 38214.13 | 174.1 | 38610 | 38382.73 | 162.08 | 38578 | 38283.63 | 184.95 | 38518 | 38177.9 | 242.61 |
| | | 2op | 38409 | 38361.37 | 69.7 | 38445 | 38419.1 | 12.94 | 38397 | 38327.53 | 42.22 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38612 | 38283.17 | 176.04 | 38585 | 38362.33 | 141.34 | 38566 | 38260.33 | 199.86 | 38546 | 38122.67 | 249.77 |
| | | 2op | 38437 | 38383.87 | 58.54 | 38445 | 38431.97 | 12 | 38422 | 38384.73 | 15.7 | 38309 | 38233 | 22.83 |
| | 50 | rnd | 38572 | 38289.37 | 153.39 | 38570 | 38344.27 | 182.82 | 38590 | 38308.03 | 172.7 | 38492 | 38219.17 | 197.79 |
| | | 2op | 38445 | 38376.87 | 65.66 | 38504 | 38436.3 | 18.33 | 38431 | 38401.8 | 16.99 | 38384 | 38255.23 | 45.07 |

Table A.2223: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38650 | 38281.53 | 204.31 | 38527 | 38229.67 | 221.88 | 38634 | 38120 | 245.46 | 38612 | 38185.97 | 238.01 |
| | | 2op | 38422 | 38404.9 | 7.94 | 38422 | 38404.9 | 8.68 | 38436 | 38296.5 | 90.8 | 38224 | 38224 | 0 |
| | 50 | rnd | 38664 | 38319.1 | 161.52 | 38550 | 38235.47 | 206.67 | 38535 | 38181.13 | 200.91 | 38571 | 38214.37 | 238.86 |
| | | 2op | 38430 | 38406.9 | 7.84 | 38423 | 38404.7 | 8.54 | 38427 | 38333.67 | 85.76 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38569 | 38319.1 | 187.91 | 38579 | 38351.7 | 150.08 | 38636 | 38234.5 | 247.45 | 38553 | 38152.83 | 229.71 |
| | | 2op | 38439 | 38417.97 | 11.97 | 38442 | 38434.8 | 7.15 | 38432 | 38393.73 | 21.38 | 38224 | 38224 | 0 |
| | 50 | rnd | 38528 | 38340.8 | 160.43 | 38651 | 38421.6 | 122.54 | 38566 | 38210.63 | 210.56 | 38687 | 38171.97 | 260.43 |
| | | 2op | 38442 | 38425.7 | 13.06 | 38442 | 38426.17 | 13.68 | 38413 | 38396.03 | 15.18 | 38432 | 38247.33 | 61.02 |

Table A.2224: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38685 | 38349.97 | 187.96 | 38605 | 38339.37 | 164.25 | 38663 | 38214.43 | 244.67 | 38655 | 38185.2 | 221.33 |
| | | 2op | 38458 | 38414.73 | 15.55 | 38437 | 38411.93 | 14.63 | 38353 | 38251.37 | 38.16 | 38224 | 38224 | 0 |
| | 50 | rnd | 38629 | 38344.27 | 156.75 | 38616 | 38366.93 | 159.43 | 38626 | 38203.33 | 213.14 | 38626 | 38210.33 | 195.38 |
| | | 2op | 38442 | 38403.4 | 41.15 | 38442 | 38400.03 | 37.22 | 38396 | 38287.67 | 62.1 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38586 | 38295.87 | 180.62 | 38581 | 38296 | 162.22 | 38652 | 38266.17 | 190.33 | 38573 | 38214.4 | 188.94 |
| | | 2op | 38442 | 38421.43 | 14.38 | 38442 | 38438.8 | 3.47 | 38437 | 38384.27 | 33.28 | 38224 | 38224 | 0 |
| | 50 | rnd | 38566 | 38316.37 | 181.34 | 38639 | 38301.43 | 194.81 | 38515 | 38206.53 | 214.45 | 38491 | 38111.67 | 233.78 |
| | | 2op | 38442 | 38429.83 | 12.35 | 38442 | 38431.03 | 12.35 | 38418 | 38386.73 | 26.62 | 38292 | 38230.8 | 18.61 |

Table A.2225: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47891 | 47585.57 | 215.2 | 47923 | 47473.93 | 264.22 | 47899 | 47562.3 | 283.96 | 47846 | 47431.87 | 287.17 |
| | | 2op | 47758 | 47482.57 | 160.26 | 47758 | 47738.97 | 51.81 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47824 | 47493.63 | 260.9 | 47949 | 47428.83 | 371.53 | 47851 | 47514.47 | 212.22 | 47939 | 47515.83 | 257.85 |
| | | 2op | 47758 | 47470.63 | 160.21 | 47758 | 47755.9 | 4.84 | 47755 | 47406.6 | 131.8 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47878 | 47477.43 | 286.35 | 47957 | 47561.37 | 224.48 | 47820 | 47494.27 | 309.7 | 47939 | 47512.67 | 305.14 |
| | | 2op | 47758 | 47515.2 | 157.39 | 47758 | 47756.57 | 3.37 | 47758 | 47554.53 | 193.51 | 47349 | 47349 | 0 |
| | 50 | rnd | 47848 | 47447.17 | 270.91 | 47919 | 47470.3 | 326.63 | 47838 | 47521.87 | 216.79 | 47833 | 47475.07 | 251.89 |
| | | 2op | 47758 | 47456.93 | 122.08 | 47758 | 47756.8 | 1.49 | 47758 | 47714.73 | 101.66 | 47349 | 47349 | 0 |

Table A.2226: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47944 | 47605.43 | 234.19 | 47956 | 47597.4 | 194.94 | 47961 | 47547.27 | 337.94 | 47899 | 47546.2 | 261.82 |
| | | 2op | 47563 | 47419.6 | 66.81 | 47574 | 47542.83 | 39.13 | 47426 | 47352.83 | 15.46 | 47349 | 47349 | 0 |
| | 50 | rnd | 48034 | 47643.73 | 264.59 | 48048 | 47604.23 | 235.57 | 47917 | 47487.73 | 298.24 | 47862 | 47600.7 | 190.43 |
| | | 2op | 47731 | 47433.13 | 103.13 | 47579 | 47570.37 | 7.65 | 47468 | 47361.27 | 28.21 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47969 | 47587.33 | 226.75 | 47917 | 47617.4 | 263.55 | 47930 | 47607.57 | 205.3 | 48023 | 47503.47 | 271.02 |
| | | 2op | 47829 | 47541.5 | 165.84 | 47830 | 47641 | 94.33 | 47561 | 47455.73 | 82.16 | 47349 | 47349 | 0 |
| | 50 | rnd | 47978 | 47620.1 | 180.92 | 47978 | 47668.5 | 192.18 | 48044 | 47585.93 | 227.63 | 47849 | 47528.27 | 252.6 |
| | | 2op | 47758 | 47438 | 137.19 | 47830 | 47659.9 | 97.41 | 47561 | 47526.93 | 47.53 | 47440 | 47352.03 | 16.61 |

Table A.2227: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47919 | 47514.43 | 268.33 | 47982 | 47536.1 | 269.66 | 47864 | 47477.83 | 251.91 | 47925 | 47482.5 | 256.88 |
| | | 2op | 47758 | 47506.07 | 161.06 | 47758 | 47741 | 53.47 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47790 | 47458.17 | 298.38 | 47923 | 47503.43 | 239.68 | 47914 | 47470.27 | 340.86 | 47916 | 47568.33 | 236.33 |
| | | 2op | 47758 | 47469.27 | 165.87 | 47758 | 47754.03 | 6.39 | 47758 | 47391.37 | 122.14 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 48012 | 47570.97 | 271.81 | 47916 | 47504.57 | 282.37 | 47909 | 47563.83 | 270.74 | 47839 | 47510.6 | 228.83 |
| | | 2op | 47758 | 47460.7 | 135.96 | 47758 | 47756.87 | 3.06 | 47758 | 47509.03 | 177.54 | 47349 | 47349 | 0 |
| | 50 | rnd | 47848 | 47488.23 | 242.11 | 47837 | 47448.9 | 329.57 | 47986 | 47562.3 | 298.49 | 47916 | 47524.33 | 246.58 |
| | | 2op | 47758 | 47527.9 | 157.08 | 47758 | 47757.2 | 1.35 | 47758 | 47713.13 | 97.34 | 47738 | 47373.37 | 92.94 |

Table A.2228: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48034 | 47669.53 | 185.92 | 48051 | 47681.57 | 238.43 | 47862 | 47580.93 | 253.13 | 47943 | 47560.4 | 313.84 |
| | | 2op | 47563 | 47414.7 | 72.56 | 47575 | 47538.17 | 37.51 | 47423 | 47352.63 | 14.74 | 47349 | 47349 | 0 |
| | 50 | rnd | 47896 | 47569.73 | 257.15 | 48045 | 47705.13 | 191.18 | 48002 | 47581.23 | 262.73 | 48027 | 47545.97 | 262.63 |
| | | 2op | 47563 | 47417.8 | 78.32 | 47578 | 47565.7 | 8.51 | 47440 | 47360.5 | 23.23 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47933 | 47562.97 | 247.98 | 48049 | 47640.5 | 195.82 | 47923 | 47642 | 242.19 | 47866 | 47553.37 | 174.66 |
| | | 2op | 47755 | 47455.97 | 127.43 | 47758 | 47606.8 | 68.24 | 47559 | 47450.17 | 77.06 | 47349 | 47349 | 0 |
| | 50 | rnd | 48043 | 47668.67 | 229.3 | 47897 | 47589.07 | 248.5 | 47948 | 47600.27 | 227.69 | 47984 | 47510.3 | 275.67 |
| | | 2op | 47758 | 47440.07 | 118.34 | 47758 | 47628.23 | 87.24 | 47577 | 47527.1 | 43.68 | 47349 | 47349 | 0 |

Table A.2229: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48036 | 47518.47 | 322.75 | 47950 | 47521.73 | 267.95 | 47906 | 47566.23 | 218.64 | 47910 | 47539.4 | 262.32 |
| | | 2op | 47758 | 47574.13 | 156.12 | 47758 | 47588.57 | 160.97 | 47758 | 47375.9 | 102.38 | 47349 | 47349 | 0 |
| | 50 | rnd | 47964 | 47613.3 | 231.52 | 47942 | 47598.03 | 256.24 | 47944 | 47451.63 | 342.38 | 47943 | 47457.27 | 280.78 |
| | | 2op | 47758 | 47666.57 | 134.36 | 47758 | 47674 | 132.32 | 47747 | 47362.27 | 72.66 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47936 | 47651.6 | 215.03 | 47897 | 47597.8 | 229.59 | 47914 | 47572.27 | 254.78 | 47848 | 47578.77 | 181.18 |
| | | 2op | 47758 | 47711.23 | 75.39 | 47758 | 47749.8 | 32.16 | 47758 | 47549.97 | 185.85 | 47349 | 47349 | 0 |
| | 50 | rnd | 48036 | 47647.83 | 187.2 | 47886 | 47593.33 | 234.65 | 47973 | 47528.67 | 299.04 | 47898 | 47502.57 | 241.79 |
| | | 2op | 47758 | 47693.6 | 87.44 | 47758 | 47746.1 | 35.05 | 47758 | 47452.6 | 140.76 | 47349 | 47349 | 0 |

Table A.2230: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47640.4 | 195.56 | 47961 | 47613.97 | 214.72 | 47967 | 47606.47 | 197.48 | 48027 | 47525.53 | 293.73 |
| | | 2op | 47814 | 47629 | 151.54 | 47814 | 47611.8 | 151.64 | 47371 | 47350.23 | 4.78 | 47349 | 47349 | 0 |
| | 50 | rnd | 48033 | 47672.6 | 218.71 | 48031 | 47612.27 | 222.71 | 47933 | 47573.5 | 222.68 | 47836 | 47558.2 | 261.46 |
| | | 2op | 47758 | 47603.9 | 150.6 | 47758 | 47603.33 | 150.37 | 47360 | 47349.57 | 2.25 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47917 | 47522.37 | 279.28 | 48052 | 47669.5 | 211.02 | 47952 | 47539.47 | 358.86 | 48043 | 47548.93 | 314.69 |
| | | 2op | 47758 | 47728.4 | 71.47 | 47758 | 47755.9 | 5.16 | 47758 | 47427.73 | 137.12 | 47349 | 47349 | 0 |
| | 50 | rnd | 47875 | 47535.4 | 315.92 | 47978 | 47565.6 | 215.86 | 47946 | 47615.83 | 237.02 | 47862 | 47546.23 | 215.16 |
| | | 2op | 47758 | 47742.77 | 61.71 | 47758 | 47733.8 | 77.71 | 47758 | 47505.5 | 179.31 | 47349 | 47349 | 0 |

Table A.2231: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54750 | 54213.5 | 266.11 | 55042 | 54361.5 | 406.41 | 54729 | 54358.1 | 271.44 | 54880 | 54300.37 | 341.91 |
| | | 2op | 54753 | 54722.77 | 20.06 | 54959 | 54733.4 | 47.51 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54874 | 54326.67 | 370.21 | 54960 | 54266.5 | 418.26 | 54884 | 54329 | 412.07 | 54827 | 54397.83 | 274.96 |
| | | 2op | 54745 | 54718.43 | 18.75 | 54754 | 54745.1 | 4.03 | 54745 | 54706.33 | 7.3 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54907 | 54334.17 | 328.31 | 54803 | 54332.5 | 319.7 | 54815 | 54274.07 | 283.99 | 54895 | 54293.73 | 318.65 |
| | | 2op | 54745 | 54719.57 | 19.25 | 54766 | 54747.2 | 7.7 | 54745 | 54713.93 | 14.74 | 54705 | 54705 | 0 |
| | 50 | rnd | 54922 | 54462.1 | 252.92 | 54742 | 54345.9 | 282.64 | 54739 | 54270.33 | 356.22 | 54716 | 54283.9 | 274.34 |
| | | 2op | 54753 | 54733.53 | 18.11 | 54754 | 54751.03 | 4.82 | 54959 | 54737.9 | 46.09 | 54705 | 54705 | 0 |

Table A.2232: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54921 | 54460.27 | 306.86 | 55078 | 54428.97 | 283.23 | 54876 | 54346.93 | 368.9 | 54921 | 54336.9 | 344.49 |
| | | 2op | 54745 | 54723.73 | 19.69 | 54745 | 54726 | 16.31 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54947 | 54404.37 | 308.7 | 55165 | 54618.3 | 278.31 | 54985 | 54388.1 | 245.37 | 55100 | 54313.33 | 364.19 |
| | | 2op | 54754 | 54726.5 | 20.14 | 54769 | 54744.9 | 6.92 | 54709 | 54705.13 | 0.73 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 55025 | 54351.03 | 426.51 | 55169 | 54529.67 | 312.58 | 54752 | 54353.17 | 345.93 | 54955 | 54322.97 | 270.66 |
| | | 2op | 54745 | 54728.9 | 19.45 | 54754 | 54746.77 | 4.55 | 54744 | 54714.9 | 14.24 | 54708 | 54705.1 | 0.55 |
| | 50 | rnd | 55022 | 54397.67 | 309.97 | 55131 | 54662.2 | 248.17 | 54966 | 54477.77 | 352.47 | 54951 | 54353.43 | 336.17 |
| | | 2op | 54745 | 54726.43 | 19.58 | 54754 | 54751.43 | 4.8 | 54745 | 54718.9 | 15.35 | 54705 | 54705 | 0 |

Table A.2233: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54814 | 54322.9 | 320.56 | 54866 | 54364.2 | 293.07 | 54827 | 54341.97 | 352.12 | 54872 | 54356.33 | 359.93 |
| | | 2op | 54745 | 54719.9 | 19.71 | 54747 | 54724.53 | 18.32 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54802 | 54304.4 | 377.65 | 55008 | 54384.9 | 369.44 | 54757 | 54177.23 | 390.15 | 54788 | 54203.73 | 333.19 |
| | | 2op | 54745 | 54720.47 | 18.78 | 54755 | 54744.97 | 5.82 | 54745 | 54706.5 | 7.33 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54832 | 54331.9 | 280.84 | 54783 | 54281.07 | 349.98 | 54615 | 54243.57 | 259.54 | 54853 | 54379.4 | 243.98 |
| | | 2op | 54745 | 54721.6 | 20.34 | 54756 | 54746.9 | 6.19 | 54747 | 54720.03 | 20.27 | 54705 | 54705 | 0 |
| | 50 | rnd | 54847 | 54386.93 | 328.7 | 54939 | 54407.53 | 327.67 | 54776 | 54307.6 | 328.01 | 54805 | 54323.33 | 325.92 |
| | | 2op | 54745 | 54723.67 | 19.76 | 54762 | 54750.33 | 5.03 | 54959 | 54737.6 | 45.91 | 54705 | 54705 | 0 |

Table A.2234: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55146 | 54505.37 | 317.31 | 55081 | 54464.73 | 382.43 | 55084 | 54432.3 | 355.28 | 55018 | 54299.83 | 353.09 |
| | | 2op | 54745 | 54724.67 | 19.19 | 54753 | 54718.77 | 15.07 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54846 | 54394.13 | 358.41 | 54933 | 54484.73 | 294.88 | 54902 | 54413.1 | 337.87 | 54912 | 54335.63 | 378.13 |
| | | 2op | 54753 | 54728.53 | 19.54 | 54754 | 54740.33 | 8.61 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 55168 | 54524.37 | 292.21 | 54896 | 54500.13 | 260.23 | 54927 | 54368.83 | 330.04 | 54801 | 54293 | 354.18 |
| | | 2op | 54754 | 54733 | 17.74 | 54754 | 54746.57 | 8.38 | 54744 | 54710.77 | 11.57 | 54705 | 54705 | 0 |
| | 50 | rnd | 54951 | 54487.07 | 284.17 | 55035 | 54662.23 | 305.49 | 55046 | 54497 | 265.99 | 54980 | 54438.33 | 350.38 |
| | | 2op | 54745 | 54731.8 | 18.5 | 54754 | 54751.3 | 3.99 | 54745 | 54717.97 | 15.47 | 54705 | 54705 | 0 |

Table A.2235: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54959 | 54325.9 | 435.66 | 54869 | 54437 | 309.01 | 54939 | 54354.97 | 361.88 | 54834 | 54348.53 | 281.78 |
| | | 2op | 54754 | 54737.13 | 16.53 | 54959 | 54741.37 | 44.62 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54903 | 54448.63 | 234.38 | 55130 | 54491.4 | 363.72 | 54832 | 54270.77 | 300.29 | 54945 | 54355.3 | 334.98 |
| | | 2op | 54754 | 54741.4 | 12.57 | 54754 | 54738.43 | 14.24 | 54720 | 54705.5 | 2.74 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54791 | 54441.53 | 280.12 | 54957 | 54461.17 | 271.78 | 54772 | 54347.7 | 304.24 | 55031 | 54326.07 | 372.7 |
| | | 2op | 54754 | 54745.03 | 8.13 | 54755 | 54746.63 | 3.52 | 54747 | 54713.87 | 16.32 | 54705 | 54705 | 0 |
| | 50 | rnd | 54938 | 54508.9 | 259.68 | 54970 | 54530.87 | 300.09 | 54859 | 54342.57 | 497.67 | 54856 | 54220.83 | 395.98 |
| | | 2op | 54769 | 54748.63 | 5.75 | 54754 | 54745.87 | 5.98 | 54746 | 54708.8 | 13.04 | 54705 | 54705 | 0 |

Table A.2236: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55048 | 54512.73 | 341.92 | 54828 | 54446.5 | 261.61 | 54921 | 54376.47 | 311.4 | 54842 | 54340.5 | 374.99 |
| | | 2op | 54754 | 54731.87 | 19.17 | 54754 | 54725.97 | 20.33 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 55135 | 54515.13 | 326.56 | 54909 | 54376.97 | 323.86 | 54866 | 54283.27 | 383.95 | 54899 | 54383.23 | 348.37 |
| | | 2op | 54754 | 54741.23 | 13.22 | 54754 | 54737.97 | 14.37 | 54712 | 54705.23 | 1.28 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54978 | 54493.3 | 367 | 55020 | 54451.53 | 301.46 | 55037 | 54480.97 | 331.63 | 54942 | 54183.1 | 423.38 |
| | | 2op | 54754 | 54746.27 | 8.78 | 54769 | 54748.97 | 5.73 | 54736 | 54708.37 | 8.26 | 54705 | 54705 | 0 |
| | 50 | rnd | 55005 | 54604.03 | 282.73 | 54957 | 54435.23 | 415.34 | 54834 | 54372.97 | 311.64 | 54913 | 54309.4 | 397.13 |
| | | 2op | 54754 | 54748.33 | 4.87 | 54754 | 54744.6 | 11.67 | 54754 | 54709.07 | 10.81 | 54705 | 54705 | 0 |

Table A.2237: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11340 | 11192.97 | 128.17 | 11478 | 11276.63 | 120.08 | 11478 | 11209.43 | 203.46 | 11478 | 11178.23 | 187.02 |
| | | 2op | 11109 | 11034.5 | 39.58 | 11305 | 11195.73 | 77.28 | 11109 | 11109 | 0 | 11017 | 11003.93 | 3.55 |
| | 50 | rnd | 11366 | 11159.23 | 146.32 | 11478 | 11242.17 | 140.54 | 11478 | 11207.13 | 179.47 | 11411 | 11179.47 | 161.68 |
| | | 2op | 11109 | 11040.5 | 42.52 | 11373 | 11249.33 | 59.91 | 11285 | 11139.03 | 58.87 | 11109 | 11053.13 | 46.29 |
| 51 | 20 | rnd | 11411 | 11187.8 | 159.27 | 11478 | 11297.23 | 114.85 | 11478 | 11268.73 | 143.47 | 11476 | 11245.73 | 129.43 |
| | | 2op | 11109 | 11027.4 | 31.52 | 11256 | 11116.5 | 29.95 | 11305 | 11179.97 | 82.93 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11153.43 | 144.01 | 11478 | 11305.87 | 113.35 | 11478 | 11233.47 | 137.16 | 11478 | 11259.1 | 121.39 |
| | | 2op | 11109 | 11070.67 | 45.15 | 11373 | 11166.2 | 81.3 | 11324 | 11250.7 | 64.7 | 11109 | 11109 | 0 |

Table A.2238: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11228.13 | 126.42 | 11478 | 11248 | 126.85 | 11413 | 11212.17 | 122.12 | 11478 | 11241.6 | 105.47 |
| | | 2op | 11109 | 11031.8 | 38.41 | 11373 | 11226.43 | 85.64 | 11109 | 11109 | 0 | 11009 | 11003.4 | 1.52 |
| | 50 | rnd | 11478 | 11232.4 | 178.64 | 11478 | 11275.43 | 105.12 | 11478 | 11287.63 | 135.73 | 11478 | 11226.97 | 142.37 |
| | | 2op | 11305 | 11060.37 | 78.34 | 11373 | 11259.07 | 66.24 | 11373 | 11130.9 | 66.09 | 11109 | 11039.27 | 38.8 |
| 51 | 20 | rnd | 11478 | 11170.13 | 163.41 | 11478 | 11242.97 | 151.91 | 11478 | 11234.03 | 125.44 | 11478 | 11195.53 | 173.57 |
| | | 2op | 11109 | 11028.6 | 32.99 | 11285 | 11119.77 | 41.15 | 11305 | 11191.43 | 76.41 | 11109 | 11105.93 | 16.8 |
| | 50 | rnd | 11478 | 11191.1 | 146.61 | 11478 | 11305.87 | 115.65 | 11478 | 11283.77 | 144.83 | 11478 | 11231.43 | 163.29 |
| | | 2op | 11109 | 11072.8 | 44.42 | 11373 | 11213.83 | 85.29 | 11373 | 11277.3 | 56.23 | 11109 | 11109 | 0 |

Table A.2239: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11198.33 | 156.5 | 11478 | 11271.47 | 96.81 | 11478 | 11200.13 | 175.99 | 11478 | 11154.13 | 175.89 |
| | | 2op | 11127 | 11025.87 | 33.11 | 11305 | 11194.73 | 83.36 | 11305 | 11115.53 | 35.78 | 11017 | 11003.47 | 2.56 |
| | 50 | rnd | 11413 | 11152.17 | 204.65 | 11478 | 11287.23 | 122.1 | 11411 | 11188.97 | 146.62 | 11411 | 11211.2 | 117.81 |
| | | 2op | 11109 | 11030.5 | 37.64 | 11373 | 11219.2 | 77.22 | 11394 | 11134.3 | 69.28 | 11109 | 11026.73 | 36.79 |
| 51 | 20 | rnd | 11411 | 11179.57 | 161.29 | 11413 | 11251.9 | 107.88 | 11478 | 11325.83 | 111.8 | 11478 | 11251.07 | 132.48 |
| | | 2op | 11109 | 11045.67 | 42.04 | 11196 | 11111.9 | 15.88 | 11305 | 11182.87 | 88.12 | 11109 | 11109 | 0 |
| | 50 | rnd | 11413 | 11228.87 | 118.57 | 11478 | 11263.17 | 121.32 | 11478 | 11309.67 | 130.8 | 11478 | 11273.8 | 146.9 |
| | | 2op | 11109 | 11053.27 | 46.68 | 11373 | 11196.13 | 84.78 | 11394 | 11277.57 | 66.77 | 11259 | 11114 | 27.39 |

Table A.2240: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11221.57 | 176.35 | 11478 | 11298.23 | 125.15 | 11478 | 11253.8 | 146.24 | 11478 | 11188.47 | 153.81 |
| | | 2op | 11285 | 11031.27 | 61.53 | 11394 | 11256.53 | 76.64 | 11151 | 11110.4 | 7.67 | 11015 | 11003.4 | 2.19 |
| | 50 | rnd | 11478 | 11201.1 | 122.65 | 11478 | 11274.97 | 142.46 | 11413 | 11247.37 | 105.41 | 11478 | 11256.97 | 135.83 |
| | | 2op | 11213 | 11030 | 48.71 | 11394 | 11279.17 | 57.77 | 11305 | 11139.37 | 69.52 | 11109 | 11021.7 | 31.62 |
| 51 | 20 | rnd | 11478 | 11186.87 | 133.65 | 11478 | 11202.17 | 144.93 | 11411 | 11235.27 | 93.71 | 11478 | 11190.47 | 176.91 |
| | | 2op | 11109 | 11040.53 | 41.04 | 11305 | 11138.7 | 67.96 | 11305 | 11155.7 | 79.66 | 11109 | 11108.6 | 1.85 |
| | 50 | rnd | 11478 | 11186.97 | 178.68 | 11478 | 11298.9 | 142.15 | 11478 | 11298.63 | 116.22 | 11478 | 11281.63 | 163.22 |
| | | 2op | 11305 | 11063.07 | 66.02 | 11373 | 11210.83 | 101.36 | 11373 | 11273.33 | 57.31 | 11109 | 11108.27 | 4.02 |

Table A.2241: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11413 | 11215.53 | 160.43 | 11413 | 11277.67 | 132.58 | 11413 | 11184.63 | 171.28 | 11394 | 11133.73 | 171.11 |
| | | 2op | 11109 | 11078.33 | 44.11 | 11394 | 11226.67 | 71.47 | 11095 | 11014.63 | 24.07 | 11003 | 11003 | 0 |
| | 50 | rnd | 11394 | 11243.7 | 105.9 | 11478 | 11270.83 | 137.14 | 11478 | 11191.47 | 125.63 | 11394 | 11146.7 | 157.54 |
| | | 2op | 11256 | 11099.27 | 46.72 | 11373 | 11222.67 | 89.47 | 11109 | 11037.2 | 42.65 | 11095 | 11006.07 | 16.8 |
| 51 | 20 | rnd | 11413 | 11243 | 91.18 | 11478 | 11280.8 | 101.01 | 11478 | 11205.37 | 196.4 | 11411 | 11120.47 | 188.23 |
| | | 2op | 11109 | 11093.67 | 34.87 | 11256 | 11118.5 | 32.1 | 11109 | 11071.87 | 43.84 | 11017 | 11004.4 | 4.27 |
| | 50 | rnd | 11413 | 11228.17 | 120.1 | 11478 | 11293.77 | 111.69 | 11478 | 11255.03 | 96.51 | 11478 | 11161.27 | 166.01 |
| | | 2op | 11109 | 11099.8 | 28.07 | 11305 | 11180.2 | 85.93 | 11109 | 11087.93 | 38.07 | 11109 | 11008.87 | 19.64 |

Table A.2242: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11222.77 | 144.12 | 11478 | 11279.27 | 136.65 | 11478 | 11194.13 | 183.21 | 11394 | 11182.2 | 159.84 |
| | | 2op | 11109 | 11078 | 44.59 | 11305 | 11273.3 | 59.4 | 11109 | 11014.53 | 27.23 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11182.6 | 169.6 | 11478 | 11282.43 | 111.08 | 11478 | 11215 | 135.37 | 11478 | 11169.17 | 167.18 |
| | | 2op | 11256 | 11095.37 | 46.59 | 11394 | 11242.77 | 89.21 | 11109 | 11033.53 | 41.27 | 11095 | 11006.07 | 16.8 |
| 51 | 20 | rnd | 11478 | 11214.3 | 139.37 | 11478 | 11274.5 | 144.96 | 11478 | 11249.27 | 119.78 | 11478 | 11210.37 | 148.65 |
| | | 2op | 11109 | 11092.07 | 35.24 | 11305 | 11122.07 | 49.73 | 11109 | 11073.03 | 41.29 | 11015 | 11004 | 3.18 |
| | 50 | rnd | 11411 | 11222.27 | 128.65 | 11478 | 11274.67 | 155.94 | 11478 | 11218.43 | 156.62 | 11413 | 11178.07 | 166 |
| | | 2op | 11257 | 11101.67 | 43.21 | 11305 | 11149.17 | 74.89 | 11305 | 11095.53 | 54.18 | 11017 | 11005.2 | 4.77 |

Table A.2243: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13842.03 | 162.2 | 14157 | 13974.83 | 143.12 | 14133 | 13809.47 | 174.57 | 14157 | 13780.1 | 195.92 |
| | | 2op | 13967 | 13802.3 | 66.45 | 14064 | 13987.27 | 42.8 | 13995 | 13940.8 | 57.54 | 13721 | 13721 | 0 |
| | 50 | rnd | 14161 | 13868.93 | 167.66 | 14137 | 13954.87 | 126.21 | 14139 | 13913.3 | 115.56 | 14079 | 13827.23 | 186.88 |
| | | 2op | 13938 | 13816.77 | 55.37 | 14157 | 14029.47 | 60.19 | 13995 | 13965.8 | 25.88 | 13922 | 13737.77 | 46.44 |
| 51 | 20 | rnd | 14161 | 13897.1 | 135.86 | 14161 | 13887.17 | 183.58 | 14161 | 13946.17 | 132.53 | 14137 | 13860.23 | 134.62 |
| | | 2op | 13938 | 13828.87 | 62.32 | 14157 | 14003.87 | 41.56 | 14059 | 13990.8 | 39.05 | 13995 | 13800.23 | 91.94 |
| | 50 | rnd | 14161 | 13901.43 | 154.38 | 14161 | 13949.2 | 117.88 | 14161 | 14003.17 | 125.08 | 14121 | 13814.6 | 151.42 |
| | | 2op | 13899 | 13811.2 | 55.78 | 14059 | 14006.67 | 37.65 | 14157 | 14024.37 | 52.71 | 13968 | 13826.53 | 85.32 |

Table A.2244: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14119 | 13843.9 | 147.44 | 14161 | 13955.77 | 115.05 | 14088 | 13907.83 | 117.46 | 14133 | 13859.07 | 155.83 |
| | | 2op | 14029 | 13851.7 | 115.73 | 14157 | 14016.3 | 55.84 | 13995 | 13851.93 | 62.03 | 13721 | 13721 | 0 |
| | 50 | rnd | 14157 | 13827.23 | 206.66 | 14137 | 13917.23 | 126.94 | 14161 | 13929.43 | 147.68 | 14150 | 13836 | 191.65 |
| | | 2op | 14133 | 13877.5 | 119.35 | 14157 | 14023.73 | 54.03 | 14038 | 13904.67 | 48.83 | 13749 | 13723.8 | 8.23 |
| 51 | 20 | rnd | 14155 | 13840.5 | 185.98 | 14137 | 13877.63 | 134.89 | 14139 | 13916.77 | 123.93 | 14131 | 13893.8 | 149.57 |
| | | 2op | 14038 | 13862.27 | 91.02 | 14157 | 13997.37 | 66.83 | 14157 | 13991.63 | 44.77 | 13867 | 13750.47 | 47.86 |
| | 50 | rnd | 14071 | 13810.2 | 193.72 | 14161 | 13942.97 | 133.13 | 14139 | 13949.77 | 130.1 | 14161 | 13851.03 | 166.64 |
| | | 2op | 13995 | 13895.33 | 82.24 | 14157 | 14017.9 | 68.9 | 14157 | 14006.67 | 47.49 | 13869 | 13765 | 56.53 |

Table A.2245: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13887.53 | 160.68 | 14161 | 13975.9 | 151.37 | 14133 | 13849.03 | 153.54 | 14094 | 13796.4 | 135.01 |
| | | 2op | 13938 | 13814.27 | 60.22 | 14064 | 13986.57 | 49.55 | 13995 | 13902.6 | 84.55 | 13721 | 13721 | 0 |
| | 50 | rnd | 14137 | 13858.9 | 167.37 | 14161 | 13973.4 | 106.97 | 14139 | 13856.9 | 175.29 | 14066 | 13800.07 | 148.12 |
| | | 2op | 13948 | 13813.33 | 59.59 | 14157 | 14008.87 | 41.28 | 13995 | 13965.97 | 25.88 | 13827 | 13724.53 | 19.35 |
| 51 | 20 | rnd | 14161 | 13886.23 | 165.42 | 14161 | 13935.03 | 160.67 | 14157 | 13933.43 | 131.8 | 14121 | 13824.7 | 170.48 |
| | | 2op | 13932 | 13797.6 | 53.65 | 14157 | 14003.87 | 43.02 | 14038 | 13983.4 | 35.96 | 13968 | 13796.97 | 79.61 |
| | 50 | rnd | 14161 | 13914.73 | 145.18 | 14161 | 13931.1 | 136.67 | 14161 | 13995.5 | 106.55 | 14157 | 13877.77 | 165.3 |
| | | 2op | 13878 | 13809.93 | 43.87 | 14157 | 14008.07 | 59.01 | 14157 | 14009.83 | 55.74 | 14038 | 13807.73 | 85.06 |

Table A.2246: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13826 | 182.08 | 14139 | 13952.63 | 143.41 | 14154 | 13919.47 | 145.49 | 14105 | 13755.1 | 185.85 |
| | | 2op | 14038 | 13878.4 | 111.21 | 14157 | 14024.57 | 59.46 | 14036 | 13833.87 | 78.58 | 13721 | 13721 | 0 |
| | 50 | rnd | 14128 | 13860.77 | 126.98 | 14157 | 13961.9 | 153.95 | 14157 | 13928 | 134.72 | 14137 | 13851.77 | 186.5 |
| | | 2op | 14038 | 13889.6 | 115.45 | 14157 | 14049.07 | 65.07 | 14038 | 13907.23 | 55.68 | 13747 | 13721.87 | 4.75 |
| 51 | 20 | rnd | 14135 | 13853.53 | 152.54 | 14137 | 13875.1 | 123.05 | 14161 | 13902.73 | 151.59 | 14155 | 13930.73 | 180.32 |
| | | 2op | 14038 | 13853.33 | 98.26 | 14157 | 14009.7 | 54.25 | 14157 | 14007.83 | 47.01 | 13938 | 13764.37 | 66.21 |
| | 50 | rnd | 14139 | 13865.6 | 174.76 | 14161 | 13962.33 | 130.7 | 14161 | 13977.7 | 138.77 | 14161 | 13800.07 | 188.66 |
| | | 2op | 14038 | 13884.07 | 108.04 | 14157 | 14008.6 | 58.15 | 14157 | 14032.67 | 64.23 | 14038 | 13756.7 | 67.95 |

Table A.2247: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13932.2 | 141.58 | 14161 | 13962.1 | 114.49 | 14105 | 13863 | 161.26 | 14099 | 13778.4 | 189.13 |
| | | 2op | 13938 | 13843.1 | 53.28 | 14157 | 13951.43 | 86.11 | 13867 | 13735.93 | 39.48 | 13721 | 13721 | 0 |
| | 50 | rnd | 14139 | 13972.8 | 139.03 | 14161 | 13989.8 | 102.67 | 14127 | 13789.67 | 191.29 | 14123 | 13835.73 | 146.61 |
| | | 2op | 13932 | 13842.43 | 26.34 | 14157 | 13988.3 | 71.67 | 13840 | 13742.6 | 41.2 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14161 | 13932.43 | 165.21 | 14161 | 13941.03 | 132.46 | 14133 | 13882.37 | 163.71 | 14071 | 13867.87 | 145.04 |
| | | 2op | 13938 | 13845.47 | 51.16 | 14038 | 13938.93 | 56.31 | 14038 | 13803.83 | 83.09 | 13721 | 13721 | 0 |
| | 50 | rnd | 14139 | 13966.73 | 140.28 | 14066 | 13942.17 | 89.52 | 14139 | 13905.63 | 143.74 | 14133 | 13772.77 | 159.57 |
| | | 2op | 13968 | 13858.27 | 40.81 | 14038 | 13911.7 | 55.98 | 13995 | 13800.6 | 73.43 | 13721 | 13721 | 0 |

Table A.2248: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14155 | 13852.83 | 179.52 | 14139 | 13957 | 99.84 | 14127 | 13794.37 | 172.54 | 14139 | 13842.1 | 171.19 |
| | | 2op | 14038 | 13928.43 | 70.9 | 14157 | 14005.87 | 46.96 | 13995 | 13737.83 | 61.95 | 13721 | 13721 | 0 |
| | 50 | rnd | 14161 | 13844.83 | 193.62 | 14157 | 13944.57 | 149.7 | 14038 | 13785.23 | 150.21 | 14064 | 13800.23 | 157.74 |
| | | 2op | 14038 | 13972.63 | 72.19 | 14071 | 13994.6 | 27.43 | 14004 | 13757.6 | 89.28 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14135 | 13876.47 | 136.74 | 14161 | 13897.07 | 130.59 | 14142 | 13886.3 | 171.15 | 14127 | 13816.8 | 178.34 |
| | | 2op | 14038 | 13927.9 | 79.28 | 13995 | 13978.47 | 13.79 | 14038 | 13825.4 | 99.24 | 13721 | 13721 | 0 |
| | 50 | rnd | 14071 | 13863.83 | 120 | 14133 | 13914.4 | 136.51 | 14161 | 13922.03 | 140.13 | 14161 | 13835.83 | 151.15 |
| | | 2op | 14038 | 13971.27 | 42.96 | 14064 | 13985.2 | 31.24 | 13993 | 13804.7 | 91.73 | 13721 | 13721 | 0 |

Table A.2249: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18143 | 17907.13 | 126.74 | 18165 | 17892.77 | 188.11 | 18172 | 17828.63 | 219.55 | 18172 | 17775.6 | 173.04 |
| | | 2op | 18017 | 18009.33 | 11.03 | 18017 | 18017 | 0 | 18017 | 18013.93 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18156 | 17892.7 | 108.79 | 18301 | 18035.93 | 132.61 | 18301 | 17807.47 | 242.82 | 18184 | 17841.37 | 175.94 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17994.77 | 4.2 |
| 51 | 20 | rnd | 18184 | 17910.1 | 196.11 | 18301 | 17946.23 | 155.36 | 18301 | 17911.97 | 163.94 | 18171 | 17860.8 | 179.6 |
| | | 2op | 18017 | 18012.4 | 9.36 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |
| | 50 | rnd | 18184 | 17966.13 | 181.75 | 18176 | 17923.53 | 167.24 | 18195 | 17953.3 | 155.74 | 18172 | 17882.83 | 167.63 |
| | | 2op | 18017 | 18012.4 | 9.36 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |

Table A.2250: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18093 | 17867.93 | 161.37 | 18136 | 17978.13 | 141.09 | 18301 | 17953.63 | 180.98 | 18261 | 17880.73 | 193.21 |
| | | 2op | 18017 | 18009.33 | 11.03 | 18017 | 18017 | 0 | 18017 | 18005.93 | 8.5 | 17994 | 17994 | 0 |
| | 50 | rnd | 18175 | 17852.37 | 190.87 | 18181 | 17989.33 | 163.35 | 18172 | 17943.87 | 189.21 | 18301 | 17904.03 | 187.61 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18016.73 | 1.46 | 18017 | 18017 | 0 | 18017 | 17994.77 | 4.2 |
| 51 | 20 | rnd | 18184 | 17875.3 | 170.12 | 18171 | 17960.73 | 134.02 | 18301 | 17924.6 | 185.16 | 18176 | 17914.63 | 181.73 |
| | | 2op | 18017 | 18012.4 | 9.36 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17997.2 | 6.16 |
| | 50 | rnd | 18114 | 17821.67 | 185.36 | 18125 | 17912.17 | 180.96 | 18156 | 17947.6 | 129.61 | 18173 | 17893.63 | 176.79 |
| | | 2op | 18017 | 18012.4 | 9.36 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18016 | 17997.07 | 6.73 |

Table A.2251: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17884.03 | 164.77 | 18171 | 17924.43 | 170.38 | 18292 | 17810.6 | 187.62 | 18184 | 17817.83 | 235.51 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18009.33 | 11.03 | 17994 | 17994 | 0 |
| | 50 | rnd | 18172 | 17859.87 | 186.37 | 18175 | 17987.93 | 138.21 | 18172 | 17851.97 | 181.34 | 18142 | 17868.37 | 176.77 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18175 | 17903.53 | 154.36 | 18186 | 17942.23 | 153.58 | 18301 | 17907.8 | 234.41 | 18109 | 17830.6 | 177.33 |
| | | 2op | 18017 | 18013.33 | 8.38 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17999.37 | 9.89 |
| | 50 | rnd | 18142 | 17914.8 | 128.07 | 18301 | 17974.53 | 167.94 | 18165 | 17947.57 | 159.65 | 18301 | 17843.33 | 226.53 |
| | | 2op | 18017 | 18013.17 | 8.72 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18002.43 | 11.27 |

Table A.2252: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18176 | 17865.17 | 191.91 | 18171 | 17927.53 | 151.28 | 18159 | 17946.8 | 155.12 | 18171 | 17863.13 | 185.53 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18002.07 | 8.69 | 17994 | 17994 | 0 |
| | 50 | rnd | 18109 | 17895.8 | 147.6 | 18301 | 17955.97 | 158.26 | 18172 | 17950.93 | 150.61 | 18172 | 17910.5 | 189.21 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18016.6 | 1.83 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18275 | 17875.33 | 164.26 | 18131 | 17960.23 | 133.19 | 18275 | 17993.33 | 143 | 18084 | 17828.3 | 162.51 |
| | | 2op | 18017 | 18013.93 | 7.95 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18014 | 17997.17 | 6.38 |
| | 50 | rnd | 18301 | 17944.2 | 162.28 | 18301 | 17959.13 | 149.95 | 18301 | 17949.87 | 154.26 | 18134 | 17923.63 | 115.8 |
| | | 2op | 18017 | 18013.17 | 8.72 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18014 | 17998.33 | 6.91 |

Table A.2253: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18165 | 17925.4 | 172.69 | 18156 | 17975.07 | 130.08 | 18301 | 17856.17 | 232.31 | 18275 | 17901.4 | 192.21 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17997.07 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18184 | 17957.07 | 124.57 | 18301 | 17980.93 | 136.15 | 18171 | 17890.2 | 201.91 | 18044 | 17777.53 | 187.56 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18175 | 17959.33 | 156.93 | 18175 | 17970.4 | 162.89 | 18301 | 17960.3 | 155.51 | 18119 | 17831.87 | 156.64 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18014.1 | 7.56 | 17994 | 17994 | 0 |
| | 50 | rnd | 18142 | 17939.47 | 149.86 | 18142 | 17966.2 | 147.37 | 18184 | 17865.37 | 216.79 | 18172 | 17873.53 | 181.16 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18012.4 | 9.36 | 17994 | 17994 | 0 |

Table A.2254: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17880.17 | 228.29 | 18181 | 17994.2 | 131.4 | 18152 | 17884.37 | 141.5 | 18301 | 17900.93 | 151.42 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18008 | 17994.7 | 2.61 | 17994 | 17994 | 0 |
| | 50 | rnd | 18084 | 17872.13 | 130.75 | 18301 | 18020.37 | 122 | 18187 | 17887.5 | 174.24 | 18152 | 17889.8 | 166.68 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17997.47 | 7.28 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18181 | 17909.67 | 209.11 | 18165 | 17931.83 | 160.44 | 18056 | 17867.9 | 160.85 | 18271 | 17862.83 | 202.3 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18014.27 | 7.12 | 17994 | 17994 | 0 |
| | 50 | rnd | 18176 | 18012.1 | 123.17 | 18152 | 17936.77 | 139.82 | 18175 | 17978.8 | 117.14 | 18216 | 17908.57 | 124.76 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18011.6 | 9.38 | 17994 | 17994 | 0 |

Table A.2255: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21199 | 20900.03 | 177.59 | 21157 | 20857.17 | 205.8 | 21104 | 20797.03 | 192.01 | 21212 | 20883.13 | 190.11 |
| | | 2op | 20829 | 20829 | 0 | 20944 | 20836.97 | 24.54 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21212 | 20903.03 | 194.15 | 21203 | 20909.57 | 188.45 | 21177 | 20813.33 | 259.85 | 21206 | 20831 | 221.23 |
| | | 2op | 20945 | 20833.63 | 21.45 | 21041 | 20892.37 | 74.85 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21152 | 20893.13 | 171.09 | 21173 | 20977.5 | 161.62 | 21163 | 20862.87 | 224.34 | 21181 | 20882.37 | 178.41 |
| | | 2op | 20829 | 20829 | 0 | 20997 | 20865.7 | 61.25 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21210 | 20951.07 | 173.67 | 21212 | 20919.67 | 169.08 | 21170 | 20913.1 | 151.03 | 21212 | 20865.4 | 207.35 |
| | | 2op | 20843 | 20829.47 | 2.56 | 21051 | 20911.2 | 75.86 | 20995 | 20838.53 | 33.23 | 20829 | 20829 | 0 |

Table A.2256: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21184 | 20865.57 | 190.69 | 21178 | 20929.17 | 179.31 | 21209 | 20901.07 | 255.59 | 21150 | 20869.97 | 195.18 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20855.87 | 80.5 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21162 | 20826.03 | 233.98 | 21176 | 20964.57 | 136.71 | 21268 | 20905.1 | 183.49 | 21196 | 20869.9 | 228.3 |
| | | 2op | 21008 | 20839.43 | 40.14 | 21210 | 20947.8 | 131.7 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21172 | 20834.17 | 213.84 | 21196 | 20920.3 | 190.01 | 21186 | 20962.27 | 155.88 | 21192 | 20826.97 | 240.74 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20914.2 | 111.85 | 21115 | 20838.53 | 52.22 | 20829 | 20829 | 0 |
| | 50 | rnd | 21238 | 20816.03 | 285.37 | 21186 | 20935.57 | 177.98 | 21212 | 20957.57 | 141.56 | 21172 | 20891.9 | 212.04 |
| | | 2op | 20889 | 20831 | 10.95 | 21187 | 20942.9 | 106.84 | 21193 | 20849.13 | 68.16 | 20829 | 20829 | 0 |

Table A.2257: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21159 | 20831.23 | 180.06 | 21212 | 20873.3 | 188.17 | 21212 | 20857.57 | 256.52 | 21132 | 20857.67 | 213.98 |
| | | 2op | 20997 | 20836.6 | 32.21 | 20997 | 20837.83 | 34.89 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21198 | 20924.83 | 158.92 | 21218 | 20935.03 | 159.39 | 21184 | 20780.47 | 216.52 | 21162 | 20832.6 | 183.47 |
| | | 2op | 20880 | 20830.73 | 9.31 | 21025 | 20857.67 | 56.08 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21173 | 20916.23 | 154.12 | 21196 | 20946.03 | 180.24 | 21172 | 20791.2 | 200.36 | 21160 | 20873.87 | 170.82 |
| | | 2op | 20889 | 20831 | 10.95 | 21048 | 20887.57 | 65 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21182 | 20918.03 | 180.01 | 21169 | 20913.97 | 169.22 | 21151 | 20923.57 | 150 | 21195 | 20883.73 | 215.29 |
| | | 2op | 20922 | 20832.83 | 17.31 | 21057 | 20897.87 | 84.19 | 20922 | 20832.33 | 16.98 | 20829 | 20829 | 0 |

Table A.2258: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20870.87 | 206.61 | 21135 | 20943.8 | 173.4 | 21166 | 20830.93 | 204.32 | 21233 | 20848.9 | 212.81 |
| | | 2op | 20997 | 20836.6 | 32.21 | 21139 | 20846.73 | 63.74 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21233 | 20881.27 | 219.5 | 21212 | 20994.43 | 139.03 | 21149 | 20784.47 | 223.99 | 21157 | 20846.87 | 179.42 |
| | | 2op | 21077 | 20844.87 | 60.44 | 21162 | 20872 | 87.71 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21171 | 20835.33 | 230.68 | 21161 | 20917.5 | 160.65 | 21203 | 20888.53 | 237.83 | 21212 | 20861.93 | 188.37 |
| | | 2op | 20889 | 20831 | 10.95 | 21047 | 20902.1 | 78.09 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21153 | 20872.13 | 190.26 | 21177 | 20963.5 | 173.68 | 21187 | 20987.77 | 116.81 | 21168 | 20879.83 | 173.62 |
| | | 2op | 21042 | 20839.4 | 42.31 | 21093 | 20952.43 | 96.46 | 21187 | 20848.03 | 74.89 | 20829 | 20829 | 0 |

Table A.2259: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21218 | 20951.07 | 169.53 | 21203 | 20917.97 | 202.25 | 21160 | 20797.4 | 230.71 | 21130 | 20761.17 | 192.23 |
| | | 2op | 20829 | 20829 | 0 | 21016 | 20872.13 | 64.68 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21218 | 20908.37 | 211.59 | 21161 | 20901.73 | 160.59 | 21160 | 20802.07 | 212.69 | 21087 | 20795.5 | 177.88 |
| | | 2op | 20911 | 20835.53 | 20.31 | 21057 | 20874.9 | 75.34 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21203 | 20882.17 | 199.51 | 21210 | 20973.17 | 173.34 | 21271 | 20927.8 | 202.22 | 21114 | 20830.47 | 199.72 |
| | | 2op | 20889 | 20831 | 10.95 | 21057 | 20869.43 | 60.03 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21203 | 20915.8 | 153.04 | 21206 | 20993.53 | 136.38 | 21202 | 20824.27 | 212.59 | 21186 | 20839.33 | 215.68 |
| | | 2op | 20997 | 20844.3 | 42.09 | 21057 | 20888.27 | 70.36 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |

Table A.2260: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21245 | 20879.13 | 218.21 | 21270 | 20965.83 | 146.28 | 21169 | 20869.83 | 205.33 | 21246 | 20852.7 | 204.59 |
| | | 2op | 20829 | 20829 | 0 | 21057 | 20865.63 | 68.49 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21271 | 20905.13 | 164.41 | 21227 | 20996.63 | 140.13 | 21190 | 20813.27 | 184.32 | 21160 | 20820.8 | 185.78 |
| | | 2op | 21008 | 20838.77 | 35.08 | 21193 | 20877.03 | 90.92 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21157 | 20873.8 | 189.74 | 21203 | 20926.33 | 190.8 | 21160 | 20890.3 | 217.52 | 21224 | 20824.37 | 223.72 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20902.83 | 104.34 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21196 | 20881.1 | 180.63 | 21166 | 20884.23 | 177.62 | 21211 | 20883.37 | 230.66 | 21178 | 20851.03 | 189.53 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21193 | 20924.27 | 122.43 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |

Table A.2261: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 590.47 | 3.55 | 595 | 592.77 | 1.63 | 596 | 593.5 | 1.91 | 596 | 590.87 | 2.96 |
| | | 2op | 596 | 592.3 | 2.59 | 595 | 594.9 | 0.31 | 596 | 594.63 | 0.72 | 594 | 593.6 | 1.1 |
| | 50 | rnd | 596 | 591.83 | 2.61 | 596 | 593.97 | 1.27 | 596 | 594.23 | 1.19 | 595 | 591.57 | 2.92 |
| | | 2op | 595 | 592.57 | 1.85 | 596 | 595 | 0.26 | 596 | 595.13 | 0.43 | 595 | 594.1 | 0.31 |
| 51 | 20 | rnd | 596 | 591.83 | 2.59 | 596 | 593.17 | 2.02 | 596 | 593.6 | 1.96 | 596 | 592.63 | 1.88 |
| | | 2op | 595 | 592.87 | 2 | 596 | 594.8 | 0.48 | 596 | 594.97 | 0.32 | 596 | 594.83 | 0.46 |
| | 50 | rnd | 596 | 592.9 | 2.06 | 596 | 594.07 | 1.41 | 596 | 594.63 | 1.13 | 596 | 592.4 | 2.04 |
| | | 2op | 595 | 593 | 2.05 | 596 | 595.1 | 0.31 | 596 | 595.33 | 0.48 | 595 | 594.6 | 0.56 |

Table A.2262: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.4 | 2.93 | 596 | 593.6 | 1.92 | 596 | 593.17 | 2.1 | 596 | 590.73 | 2.65 |
| | | 2op | 596 | 592.07 | 2.42 | 596 | 594.57 | 1.01 | 596 | 594.37 | 1.38 | 595 | 593.37 | 1.35 |
| | 50 | rnd | 596 | 592.13 | 2.99 | 596 | 594.37 | 1.4 | 596 | 594.63 | 1.1 | 595 | 591.2 | 3.02 |
| | | 2op | 595 | 592.57 | 1.98 | 596 | 594.5 | 0.97 | 596 | 594.77 | 0.77 | 595 | 593.77 | 1.25 |
| 51 | 20 | rnd | 595 | 591.13 | 2.39 | 596 | 593.73 | 1.72 | 596 | 594.2 | 1.4 | 596 | 593.03 | 2.08 |
| | | 2op | 595 | 593.27 | 1.86 | 596 | 594.87 | 0.51 | 596 | 595.23 | 0.43 | 595 | 594.7 | 0.53 |
| | 50 | rnd | 596 | 592.5 | 2.22 | 596 | 594.53 | 1.17 | 596 | 594.67 | 1.03 | 596 | 593.9 | 1.83 |
| | | 2op | 595 | 593.07 | 2.18 | 596 | 595 | 0.69 | 596 | 595.13 | 0.57 | 596 | 594.33 | 1.09 |

Table A.2263: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.7 | 2.51 | 596 | 593.73 | 1.72 | 595 | 592.3 | 2.2 | 596 | 590.9 | 3.24 |
| | | 2op | 595 | 591.6 | 2.11 | 595 | 594.9 | 0.31 | 596 | 594.47 | 0.57 | 594 | 593.03 | 1.45 |
| | 50 | rnd | 596 | 591.37 | 2.97 | 596 | 593.63 | 1.38 | 596 | 593.8 | 1.35 | 596 | 590.77 | 2.7 |
| | | 2op | 595 | 592.27 | 2.08 | 596 | 595.03 | 0.32 | 596 | 595.07 | 0.45 | 595 | 594 | 0.26 |
| 51 | 20 | rnd | 596 | 591.6 | 3.46 | 596 | 593.53 | 1.43 | 596 | 594.7 | 1.06 | 595 | 592.8 | 1.69 |
| | | 2op | 595 | 593.17 | 1.78 | 596 | 595 | 0.37 | 596 | 595.13 | 0.35 | 596 | 594.83 | 0.46 |
| | 50 | rnd | 596 | 591.57 | 2.67 | 596 | 594.07 | 1.41 | 596 | 594.6 | 1.43 | 596 | 592.67 | 2.31 |
| | | 2op | 596 | 593.2 | 1.92 | 596 | 595.03 | 0.56 | 596 | 595.07 | 0.25 | 595 | 594.57 | 0.5 |

Table A.2264: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 590.9 | 3.36 | 596 | 593.93 | 1.62 | 596 | 593.2 | 1.95 | 595 | 591 | 2.72 |
| | | 2op | 596 | 591.67 | 2.17 | 596 | 594.73 | 0.94 | 596 | 594.13 | 1.2 | 594 | 592.3 | 1.56 |
| | 50 | rnd | 595 | 591.07 | 2.75 | 596 | 594.43 | 1.28 | 596 | 594.33 | 1.21 | 596 | 591.93 | 2.69 |
| | | 2op | 596 | 592.3 | 2.14 | 596 | 595.03 | 0.93 | 596 | 594.77 | 0.9 | 595 | 594.07 | 0.37 |
| 51 | 20 | rnd | 595 | 590.73 | 3.28 | 596 | 593.53 | 1.7 | 596 | 594.53 | 1.59 | 595 | 593.13 | 1.55 |
| | | 2op | 595 | 593.07 | 1.7 | 596 | 594.9 | 0.4 | 596 | 595.1 | 0.31 | 596 | 594.87 | 0.51 |
| | 50 | rnd | 596 | 591.67 | 2.59 | 596 | 594.73 | 0.91 | 596 | 594.53 | 1.28 | 596 | 593.33 | 1.99 |
| | | 2op | 596 | 593.4 | 1.79 | 596 | 595.07 | 0.74 | 596 | 595.17 | 0.75 | 596 | 594.47 | 0.9 |

Table A.2265: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.4 | 2.76 | 596 | 593.93 | 1.36 | 596 | 590.6 | 3.68 | 595 | 589.97 | 4.09 |
| | | 2op | 596 | 594.03 | 0.85 | 596 | 595.03 | 0.49 | 594 | 590.33 | 2.04 | 589 | 589 | 0 |
| | 50 | rnd | 596 | 592.7 | 1.78 | 596 | 593.4 | 1.81 | 595 | 590.67 | 2.76 | 595 | 589.27 | 3.78 |
| | | 2op | 595 | 593.73 | 1.2 | 596 | 594.8 | 0.55 | 594 | 593.2 | 1.35 | 592 | 589.17 | 0.65 |
| 51 | 20 | rnd | 596 | 591.33 | 2.51 | 596 | 593.03 | 1.9 | 596 | 592.2 | 2.38 | 595 | 590.07 | 2.69 |
| | | 2op | 595 | 593.73 | 1.26 | 596 | 595.03 | 0.32 | 595 | 594.53 | 0.51 | 594 | 591.17 | 2.02 |
| | 50 | rnd | 596 | 593 | 1.91 | 596 | 593.3 | 1.8 | 596 | 592.27 | 2.15 | 595 | 588.73 | 3.91 |
| | | 2op | 596 | 594.53 | 0.9 | 596 | 594.9 | 0.4 | 595 | 594.13 | 0.35 | 594 | 589.63 | 1.5 |

Table A.2266: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.77 | 2.71 | 596 | 594.07 | 1.31 | 595 | 591.43 | 2.81 | 595 | 589.03 | 3.42 |
| | | 2op | 596 | 594.33 | 0.71 | 596 | 595.1 | 0.55 | 594 | 589.83 | 1.37 | 589 | 589 | 0 |
| | 50 | rnd | 595 | 591.77 | 2.01 | 595 | 593.57 | 1.36 | 595 | 590.83 | 2.8 | 595 | 588.7 | 3.65 |
| | | 2op | 596 | 594 | 1.26 | 596 | 594.87 | 0.43 | 594 | 591.87 | 1.85 | 590 | 589.07 | 0.25 |
| 51 | 20 | rnd | 596 | 592.83 | 1.97 | 596 | 594.37 | 1.16 | 596 | 592.7 | 2.04 | 596 | 591.77 | 2.11 |
| | | 2op | 595 | 594.13 | 0.35 | 596 | 595.07 | 0.25 | 595 | 594.33 | 0.48 | 595 | 591.63 | 2.33 |
| | 50 | rnd | 596 | 592.83 | 1.53 | 596 | 593.77 | 1.55 | 596 | 592.5 | 2.03 | 595 | 589.2 | 3.65 |
| | | 2op | 596 | 594.67 | 0.55 | 596 | 595.07 | 0.58 | 595 | 594.17 | 0.91 | 592 | 589.4 | 0.93 |

Table A.2267: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 767.93 | 4.59 | 777 | 774.47 | 1.98 | 777 | 772.97 | 2.28 | 777 | 770.3 | 5.57 |
| | | 2op | 775 | 767.93 | 2.56 | 777 | 773.07 | 1.93 | 776 | 772.2 | 1.95 | 772 | 769.47 | 0.82 |
| | 50 | rnd | 777 | 770.4 | 3.2 | 776 | 774.53 | 1.59 | 777 | 774.77 | 1.55 | 777 | 770.43 | 4.62 |
| | | 2op | 774 | 768.23 | 2.53 | 777 | 774.17 | 1.9 | 777 | 774.7 | 1.37 | 770 | 769.37 | 0.49 |
| 51 | 20 | rnd | 777 | 770.93 | 3.11 | 777 | 773.57 | 2.24 | 777 | 773.97 | 2.16 | 777 | 772.27 | 2.24 |
| | | 2op | 770 | 768.27 | 1.86 | 777 | 772.37 | 2.04 | 777 | 773 | 1.55 | 775 | 771.33 | 2.04 |
| | 50 | rnd | 777 | 771.9 | 2.93 | 777 | 774.57 | 1.81 | 777 | 775.17 | 1.42 | 777 | 773.4 | 2.81 |
| | | 2op | 770 | 768.3 | 1.53 | 777 | 773.53 | 1.81 | 777 | 773.97 | 1.67 | 774 | 771.43 | 1.79 |

Table A.2268: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771 | 4.91 | 777 | 774.43 | 2.33 | 777 | 773.83 | 2.56 | 776 | 772.27 | 3.53 |
| | | 2op | 775 | 768.57 | 3.28 | 777 | 774.1 | 2.29 | 777 | 773.13 | 1.98 | 771 | 768.8 | 0.92 |
| | 50 | rnd | 777 | 772.03 | 5.08 | 777 | 775.33 | 1.47 | 777 | 775.07 | 1.8 | 777 | 771.93 | 3.1 |
| | | 2op | 775 | 770.03 | 3.5 | 777 | 774.97 | 1.67 | 777 | 775.17 | 1.91 | 770 | 769.33 | 0.55 |
| 51 | 20 | rnd | 777 | 771.07 | 5.25 | 776 | 773.33 | 2.41 | 777 | 773.93 | 1.96 | 777 | 772.77 | 2.51 |
| | | 2op | 775 | 768.6 | 2.24 | 777 | 772.6 | 1.75 | 777 | 773.33 | 1.24 | 775 | 771.7 | 1.9 |
| | 50 | rnd | 777 | 772 | 4.59 | 777 | 774.53 | 1.53 | 777 | 775.27 | 1.48 | 777 | 774.1 | 1.88 |
| | | 2op | 773 | 769.37 | 1.67 | 777 | 774.47 | 1.87 | 777 | 775.17 | 1.66 | 775 | 772.1 | 1.56 |

Table A.2269: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 768.53 | 3.56 | 777 | 774.13 | 1.61 | 777 | 773.23 | 2.49 | 777 | 770.57 | 6.87 |
| | | 2op | 773 | 767.5 | 2.37 | 777 | 772.3 | 2.17 | 774 | 771.4 | 1.77 | 770 | 769.07 | 1.34 |
| | 50 | rnd | 775 | 770.2 | 2.96 | 777 | 774.2 | 1.73 | 777 | 774.83 | 1.42 | 777 | 769.8 | 3.94 |
| | | 2op | 774 | 768.77 | 2.92 | 777 | 773.8 | 1.58 | 777 | 774.2 | 1.54 | 770 | 769.43 | 0.5 |
| 51 | 20 | rnd | 775 | 769.8 | 3.6 | 777 | 773.03 | 2.09 | 777 | 773.97 | 1.99 | 777 | 773.43 | 2.24 |
| | | 2op | 770 | 768.03 | 1.73 | 777 | 772.33 | 2.31 | 777 | 773.37 | 1.43 | 776 | 771.2 | 1.92 |
| | 50 | rnd | 777 | 770.87 | 3.59 | 777 | 774.53 | 1.7 | 777 | 775 | 1.14 | 777 | 773.87 | 2.4 |
| | | 2op | 775 | 769.27 | 2.43 | 777 | 774.37 | 1.65 | 777 | 774.37 | 1.63 | 774 | 771 | 1.8 |

Table A.2270: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.6 | 2.77 | 777 | 774.8 | 1.85 | 777 | 774.23 | 1.83 | 777 | 769.7 | 5.77 |
| | | 2op | 774 | 769.07 | 2.96 | 777 | 774.17 | 2.28 | 777 | 772.23 | 1.7 | 770 | 768.27 | 1.57 |
| | 50 | rnd | 777 | 772.7 | 2.9 | 777 | 774.87 | 1.25 | 777 | 774.67 | 1.52 | 777 | 771.83 | 2.68 |
| | | 2op | 775 | 769.63 | 2.74 | 777 | 775.03 | 1.87 | 777 | 774.93 | 1.44 | 770 | 769.03 | 0.85 |
| 51 | 20 | rnd | 777 | 771.13 | 4.68 | 777 | 773.77 | 2.36 | 777 | 774.1 | 1.84 | 777 | 773.13 | 3.03 |
| | | 2op | 775 | 768.4 | 2.24 | 777 | 773.4 | 1.63 | 777 | 773.6 | 1.75 | 776 | 772.07 | 1.68 |
| | 50 | rnd | 777 | 773.73 | 1.93 | 777 | 774.7 | 1.78 | 777 | 775.7 | 1.15 | 777 | 773.37 | 2.82 |
| | | 2op | 775 | 770.1 | 2.4 | 777 | 774.07 | 1.68 | 777 | 775 | 1.93 | 777 | 772.9 | 2.32 |

Table A.2271: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 770.4 | 3.61 | 777 | 774.4 | 1.79 | 777 | 770.73 | 3.69 | 777 | 769.13 | 5.63 |
| | | 2op | 773 | 769.67 | 1.21 | 777 | 773.53 | 1.48 | 770 | 766.5 | 1.94 | 765 | 765 | 0 |
| | 50 | rnd | 777 | 771.57 | 3.21 | 777 | 774 | 2.26 | 777 | 770.77 | 3.76 | 777 | 770.13 | 3.95 |
| | | 2op | 775 | 769.6 | 2.13 | 777 | 773.4 | 1.75 | 770 | 768.33 | 1.67 | 765 | 765 | 0 |
| 51 | 20 | rnd | 775 | 770.9 | 3.58 | 777 | 771.5 | 4.73 | 777 | 772.67 | 2.86 | 777 | 771.4 | 3.54 |
| | | 2op | 771 | 769.57 | 0.63 | 774 | 771.23 | 1.48 | 774 | 770.7 | 1.34 | 769 | 766.3 | 1.49 |
| | 50 | rnd | 777 | 772.1 | 2.44 | 777 | 773.5 | 2.11 | 777 | 771.37 | 2.97 | 777 | 770 | 4.64 |
| | | 2op | 772 | 769.77 | 1.01 | 777 | 772.13 | 1.57 | 772 | 770.1 | 1.03 | 770 | 765.2 | 0.92 |

Table A.2272: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 770.6 | 3.35 | 776 | 773.93 | 1.53 | 777 | 771.2 | 3.44 | 775 | 766.7 | 9.4 |
| | | 2op | 775 | 769.7 | 1.7 | 777 | 773.23 | 1.59 | 770 | 765.8 | 1.47 | 765 | 765 | 0 |
| | 50 | rnd | 777 | 772.43 | 2.66 | 777 | 774.9 | 1.58 | 777 | 771.73 | 3.99 | 776 | 767.47 | 6.24 |
| | | 2op | 777 | 770.7 | 2.76 | 777 | 774.17 | 1.78 | 775 | 768.43 | 1.87 | 765 | 765 | 0 |
| 51 | 20 | rnd | 777 | 771.63 | 2.77 | 777 | 773.43 | 2.47 | 777 | 772.77 | 2.62 | 777 | 771.1 | 3.14 |
| | | 2op | 772 | 769.7 | 0.79 | 776 | 772.17 | 1.42 | 774 | 770.83 | 1.51 | 770 | 766.3 | 1.9 |
| | 50 | rnd | 777 | 773.73 | 2.23 | 777 | 774.1 | 1.88 | 777 | 773.97 | 2.63 | 776 | 769.2 | 4.98 |
| | | 2op | 775 | 770.53 | 1.8 | 777 | 772.57 | 1.55 | 774 | 771.23 | 1.83 | 768 | 765.13 | 0.57 |

Table A.2273: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 914.9 | 2.71 | 921 | 916.73 | 2.45 | 921 | 915.87 | 2.78 | 921 | 915.43 | 3.26 |
| | | 2op | 916 | 912.73 | 2.95 | 921 | 916.97 | 1.25 | 921 | 916.4 | 1.04 | 916 | 915.9 | 0.55 |
| | 50 | rnd | 919 | 914.73 | 2.9 | 921 | 917.03 | 1.61 | 921 | 917.5 | 1.83 | 921 | 914.33 | 2.95 |
| | | 2op | 918 | 914.6 | 2.47 | 919 | 916.7 | 0.99 | 921 | 917.5 | 1.74 | 916 | 915.97 | 0.18 |
| 51 | 20 | rnd | 921 | 914.63 | 4.12 | 921 | 917.43 | 2.45 | 921 | 917.1 | 2.4 | 921 | 915.77 | 3.08 |
| | | 2op | 916 | 914.17 | 2.7 | 918 | 916.33 | 0.71 | 921 | 917.37 | 1.63 | 918 | 916.07 | 0.37 |
| | 50 | rnd | 921 | 915 | 2.97 | 921 | 916.83 | 2.13 | 921 | 917.57 | 1.68 | 921 | 916.6 | 2.69 |
| | | 2op | 917 | 915.2 | 1.54 | 921 | 917.03 | 1.16 | 921 | 917.8 | 1.37 | 916 | 916 | 0 |

Table A.2274: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.5 | 3.28 | 921 | 916.83 | 2.77 | 921 | 916.07 | 2.68 | 919 | 914.73 | 2.99 |
| | | 2op | 919 | 913.83 | 3.32 | 921 | 918.53 | 1.89 | 921 | 917.6 | 1.89 | 919 | 915.87 | 1.8 |
| | 50 | rnd | 921 | 915.3 | 2.9 | 921 | 917.8 | 2.35 | 921 | 918.5 | 1.96 | 919 | 914 | 3.55 |
| | | 2op | 921 | 914.97 | 2.61 | 921 | 918.5 | 1.94 | 921 | 918.93 | 2.1 | 919 | 915.9 | 1.69 |
| 51 | 20 | rnd | 919 | 914.1 | 3.6 | 921 | 915.8 | 2.44 | 921 | 917.57 | 2.21 | 921 | 916.3 | 2.9 |
| | | 2op | 916 | 914.53 | 2.1 | 921 | 916.93 | 1.39 | 921 | 917.6 | 1.63 | 918 | 916.1 | 0.66 |
| | 50 | rnd | 919 | 914.1 | 3.2 | 921 | 916.23 | 2.37 | 921 | 917.23 | 2.14 | 921 | 915.1 | 3.52 |
| | | 2op | 917 | 915.03 | 2.16 | 921 | 918.73 | 2.05 | 921 | 919.27 | 1.78 | 921 | 916.63 | 1.56 |

Table A.2275: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 913.8 | 3.32 | 921 | 916.87 | 2.56 | 921 | 916.63 | 2.43 | 919 | 913.63 | 3.61 |
| | | 2op | 916 | 913.63 | 2.65 | 921 | 916.63 | 1.13 | 918 | 916.27 | 0.64 | 916 | 916 | 0 |
| | 50 | rnd | 919 | 914.13 | 3.44 | 919 | 916.77 | 2.11 | 921 | 916.47 | 2.39 | 919 | 914.73 | 3.65 |
| | | 2op | 917 | 914.6 | 2.54 | 919 | 916.77 | 0.9 | 921 | 916.97 | 1.4 | 916 | 915.83 | 0.91 |
| 51 | 20 | rnd | 919 | 914.2 | 3.35 | 921 | 916 | 2.26 | 921 | 916.9 | 1.86 | 921 | 916.4 | 3.12 |
| | | 2op | 916 | 914.8 | 2.07 | 918 | 916.27 | 0.58 | 919 | 916.6 | 0.89 | 918 | 916.17 | 0.53 |
| | 50 | rnd | 918 | 913.5 | 3.22 | 921 | 917.03 | 1.75 | 921 | 917.67 | 1.42 | 921 | 915.9 | 3.43 |
| | | 2op | 918 | 915.03 | 2.24 | 919 | 917.1 | 0.99 | 921 | 918.1 | 1.06 | 916 | 916 | 0 |

Table A.2276: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.17 | 3.74 | 921 | 917.33 | 1.99 | 921 | 916.53 | 2.56 | 919 | 914.6 | 2.34 |
| | | 2op | 919 | 914.13 | 2.58 | 921 | 918.33 | 2.09 | 921 | 916.9 | 1.63 | 921 | 916.17 | 1.46 |
| | 50 | rnd | 921 | 914 | 3.26 | 921 | 916.9 | 2.09 | 921 | 917.87 | 2.06 | 921 | 915.7 | 3.33 |
| | | 2op | 921 | 915.17 | 3.22 | 921 | 918.4 | 1.96 | 921 | 918.9 | 1.92 | 918 | 916.07 | 0.87 |
| 51 | 20 | rnd | 919 | 914.4 | 2.25 | 919 | 915.73 | 2.02 | 921 | 916.43 | 2.42 | 921 | 916.33 | 3.27 |
| | | 2op | 917 | 914.87 | 2.26 | 921 | 916.63 | 2.14 | 921 | 918.07 | 1.98 | 921 | 916.43 | 1.1 |
| | 50 | rnd | 921 | 915.03 | 3.05 | 921 | 916.87 | 2 | 921 | 918.1 | 1.6 | 921 | 915.7 | 2.77 |
| | | 2op | 919 | 914.57 | 2.43 | 921 | 918.53 | 1.94 | 921 | 918.67 | 1.92 | 919 | 916.27 | 0.83 |

Table A.2277: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 913.6 | 3.15 | 921 | 916.8 | 2.37 | 921 | 914.17 | 3.17 | 921 | 913.03 | 3.93 |
| | | 2op | 916 | 915.67 | 1.27 | 921 | 917.17 | 1.46 | 919 | 915.7 | 2.31 | 914 | 906.27 | 1.46 |
| | 50 | rnd | 921 | 914.97 | 3.05 | 921 | 916.43 | 2.24 | 921 | 915.03 | 2.93 | 919 | 913.43 | 3.84 |
| | | 2op | 917 | 915.83 | 0.79 | 921 | 916.6 | 1.04 | 916 | 916 | 0 | 912 | 906.7 | 1.62 |
| 51 | 20 | rnd | 921 | 915.2 | 2.89 | 921 | 916.73 | 2.94 | 921 | 916.27 | 2.77 | 921 | 913.33 | 4.66 |
| | | 2op | 916 | 916 | 0 | 918 | 916.23 | 0.57 | 918 | 916.1 | 0.4 | 919 | 913.87 | 2.91 |
| | 50 | rnd | 921 | 916.27 | 2.43 | 921 | 917.03 | 3.06 | 919 | 914.47 | 2.78 | 919 | 912.83 | 3.18 |
| | | 2op | 916 | 916 | 0 | 918 | 916.13 | 0.43 | 916 | 916 | 0 | 918 | 909.63 | 3.24 |

Table A.2278: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 913.97 | 3.22 | 921 | 916.93 | 2.42 | 917 | 912.5 | 2.65 | 918 | 910.83 | 4.74 |
| | | 2op | 918 | 915.27 | 1.84 | 921 | 917.1 | 1.54 | 918 | 913.87 | 2.15 | 907 | 906.03 | 0.18 |
| | 50 | rnd | 919 | 915.5 | 2.66 | 921 | 918.07 | 1.86 | 919 | 914.67 | 3.1 | 918 | 912.63 | 3.54 |
| | | 2op | 918 | 914.73 | 2.36 | 921 | 917.43 | 1.63 | 919 | 915.2 | 1.94 | 908 | 906.27 | 0.52 |
| 51 | 20 | rnd | 921 | 915.7 | 2.41 | 921 | 917.13 | 2.49 | 921 | 916.37 | 2.58 | 921 | 914.37 | 3.24 |
| | | 2op | 916 | 915.83 | 0.91 | 917 | 916.07 | 0.25 | 918 | 916.07 | 0.37 | 919 | 915 | 2.74 |
| | 50 | rnd | 921 | 916.3 | 3.31 | 921 | 916.47 | 3.05 | 921 | 915.77 | 2.88 | 921 | 914.13 | 3.26 |
| | | 2op | 916 | 915.97 | 0.18 | 921 | 916.5 | 1.17 | 919 | 916.17 | 1.02 | 919 | 909.8 | 3.99 |

Table A.2279: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1556.03 | 10.9 | 1577 | 1554.13 | 12.09 | 1572 | 1555.43 | 11.5 | 1577 | 1553.13 | 14.23 |
| | | 2op | 1567 | 1554.67 | 2.76 | 1569 | 1559.07 | 4.89 | 1557 | 1553.17 | 0.75 | 1553 | 1553 | 0 |
| | 50 | rnd | 1573 | 1558.77 | 7.03 | 1576 | 1560.7 | 6.65 | 1568 | 1551.4 | 11.31 | 1573 | 1552.73 | 14.14 |
| | | 2op | 1558 | 1553.83 | 1.34 | 1572 | 1565.63 | 4.63 | 1567 | 1556.43 | 3.5 | 1555 | 1553.07 | 0.37 |
| 51 | 20 | rnd | 1578 | 1556.17 | 10.34 | 1576 | 1556.23 | 10.83 | 1578 | 1559.4 | 10.3 | 1575 | 1557.33 | 9.8 |
| | | 2op | 1558 | 1554.27 | 1.57 | 1572 | 1563.5 | 6.14 | 1572 | 1559.13 | 5.28 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1555.5 | 11.43 | 1577 | 1559.23 | 8.72 | 1577 | 1560.63 | 9.8 | 1571 | 1556 | 9.86 |
| | | 2op | 1562 | 1555.1 | 2.02 | 1573 | 1562.6 | 5.77 | 1572 | 1563.43 | 4.5 | 1557 | 1553.27 | 0.87 |

Table A.2280: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1577 | 1559.2 | 13.02 | 1572 | 1560.77 | 7.19 | 1572 | 1558.3 | 10.3 | 1573 | 1556.77 | 11.97 |
| | | 2op | 1564 | 1554.3 | 2.12 | 1565 | 1557.73 | 3.96 | 1554 | 1553.03 | 0.18 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1559.13 | 9.14 | 1574 | 1560.97 | 6.45 | 1575 | 1560.7 | 7.64 | 1568 | 1554.03 | 12.74 |
| | | 2op | 1568 | 1554.4 | 3.32 | 1572 | 1561.73 | 4.35 | 1564 | 1555.4 | 2.92 | 1555 | 1553.07 | 0.37 |
| 51 | 20 | rnd | 1571 | 1559.3 | 10.77 | 1572 | 1560.17 | 8.16 | 1573 | 1560.37 | 10.41 | 1570 | 1553.93 | 11.25 |
| | | 2op | 1562 | 1554.6 | 2.42 | 1565 | 1560.13 | 3.75 | 1572 | 1557.6 | 4.39 | 1553 | 1553 | 0 |
| | 50 | rnd | 1569 | 1554.93 | 10.1 | 1578 | 1562.23 | 7.44 | 1577 | 1560.1 | 6.42 | 1573 | 1556.13 | 9 |
| | | 2op | 1566 | 1556.07 | 3.7 | 1565 | 1560.27 | 4.21 | 1569 | 1561.53 | 3.99 | 1555 | 1553.13 | 0.51 |

Table A.2281: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1556.33 | 9.98 | 1575 | 1556.6 | 10.75 | 1576 | 1556.03 | 10.9 | 1574 | 1552.93 | 13.69 |
| | | 2op | 1558 | 1553.93 | 1.46 | 1569 | 1559.33 | 4.72 | 1562 | 1553.8 | 1.95 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1558.03 | 8.2 | 1574 | 1557 | 10.07 | 1573 | 1557.47 | 7.86 | 1571 | 1553.97 | 12.12 |
| | | 2op | 1558 | 1553.93 | 1.6 | 1572 | 1564.6 | 5.08 | 1563 | 1554.93 | 2.39 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1559.37 | 11.33 | 1574 | 1555.13 | 11 | 1573 | 1556.3 | 9.83 | 1570 | 1551.4 | 13.63 |
| | | 2op | 1564 | 1555.27 | 2.86 | 1573 | 1563.3 | 5.31 | 1566 | 1558 | 3.77 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1558.1 | 8.88 | 1572 | 1558.27 | 9.74 | 1572 | 1554.97 | 10.45 | 1578 | 1557.07 | 12.3 |
| | | 2op | 1558 | 1554.1 | 1.32 | 1572 | 1564.63 | 4.94 | 1572 | 1563.13 | 5.08 | 1563 | 1553.6 | 2.04 |

Table A.2282: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1557.5 | 8.76 | 1576 | 1559.43 | 8.06 | 1573 | 1556.6 | 8.7 | 1580 | 1557.3 | 10.89 |
| | | 2op | 1570 | 1554.27 | 3.15 | 1565 | 1557.5 | 3.98 | 1560 | 1553.37 | 1.35 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1558.53 | 9.16 | 1576 | 1561.5 | 7.35 | 1574 | 1559.53 | 8.78 | 1574 | 1553.93 | 10.01 |
| | | 2op | 1570 | 1554.47 | 3.61 | 1566 | 1560.4 | 4.34 | 1558 | 1554 | 1.29 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1559.53 | 8.41 | 1580 | 1559.57 | 8.16 | 1574 | 1559.47 | 8.95 | 1573 | 1555.5 | 10.42 |
| | | 2op | 1563 | 1555.6 | 3.47 | 1565 | 1560.17 | 4.21 | 1572 | 1558.1 | 4.89 | 1553 | 1553 | 0 |
| | 50 | rnd | 1576 | 1560.13 | 9.98 | 1579 | 1562.3 | 8.22 | 1579 | 1560.57 | 7.86 | 1573 | 1556.47 | 10.83 |
| | | 2op | 1569 | 1554.9 | 3.8 | 1565 | 1560.6 | 3.83 | 1572 | 1560.53 | 4.7 | 1553 | 1553 | 0 |

Table A.2283: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1559.07 | 7.7 | 1576 | 1557.2 | 10.96 | 1568 | 1552.5 | 16.38 | 1571 | 1551.67 | 14.01 |
| | | 2op | 1565 | 1555.07 | 2.94 | 1565 | 1554.77 | 2.25 | 1563 | 1553.33 | 1.83 | 1553 | 1553 | 0 |
| | 50 | rnd | 1570 | 1556.37 | 7.98 | 1578 | 1558.87 | 9.79 | 1572 | 1558.4 | 10.1 | 1577 | 1555.4 | 11.85 |
| | | 2op | 1560 | 1555.37 | 1.65 | 1562 | 1554.77 | 1.79 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1574 | 1558.6 | 11.42 | 1578 | 1560.87 | 7.57 | 1570 | 1556.03 | 9.6 | 1568 | 1552.77 | 10.66 |
| | | 2op | 1568 | 1557.33 | 3.85 | 1568 | 1562.33 | 3.65 | 1555 | 1553.27 | 0.58 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1561.67 | 6.68 | 1572 | 1559.23 | 7.26 | 1571 | 1555.4 | 12.59 | 1573 | 1555.33 | 12.57 |
| | | 2op | 1566 | 1558 | 3.66 | 1565 | 1558.9 | 3.68 | 1557 | 1553.2 | 0.81 | 1553 | 1553 | 0 |

Table A.2284: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1580 | 1559.13 | 9.09 | 1575 | 1555.97 | 11.28 | 1573 | 1553.13 | 14.47 | 1570 | 1554.07 | 11.52 |
| | | 2op | 1568 | 1555.87 | 4.3 | 1567 | 1556.47 | 4.45 | 1553 | 1553 | 0 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1560.03 | 8.24 | 1572 | 1559.37 | 7.7 | 1578 | 1556.23 | 8.91 | 1570 | 1558.23 | 10.79 |
| | | 2op | 1564 | 1555.5 | 2.35 | 1564 | 1554.57 | 1.99 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1578 | 1559.47 | 8.23 | 1576 | 1561.13 | 6.92 | 1575 | 1558.03 | 9.99 | 1574 | 1554.6 | 10.49 |
| | | 2op | 1564 | 1557 | 2.82 | 1571 | 1565.53 | 3.87 | 1559 | 1553.7 | 1.6 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1559.27 | 7.11 | 1573 | 1559.77 | 7.32 | 1576 | 1556.43 | 8.77 | 1577 | 1559.2 | 9.08 |
| | | 2op | 1568 | 1559.33 | 4.06 | 1569 | 1559.37 | 4.51 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |

Table A.2285: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1542.5 | 15.73 | 1570 | 1548.87 | 11.1 | 1566 | 1548.37 | 12.2 | 1568 | 1547.53 | 9.28 |
| | | 2op | 1557 | 1532.83 | 5.17 | 1560 | 1537.57 | 9.47 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1563 | 1543.8 | 11.25 | 1569 | 1552.47 | 10.36 | 1569 | 1554.6 | 10.57 | 1564 | 1549.67 | 10.32 |
| | | 2op | 1539 | 1531.7 | 2.12 | 1560 | 1543.87 | 9.94 | 1540 | 1531.5 | 1.78 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1563 | 1545.37 | 10.8 | 1569 | 1551.47 | 8.81 | 1568 | 1555.6 | 8.1 | 1569 | 1552.27 | 10.55 |
| | | 2op | 1556 | 1534.63 | 6.36 | 1565 | 1541.83 | 10.56 | 1556 | 1535.97 | 6.67 | 1531 | 1531 | 0 |
| | 50 | rnd | 1563 | 1546.13 | 11.44 | 1566 | 1548.97 | 8.61 | 1567 | 1551.33 | 9.54 | 1568 | 1551.47 | 12.71 |
| | | 2op | 1556 | 1535.67 | 8.11 | 1566 | 1541.83 | 9.99 | 1565 | 1541.17 | 8.68 | 1531 | 1531 | 0 |

Table A.2286: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1554.33 | 10.69 | 1569 | 1556.63 | 7.9 | 1566 | 1551.2 | 12 | 1565 | 1548.37 | 11.71 |
| | | 2op | 1563 | 1536 | 10.72 | 1564 | 1538.53 | 11.36 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1571 | 1552.93 | 9.67 | 1570 | 1557.27 | 6.89 | 1567 | 1555.43 | 8.23 | 1564 | 1551.83 | 9.5 |
| | | 2op | 1561 | 1534.33 | 8.77 | 1570 | 1545.43 | 13.53 | 1561 | 1533.4 | 7.37 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1567 | 1554.63 | 11.11 | 1571 | 1556.47 | 8.82 | 1570 | 1558.37 | 6.56 | 1570 | 1551.57 | 9.68 |
| | | 2op | 1563 | 1540.33 | 12.22 | 1565 | 1548.07 | 11.53 | 1567 | 1548.97 | 13.73 | 1531 | 1531 | 0 |
| | 50 | rnd | 1570 | 1551.87 | 7.58 | 1567 | 1556.57 | 7.73 | 1568 | 1559.33 | 6.1 | 1567 | 1550.87 | 11.87 |
| | | 2op | 1566 | 1541.63 | 13.81 | 1565 | 1550.3 | 12.2 | 1569 | 1553.33 | 11.22 | 1550 | 1531.63 | 3.47 |

Table A.2287: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1543.83 | 10.56 | 1566 | 1551.43 | 9.93 | 1565 | 1547.37 | 15.16 | 1567 | 1550.73 | 10.18 |
| | | 2op | 1548 | 1532.3 | 4.33 | 1565 | 1537.03 | 9.65 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1561 | 1545 | 11.29 | 1563 | 1553.3 | 7.43 | 1569 | 1550.47 | 10.01 | 1569 | 1551.57 | 10.49 |
| | | 2op | 1549 | 1532.3 | 4.47 | 1565 | 1548.23 | 12.22 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1543.23 | 8.95 | 1564 | 1550.87 | 9.21 | 1565 | 1553 | 8.91 | 1567 | 1549 | 11.02 |
| | | 2op | 1556 | 1533.4 | 5.6 | 1561 | 1542.47 | 9.69 | 1556 | 1536 | 7 | 1531 | 1531 | 0 |
| | 50 | rnd | 1566 | 1549.57 | 10.77 | 1567 | 1548.77 | 10.65 | 1567 | 1551.67 | 9.54 | 1562 | 1547.63 | 9.81 |
| | | 2op | 1552 | 1533.87 | 5.04 | 1555 | 1539.17 | 7.86 | 1566 | 1544.03 | 10.2 | 1531 | 1531 | 0 |

Table A.2288: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1552 | 10.72 | 1569 | 1557.5 | 7.88 | 1569 | 1550.43 | 10.66 | 1566 | 1545.67 | 11.58 |
| | | 2op | 1557 | 1534.33 | 8.67 | 1563 | 1538.27 | 11.54 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1569 | 1555.13 | 9.96 | 1570 | 1556 | 7.65 | 1568 | 1553.27 | 8.15 | 1567 | 1546.6 | 13.18 |
| | | 2op | 1560 | 1533.47 | 7.6 | 1563 | 1543.97 | 10.8 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1553.53 | 7.29 | 1568 | 1551.97 | 9.14 | 1569 | 1554.53 | 8.36 | 1564 | 1553.13 | 7.79 |
| | | 2op | 1564 | 1537.5 | 11.13 | 1566 | 1547.43 | 12.49 | 1566 | 1542.5 | 13.9 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1554.47 | 8.54 | 1568 | 1556.23 | 8.35 | 1568 | 1558.53 | 6.52 | 1566 | 1555 | 11.84 |
| | | 2op | 1563 | 1540.9 | 13.55 | 1568 | 1549.5 | 14.43 | 1569 | 1553.47 | 11.96 | 1531 | 1531 | 0 |

Table A.2289: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1545.2 | 9.17 | 1567 | 1552.03 | 9.53 | 1569 | 1548.63 | 9.89 | 1566 | 1546.2 | 13.04 |
| | | 2op | 1552 | 1533.07 | 4.58 | 1550 | 1538.27 | 5.91 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1547.87 | 10.26 | 1569 | 1549.87 | 11.44 | 1563 | 1547.23 | 12.29 | 1569 | 1546.7 | 11.46 |
| | | 2op | 1552 | 1535 | 7.01 | 1551 | 1535.4 | 5.9 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1567 | 1552.03 | 10.88 | 1568 | 1556.3 | 7.75 | 1569 | 1551.33 | 11.99 | 1570 | 1551.2 | 12.33 |
| | | 2op | 1556 | 1539.97 | 7.5 | 1559 | 1548.87 | 6.06 | 1537 | 1531.43 | 1.38 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1549.43 | 9.81 | 1565 | 1550.73 | 8.1 | 1568 | 1548.07 | 12.74 | 1565 | 1544.83 | 12.66 |
| | | 2op | 1556 | 1544.03 | 9.08 | 1561 | 1545.4 | 9.09 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.2290: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1552.63 | 10.16 | 1570 | 1557.73 | 5.53 | 1564 | 1547.87 | 9.86 | 1570 | 1550.9 | 10.4 |
| | | 2op | 1569 | 1538.93 | 13.04 | 1573 | 1550.5 | 12.28 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1570 | 1552.07 | 7.68 | 1570 | 1557.23 | 7.99 | 1566 | 1548 | 13.9 | 1560 | 1545.33 | 11.21 |
| | | 2op | 1570 | 1540.6 | 13.47 | 1569 | 1544.73 | 15.52 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1572 | 1555.97 | 9.23 | 1570 | 1556.83 | 9.42 | 1564 | 1551.03 | 9.33 | 1567 | 1550.87 | 9.64 |
| | | 2op | 1564 | 1553 | 8.4 | 1565 | 1556.83 | 2.61 | 1561 | 1533.77 | 8.48 | 1531 | 1531 | 0 |
| | 50 | rnd | 1567 | 1555.37 | 8.73 | 1570 | 1556 | 8 | 1569 | 1554.4 | 10.86 | 1571 | 1551.27 | 11.24 |
| | | 2op | 1565 | 1554.03 | 10.25 | 1565 | 1554.67 | 8.35 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.2291: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1558 | 1547.3 | 8.48 | 1566 | 1550.27 | 8 | 1567 | 1547.8 | 9.26 | 1565 | 1548.53 | 7.4 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1562 | 1547.97 | 9.29 | 1565 | 1548.8 | 7.48 | 1566 | 1550 | 9.87 | 1561 | 1551.47 | 6.48 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1559 | 1545.77 | 8.34 | 1565 | 1550.27 | 10.15 | 1567 | 1549.33 | 10.45 | 1559 | 1548.03 | 7.21 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1548.63 | 9.49 | 1564 | 1549.13 | 7.39 | 1568 | 1549.37 | 8.39 | 1566 | 1549.93 | 8.54 |
| | | 2op | 1549 | 1548.03 | 0.18 | 1549 | 1548.03 | 0.18 | 1551 | 1548.13 | 0.57 | 1548 | 1548 | 0 |

Table A.2292: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1549.07 | 9.54 | 1567 | 1554.87 | 6.17 | 1568 | 1547.87 | 9.31 | 1562 | 1547.33 | 8.82 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1550.17 | 8.35 | 1565 | 1552.3 | 5.42 | 1566 | 1550.5 | 8.26 | 1561 | 1548.5 | 8.73 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1551 | 7.71 | 1566 | 1551.9 | 8.5 | 1565 | 1552.57 | 7.67 | 1562 | 1549.7 | 9.36 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1549.33 | 8.41 | 1564 | 1550.83 | 6.79 | 1568 | 1553.23 | 7.88 | 1564 | 1548.4 | 9.27 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1550 | 1548.13 | 0.51 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 |

Table A.2293: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1545.77 | 9.94 | 1566 | 1547.97 | 9.23 | 1567 | 1547.53 | 11.36 | 1567 | 1551 | 8.52 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1558 | 1546.33 | 7.64 | 1565 | 1548.5 | 8.41 | 1565 | 1547.3 | 11.87 | 1564 | 1550.43 | 9.27 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1566 | 1548.03 | 8.5 | 1566 | 1548.17 | 8.91 | 1568 | 1549.4 | 8.96 | 1565 | 1543.83 | 13.08 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1547.63 | 8.62 | 1566 | 1551.3 | 6.72 | 1564 | 1548.57 | 8.77 | 1563 | 1549.87 | 7.2 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1551 | 1548.23 | 0.77 | 1548 | 1548 | 0 |

Table A.2294: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1550.13 | 10.9 | 1564 | 1550.23 | 9.08 | 1563 | 1550.23 | 9.43 | 1563 | 1547.27 | 8.66 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1546.63 | 9.56 | 1565 | 1551.67 | 6.76 | 1560 | 1550.13 | 7.64 | 1563 | 1546.9 | 10.66 |
| | | 2op | 1548 | 1548 | 0 | 1556 | 1548.27 | 1.46 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1549.23 | 10.11 | 1565 | 1552.17 | 7.56 | 1565 | 1547.67 | 8.04 | 1564 | 1548.8 | 8.87 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1550.43 | 7.38 | 1568 | 1551.73 | 8.54 | 1565 | 1552.4 | 9.84 | 1561 | 1550.1 | 7.12 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1549 | 1548.07 | 0.25 | 1548 | 1548 | 0 |

Table A.2295: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1547.13 | 8.76 | 1561 | 1548.2 | 9.03 | 1560 | 1543.6 | 10.77 | 1566 | 1548.53 | 8.9 |
| | | 2op | 1548 | 1548 | 0 | 1549 | 1548.03 | 0.18 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1564 | 1547.13 | 8.2 | 1563 | 1550.1 | 8.65 | 1565 | 1549.53 | 9.82 | 1564 | 1546.97 | 10.68 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1561 | 1548.53 | 6.3 | 1567 | 1550.87 | 9.55 | 1566 | 1548.37 | 8.26 | 1565 | 1548.07 | 10.01 |
| | | 2op | 1549 | 1548.03 | 0.18 | 1551 | 1548.53 | 0.68 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1564 | 1549.63 | 7.88 | 1560 | 1547.7 | 8.14 | 1566 | 1548.73 | 8.99 | 1568 | 1546.17 | 10.18 |
| | | 2op | 1549 | 1548.07 | 0.25 | 1549 | 1548.1 | 0.31 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.2296: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1553.43 | 8.73 | 1565 | 1551.2 | 9.46 | 1568 | 1547.73 | 10.51 | 1565 | 1548.47 | 10.21 |
| | | 2op | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1548.4 | 7.33 | 1564 | 1553.37 | 6.55 | 1566 | 1547.43 | 10.62 | 1562 | 1547.4 | 9.25 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1565 | 1550.87 | 7.98 | 1563 | 1553.77 | 7.96 | 1565 | 1548.43 | 9.7 | 1564 | 1547.47 | 11.39 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1550 | 1548.87 | 1.01 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1548.97 | 8 | 1570 | 1553.07 | 8.6 | 1565 | 1548.33 | 8.47 | 1562 | 1547.57 | 9.65 |
| | | 2op | 1550 | 1548.13 | 0.51 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.2297: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2762 | 2739.93 | 11.6 | 2780 | 2743.2 | 15.47 | 2758 | 2736.83 | 12.41 | 2767 | 2735.77 | 15.51 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.9 | 12.86 | 2765 | 2741.13 | 12.04 | 2771 | 2746.7 | 13.43 | 2763 | 2733.1 | 12.9 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2741.37 | 15.33 | 2771 | 2745.07 | 13.38 | 2764 | 2738.07 | 15.62 | 2773 | 2738.73 | 17.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2762 | 2735.7 | 17.59 | 2766 | 2742.03 | 14.95 | 2767 | 2740.5 | 11.45 | 2772 | 2741.27 | 15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2298: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2775 | 2745.43 | 12.37 | 2771 | 2747.4 | 12.24 | 2771 | 2742.87 | 15.5 | 2757 | 2740.63 | 10.76 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2759 | 2741.83 | 10.49 | 2758 | 2742.43 | 12.12 | 2764 | 2741.33 | 12.33 | 2765 | 2742.07 | 13.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2768 | 2741.5 | 12.64 | 2762 | 2745.83 | 9.3 | 2767 | 2740.8 | 14.58 | 2764 | 2736.3 | 14.14 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2771 | 2747.6 | 11.94 | 2764 | 2745.77 | 12.51 | 2767 | 2741.97 | 10.61 | 2763 | 2743.03 | 9.73 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2299: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2773 | 2740.47 | 17.39 | 2764 | 2740.67 | 14.86 | 2761 | 2741.47 | 11.95 | 2766 | 2741.37 | 19.15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2772 | 2742.53 | 11.68 | 2761 | 2739.87 | 15.75 | 2761 | 2742.83 | 11.19 | 2768 | 2740.03 | 15.66 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2770 | 2739.2 | 13.97 | 2762 | 2739.87 | 15.91 | 2759 | 2737.03 | 15.24 | 2770 | 2739.6 | 18.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2775 | 2739.57 | 12.79 | 2772 | 2740.17 | 19.26 | 2767 | 2742.3 | 13.43 | 2759 | 2741.6 | 12.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2300: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2769 | 2744.13 | 18.01 | 2770 | 2743.97 | 13.74 | 2766 | 2741.4 | 13.77 | 2766 | 2746.3 | 10.41 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2746.93 | 12.22 | 2768 | 2741.8 | 12.79 | 2765 | 2742.2 | 13.94 | 2763 | 2743.27 | 12.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2764 | 2739.1 | 13.96 | 2774 | 2743.8 | 14.74 | 2763 | 2742.77 | 10.08 | 2767 | 2740.3 | 14.69 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2742.53 | 11.75 | 2770 | 2745.97 | 10.55 | 2760 | 2741.83 | 9.08 | 2762 | 2740.23 | 16.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2301: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2740.83 | 13.99 | 2767 | 2743 | 14.82 | 2767 | 2744.6 | 14.09 | 2770 | 2741.4 | 13.37 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2739.73 | 12.51 | 2766 | 2743.4 | 11.52 | 2772 | 2742.53 | 15.67 | 2763 | 2743.23 | 11.83 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2739.67 | 15.33 | 2763 | 2738.2 | 13.06 | 2768 | 2738.93 | 17.31 | 2773 | 2740.37 | 14.28 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2759 | 2737.9 | 18.6 | 2759 | 2739.83 | 11.53 | 2769 | 2740.83 | 15.59 | 2773 | 2742.83 | 13.22 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2302: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2766 | 2745.67 | 12.8 | 2771 | 2742.87 | 14.03 | 2760 | 2740.33 | 12.4 | 2765 | 2738.1 | 14.19 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.57 | 12.93 | 2766 | 2742.37 | 14.12 | 2761 | 2743.03 | 10.45 | 2763 | 2736.83 | 13.97 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2769 | 2746.7 | 14.03 | 2766 | 2746.53 | 9.54 | 2766 | 2744.27 | 12.45 | 2768 | 2743.83 | 15.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2769 | 2748.4 | 12.43 | 2763 | 2743.9 | 11.37 | 2764 | 2744.3 | 12.49 | 2761 | 2739.5 | 12.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2303: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2834 | 2810.1 | 14.44 | 2838 | 2814.1 | 13.2 | 2845 | 2809.4 | 16.84 | 2835 | 2808.7 | 12.44 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2813.87 | 16.35 | 2830 | 2811.4 | 14.13 | 2834 | 2807.53 | 17.03 | 2837 | 2805.97 | 14.87 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2834 | 2809.7 | 14.7 | 2842 | 2815.6 | 9.57 | 2844 | 2813.63 | 12.79 | 2837 | 2809.1 | 16.26 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2804.6 | 1.83 | 2804 | 2804 | 0 |
| | 50 | rnd | 2827 | 2808.7 | 10.57 | 2837 | 2811.73 | 18.95 | 2834 | 2812.4 | 12.84 | 2829 | 2806.13 | 12.85 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2805.6 | 2.7 | 2804 | 2804 | 0 |

Table A.2304: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2810.7 | 14.63 | 2843 | 2814.4 | 14.4 | 2837 | 2814.13 | 15.34 | 2839 | 2813.9 | 12.79 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2815.67 | 11.85 | 2838 | 2817.37 | 9.07 | 2840 | 2812.57 | 12.91 | 2835 | 2811.07 | 12.23 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2831 | 2813.4 | 12.44 | 2835 | 2818.8 | 12.93 | 2835 | 2810.73 | 18.79 | 2844 | 2811.87 | 12.11 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2814.17 | 10.49 | 2838 | 2813.37 | 14.43 | 2832 | 2814.6 | 10.7 | 2842 | 2815.47 | 13.99 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.2305: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2827 | 2813.33 | 10.91 | 2830 | 2810.43 | 15.93 | 2838 | 2810.03 | 16.83 | 2838 | 2809.8 | 16.1 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2828 | 2813.37 | 8.71 | 2829 | 2813.1 | 9.13 | 2846 | 2812.37 | 16.9 | 2845 | 2813.27 | 13.93 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2805.8 | 2.8 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2833 | 2807.73 | 14.14 | 2832 | 2812.53 | 14.3 | 2838 | 2810.37 | 13.69 | 2838 | 2814.4 | 10.51 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806 | 2.88 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2808.77 | 12.38 | 2835 | 2811.57 | 16.53 | 2838 | 2813.83 | 15.64 | 2836 | 2813.47 | 11.78 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2805.4 | 2.58 | 2804 | 2804 | 0 |

Table A.2306: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2836 | 2814.27 | 12.29 | 2837 | 2810.27 | 15.73 | 2838 | 2814.8 | 14.12 | 2837 | 2814.8 | 10.91 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2815.6 | 12.92 | 2840 | 2817.3 | 10.48 | 2840 | 2814.5 | 14.17 | 2843 | 2812.33 | 11.7 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2837 | 2814.9 | 13.12 | 2849 | 2819.43 | 13.17 | 2836 | 2812.9 | 13.4 | 2833 | 2810.93 | 14.23 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2812 | 15.11 | 2838 | 2816.63 | 13.35 | 2842 | 2815.73 | 12.67 | 2838 | 2812.47 | 17.08 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.2307: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2837 | 2810.47 | 16.11 | 2833 | 2807.57 | 17.14 | 2833 | 2813.1 | 12.89 | 2833 | 2809.67 | 15.24 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2809.97 | 15.41 | 2839 | 2811.97 | 14.07 | 2840 | 2811.47 | 11.83 | 2837 | 2811.77 | 12.66 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2836 | 2811.6 | 12.81 | 2842 | 2811.37 | 12.45 | 2839 | 2809.77 | 17.31 | 2835 | 2810.37 | 13.57 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.6 | 1.83 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2836 | 2811.97 | 9.86 | 2838 | 2807.2 | 13.97 | 2836 | 2814.77 | 10.4 | 2847 | 2811.97 | 15.89 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.2308: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2815.53 | 13.98 | 2835 | 2810.2 | 13.56 | 2837 | 2811.47 | 13.81 | 2825 | 2805.8 | 13.12 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2841 | 2814.9 | 13.81 | 2842 | 2815.57 | 14.3 | 2835 | 2805.03 | 15.11 | 2835 | 2814.8 | 11.06 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2835 | 2815.17 | 11.42 | 2838 | 2816.5 | 15.76 | 2835 | 2811.67 | 13.78 | 2842 | 2814.87 | 15.36 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2817.4 | 13.87 | 2838 | 2817.9 | 12.24 | 2834 | 2813.77 | 12.71 | 2845 | 2811.83 | 16.74 |
| | | 2op | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.2309: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2709 | 2682.07 | 13.94 | 2710 | 2683.53 | 14.76 | 2714 | 2686.57 | 14.43 | 2702 | 2680.13 | 14.46 |
| | | 2op | 2700 | 2690.13 | 4.28 | 2698 | 2689.9 | 3.98 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2700 | 2683.37 | 13.28 | 2710 | 2684.37 | 17.53 | 2716 | 2683.37 | 11.39 | 2708 | 2687.77 | 11.23 |
| | | 2op | 2706 | 2690.83 | 5.23 | 2702 | 2695.63 | 3.05 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2683.07 | 12.72 | 2711 | 2685.7 | 15.65 | 2715 | 2687.43 | 14.11 | 2706 | 2684.3 | 10.92 |
| | | 2op | 2697 | 2691.2 | 4.05 | 2700 | 2694.7 | 3.71 | 2699 | 2689.97 | 4.41 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2678.43 | 14.62 | 2713 | 2683.13 | 18.89 | 2710 | 2684.67 | 12.44 | 2710 | 2682.93 | 13.94 |
| | | 2op | 2698 | 2692.1 | 4 | 2702 | 2695.67 | 1.75 | 2698 | 2693.67 | 2.96 | 2687 | 2687 | 0 |

Table A.2310: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2682.97 | 12.42 | 2718 | 2689 | 14.94 | 2705 | 2686.83 | 11.3 | 2709 | 2684.5 | 13.12 |
| | | 2op | 2696 | 2689.9 | 3.9 | 2695 | 2689.47 | 3.43 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2685.5 | 12.61 | 2708 | 2686.47 | 13.01 | 2704 | 2681.97 | 13.66 | 2710 | 2683.67 | 13.6 |
| | | 2op | 2695 | 2690.03 | 3.83 | 2700 | 2693.47 | 3.32 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2712 | 2683.83 | 13.62 | 2700 | 2686.53 | 9.53 | 2705 | 2685.7 | 14.5 | 2709 | 2683.37 | 10.8 |
| | | 2op | 2695 | 2691.03 | 3.93 | 2696 | 2692.47 | 3.08 | 2695 | 2688.27 | 2.52 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2691.03 | 14.01 | 2714 | 2688.93 | 11.62 | 2707 | 2684.8 | 14.25 | 2699 | 2680.3 | 15.67 |
| | | 2op | 2695 | 2691.73 | 3.81 | 2696 | 2694.57 | 1.3 | 2696 | 2692.23 | 2.94 | 2687 | 2687 | 0 |

Table A.2311: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2700 | 2678.9 | 11.61 | 2713 | 2685.23 | 15.38 | 2710 | 2684.07 | 12.28 | 2706 | 2684.17 | 14.9 |
| | | 2op | 2699 | 2690.37 | 4.11 | 2699 | 2690.17 | 4.41 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2684.07 | 11.43 | 2703 | 2683.47 | 10.51 | 2718 | 2683.87 | 12.34 | 2709 | 2682.33 | 14.12 |
| | | 2op | 2698 | 2690.8 | 4.22 | 2706 | 2694.67 | 4.2 | 2698 | 2687.37 | 2.01 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2704 | 2679.5 | 12.68 | 2708 | 2685.97 | 13.7 | 2704 | 2682.23 | 13.35 | 2698 | 2678.97 | 14.18 |
| | | 2op | 2700 | 2691 | 4.5 | 2700 | 2694.47 | 3.23 | 2704 | 2690.27 | 5.03 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2679.27 | 13.84 | 2708 | 2685.97 | 14.42 | 2707 | 2687.6 | 12.16 | 2707 | 2687.33 | 12.29 |
| | | 2op | 2698 | 2691.83 | 4.07 | 2700 | 2695.93 | 1.51 | 2700 | 2693.23 | 4.45 | 2687 | 2687 | 0 |

Table A.2312: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2713 | 2686.9 | 13.85 | 2706 | 2689.37 | 11.14 | 2707 | 2688.2 | 9.3 | 2703 | 2685.03 | 13.53 |
| | | 2op | 2695 | 2689.63 | 3.39 | 2695 | 2689.07 | 3.07 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2685.6 | 11.51 | 2712 | 2693.67 | 11.06 | 2703 | 2686.97 | 12.54 | 2709 | 2682.37 | 13.88 |
| | | 2op | 2695 | 2690.33 | 3.81 | 2696 | 2692.53 | 3 | 2693 | 2687.2 | 1.1 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2709 | 2688 | 11.42 | 2708 | 2685.1 | 11.59 | 2709 | 2683.2 | 15.57 | 2717 | 2685.5 | 16.35 |
| | | 2op | 2695 | 2690.47 | 3.85 | 2695 | 2692.8 | 2.85 | 2695 | 2688.57 | 2.99 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2683.97 | 11.42 | 2712 | 2689.73 | 12.89 | 2705 | 2683 | 11.9 | 2703 | 2684.17 | 16.39 |
| | | 2op | 2695 | 2691.53 | 3.85 | 2695 | 2694.37 | 1.69 | 2696 | 2691.27 | 3.56 | 2687 | 2687 | 0 |

Table A.2313: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2705 | 2678.3 | 11.29 | 2708 | 2684.3 | 13.05 | 2707 | 2687.03 | 11.52 | 2711 | 2689.1 | 16.7 |
| | | 2op | 2700 | 2691.97 | 4.33 | 2700 | 2690.83 | 4.8 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2682.13 | 10.54 | 2706 | 2684.3 | 13.31 | 2706 | 2686.33 | 13.65 | 2711 | 2686.7 | 13 |
| | | 2op | 2698 | 2694.3 | 2.53 | 2698 | 2691.5 | 4.39 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2700 | 2678.97 | 13.47 | 2703 | 2678.63 | 15.27 | 2705 | 2688.47 | 8.96 | 2713 | 2684.53 | 12.4 |
| | | 2op | 2700 | 2694.5 | 3.33 | 2699 | 2694.9 | 2.32 | 2697 | 2687.7 | 2.25 | 2687 | 2687 | 0 |
| | 50 | rnd | 2698 | 2684 | 11.47 | 2708 | 2685.73 | 13.76 | 2715 | 2687.6 | 12.83 | 2716 | 2685.53 | 14.8 |
| | | 2op | 2696 | 2695.07 | 0.25 | 2699 | 2693.37 | 3.45 | 2695 | 2688 | 2.61 | 2687 | 2687 | 0 |

Table A.2314: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2707 | 2689.5 | 10.61 | 2714 | 2690.03 | 11.61 | 2710 | 2684.97 | 14.67 | 2701 | 2682.2 | 15.84 |
| | | 2op | 2695 | 2691.43 | 3.8 | 2695 | 2689.57 | 3.37 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2688.63 | 13.82 | 2708 | 2684.67 | 15.88 | 2703 | 2684.63 | 13.24 | 2711 | 2685.67 | 11.35 |
| | | 2op | 2695 | 2694.13 | 2.45 | 2695 | 2691 | 3.86 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2686.1 | 12.67 | 2705 | 2688.57 | 9.08 | 2711 | 2686.83 | 15.97 | 2709 | 2683.83 | 12.16 |
| | | 2op | 2699 | 2694.43 | 2.91 | 2708 | 2696.2 | 3.74 | 2695 | 2687.53 | 1.76 | 2687 | 2687 | 0 |
| | 50 | rnd | 2709 | 2684.37 | 14.9 | 2702 | 2681.07 | 13.43 | 2710 | 2686.57 | 11.45 | 2713 | 2686.7 | 14.63 |
| | | 2op | 2696 | 2695.13 | 0.35 | 2696 | 2692.2 | 3.53 | 2695 | 2687.63 | 2.04 | 2687 | 2687 | 0 |

Table A.2315: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17870 | 17791.77 | 36.7 | 17886 | 17803 | 34.56 | 17887 | 17788.53 | 47.04 | 17845 | 17779.9 | 44.85 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17906 | 17800.47 | 45 | 17856 | 17799.73 | 35.11 | 17899 | 17799.47 | 35.64 | 17878 | 17785.33 | 46.37 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17899 | 17802.9 | 38.21 | 17871 | 17798.8 | 34.96 | 17866 | 17793.8 | 42.53 | 17860 | 17796.47 | 36.81 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17859 | 17792.17 | 35.18 | 17847 | 17781.93 | 38.19 | 17921 | 17808.7 | 37.78 | 17876 | 17791 | 48.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2316: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17882 | 17786.2 | 42.05 | 17841 | 17796.1 | 32.29 | 17871 | 17789.2 | 39.13 | 17863 | 17792.4 | 41.13 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17871 | 17807.37 | 32.64 | 17878 | 17798.63 | 36.52 | 17877 | 17803.53 | 41.03 | 17855 | 17782.07 | 37.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17857 | 17791.1 | 41.11 | 17876 | 17812.03 | 35.42 | 17834 | 17786.23 | 41.81 | 17848 | 17785.43 | 39.5 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17866 | 17801.43 | 38.79 | 17869 | 17792.57 | 39.73 | 17878 | 17799.2 | 47.72 | 17889 | 17802.93 | 49.79 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2317: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17880 | 17792.03 | 40.22 | 17880 | 17804.97 | 33.95 | 17886 | 17787.7 | 45.68 | 17882 | 17796.63 | 40.29 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17861 | 17798.4 | 33.86 | 17850 | 17798.53 | 31.82 | 17884 | 17790.37 | 44.28 | 17877 | 17796.9 | 45.64 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17897 | 17797.2 | 39.64 | 17861 | 17796.23 | 35.58 | 17866 | 17793.8 | 41.1 | 17863 | 17800.83 | 36.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17921 | 17803.57 | 41.35 | 17876 | 17793.77 | 44.69 | 17866 | 17783 | 44.78 | 17893 | 17808.33 | 41.73 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2318: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17844 | 17790.5 | 29.01 | 17910 | 17801.73 | 44 | 17880 | 17794.73 | 46.31 | 17887 | 17806.9 | 31.33 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17886 | 17803.37 | 36.65 | 17879 | 17804.57 | 36.42 | 17882 | 17815.67 | 30.07 | 17843 | 17789.63 | 32.32 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17925 | 17797.07 | 41.17 | 17868 | 17797 | 43.42 | 17887 | 17792.33 | 47.55 | 17868 | 17796.07 | 36.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17853 | 17796.63 | 33.31 | 17861 | 17801.5 | 33.06 | 17898 | 17808.4 | 30.79 | 17833 | 17792.77 | 34.09 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2319: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17853 | 17797.6 | 40.81 | 17877 | 17789.93 | 35.25 | 17843 | 17788.17 | 32.32 | 17862 | 17793.07 | 43.34 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17868 | 17797.23 | 44.88 | 17883 | 17806.77 | 36.28 | 17866 | 17800.07 | 29.95 | 17881 | 17793.03 | 46.05 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17841 | 17789.63 | 38.56 | 17834 | 17782.23 | 31.52 | 17904 | 17785.93 | 43.57 | 17883 | 17795.3 | 43.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17899 | 17797.63 | 44.4 | 17851 | 17800.33 | 31.84 | 17861 | 17803.53 | 32.55 | 17872 | 17798.73 | 37.59 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2320: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17879 | 17798.03 | 37.31 | 17899 | 17790.47 | 53.04 | 17880 | 17790.57 | 40.15 | 17866 | 17795.7 | 37.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17865 | 17800.37 | 27.98 | 17859 | 17809.8 | 30.08 | 17901 | 17814.67 | 40.25 | 17888 | 17806.53 | 43.87 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17865 | 17804.77 | 32.95 | 17862 | 17802.3 | 27.88 | 17849 | 17797 | 36.03 | 17906 | 17810.43 | 39.77 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17836 | 17782.27 | 32.19 | 17874 | 17789.47 | 36.63 | 17853 | 17790.17 | 31.19 | 17867 | 17801.9 | 37.22 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2321: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22166 | 22068.7 | 38.72 | 22124 | 22045.63 | 51.44 | 22139 | 22066.67 | 39.99 | 22154 | 22049.23 | 46.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22063.8 | 53.57 | 22180 | 22076.07 | 47.99 | 22141 | 22059.43 | 50.97 | 22129 | 22064.27 | 35.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22138 | 22068.4 | 38.27 | 22178 | 22072.13 | 52.6 | 22133 | 22064.53 | 40.4 | 22123 | 22064.33 | 41.55 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22175 | 22065.27 | 54.99 | 22162 | 22065.77 | 38.94 | 22146 | 22061.5 | 42.27 | 22171 | 22066.8 | 48.14 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2322: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22138 | 22071.3 | 45.43 | 22170 | 22064.8 | 43.43 | 22183 | 22056.63 | 48.21 | 22133 | 22060.53 | 36.71 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22167 | 22082.27 | 39.56 | 22143 | 22070.47 | 43.39 | 22161 | 22075.33 | 47.57 | 22170 | 22080.4 | 39.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22164 | 22082 | 51.82 | 22146 | 22066.33 | 34.85 | 22170 | 22065.7 | 44.12 | 22193 | 22066.6 | 54.18 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22069.23 | 43.42 | 22143 | 22057.6 | 48.01 | 22139 | 22065.53 | 46.61 | 22202 | 22084.37 | 46.51 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2323: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22163 | 22078.77 | 47.16 | 22160 | 22080.27 | 45.12 | 22130 | 22050 | 42.62 | 22133 | 22053.47 | 42.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22162 | 22057 | 46.54 | 22134 | 22058.33 | 42.67 | 22148 | 22055.83 | 45.7 | 22135 | 22063.97 | 41.79 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22192 | 22068.07 | 47.16 | 22155 | 22073.33 | 51.26 | 22146 | 22065.43 | 42.14 | 22154 | 22061.8 | 50.3 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22148 | 22064.6 | 43.2 | 22160 | 22058.07 | 45.14 | 22168 | 22067.17 | 35.91 | 22168 | 22071.2 | 43.66 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2324: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22140 | 22059.03 | 36.75 | 22184 | 22082.97 | 46.58 | 22146 | 22057.5 | 46.54 | 22145 | 22065.43 | 42.4 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22141 | 22068.53 | 46.9 | 22145 | 22060.7 | 37.7 | 22155 | 22067.73 | 51.82 | 22161 | 22070.83 | 43.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22144 | 22071.83 | 43.05 | 22157 | 22073.23 | 43.72 | 22183 | 22055.93 | 44.98 | 22144 | 22067.37 | 43.53 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22120 | 22066.67 | 35.27 | 22136 | 22065.27 | 45.87 | 22143 | 22047 | 58.62 | 22155 | 22060.2 | 46.45 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2325: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22164 | 22058.03 | 51.71 | 22155 | 22063.5 | 43.82 | 22137 | 22065.53 | 38.39 | 22220 | 22069 | 53.22 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22136 | 22061.77 | 35.82 | 22128 | 22063.03 | 44.63 | 22176 | 22077.53 | 40.82 | 22157 | 22060.33 | 47.29 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22142 | 22076.33 | 44.3 | 22158 | 22068.6 | 49.43 | 22182 | 22087.17 | 43.58 | 22146 | 22066.73 | 47.13 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22128 | 22042.77 | 54.62 | 22169 | 22065.13 | 39.38 | 22176 | 22065.6 | 46.62 | 22148 | 22060.73 | 48.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2326: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22178 | 22084.53 | 48.81 | 22150 | 22075.37 | 52.84 | 22203 | 22078.03 | 50.14 | 22133 | 22049.13 | 43.7 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22163 | 22065.93 | 48.08 | 22153 | 22060.87 | 52.35 | 22130 | 22048.6 | 45.97 | 22128 | 22056.87 | 47.98 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22199 | 22068.6 | 47.82 | 22199 | 22068.6 | 47.82 | 22143 | 22067.33 | 44.74 | 22200 | 22068.97 | 60.78 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22155 | 22076.93 | 44.65 | 22155 | 22078.97 | 42.31 | 22154 | 22072.8 | 43.81 | 22166 | 22062.43 | 45.63 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2327: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24735 | 24674.03 | 43.38 | 24731 | 24659.37 | 49.11 | 24762 | 24667.8 | 51.36 | 24741 | 24671.9 | 43.3 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24651.7 | 60.03 | 24775 | 24656.33 | 39.57 | 24732 | 24663.2 | 40.92 | 24764 | 24683.3 | 43.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24808 | 24662.53 | 65.95 | 24731 | 24665.37 | 34.7 | 24790 | 24681.97 | 49.91 | 24747 | 24658.4 | 48.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24742 | 24655.17 | 49.91 | 24767 | 24664.9 | 48.45 | 24754 | 24658.63 | 51.39 | 24746 | 24671.27 | 47.59 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2328: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24737 | 24662.73 | 44.97 | 24747 | 24639.5 | 56.87 | 24752 | 24672.57 | 49.29 | 24776 | 24660.43 | 50.57 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24759 | 24667.47 | 51.05 | 24771 | 24656.47 | 51.22 | 24728 | 24664.8 | 39.58 | 24747 | 24655.83 | 41.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24673.73 | 50.69 | 24791 | 24669.97 | 50.42 | 24744 | 24664.77 | 52.91 | 24746 | 24655.37 | 44.26 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24777 | 24664.43 | 53.11 | 24746 | 24674.87 | 36.95 | 24795 | 24653.17 | 57.01 | 24746 | 24653.8 | 46.42 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2329: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24753 | 24667.9 | 54.58 | 24771 | 24682.13 | 50.59 | 24762 | 24668.57 | 53.11 | 24784 | 24665.27 | 51.19 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24729 | 24661.23 | 40.52 | 24744 | 24670.93 | 41.89 | 24788 | 24661.23 | 48.81 | 24754 | 24669.67 | 41.53 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24747 | 24667.6 | 49.15 | 24788 | 24678.7 | 46.57 | 24781 | 24663.57 | 53.57 | 24734 | 24666.8 | 46.16 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24745 | 24664.7 | 49.48 | 24811 | 24683.17 | 62.38 | 24812 | 24659 | 53.61 | 24736 | 24649.9 | 41.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2330: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24770 | 24680.73 | 38.89 | 24744 | 24665.7 | 55.27 | 24752 | 24660.63 | 59.78 | 24772 | 24673.63 | 46.01 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24752 | 24663.53 | 50.09 | 24727 | 24665.1 | 38.52 | 24771 | 24647.43 | 62.5 | 24778 | 24664.53 | 54.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24763 | 24674.6 | 47.46 | 24770 | 24665.4 | 53.88 | 24800 | 24659.97 | 49.22 | 24746 | 24662 | 54.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24775 | 24683.23 | 49.99 | 24730 | 24671.83 | 38.58 | 24767 | 24679.8 | 42.61 | 24760 | 24675.63 | 53.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2331: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24809 | 24674.27 | 43.08 | 24787 | 24666.63 | 43.53 | 24750 | 24659.13 | 57.33 | 24796 | 24681.93 | 53.35 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24727 | 24646.43 | 41.62 | 24742 | 24662.17 | 45.47 | 24771 | 24656.37 | 59.25 | 24750 | 24666.93 | 45.65 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24778 | 24664.87 | 53.45 | 24755 | 24674.7 | 51.6 | 24775 | 24657.97 | 49.92 | 24729 | 24642.2 | 48.06 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24749 | 24661.1 | 46 | 24778 | 24668.43 | 44.53 | 24791 | 24672.3 | 52.43 | 24757 | 24665.63 | 49.5 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2332: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24757 | 24675.83 | 47.13 | 24732 | 24657.53 | 41.06 | 24720 | 24640.67 | 46.92 | 24754 | 24657.37 | 43.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24739 | 24651.23 | 53.09 | 24732 | 24652.4 | 45.58 | 24759 | 24657.27 | 56.2 | 24751 | 24675.67 | 32.95 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24672.13 | 54.39 | 24782 | 24672.13 | 54.39 | 24766 | 24673.33 | 52.29 | 24797 | 24667.97 | 61.86 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24674.3 | 41.95 | 24754 | 24674.3 | 41.95 | 24757 | 24650.8 | 53.14 | 24734 | 24661.07 | 34.91 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2333: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48003 | 47857.47 | 99.4 | 47998 | 47840.37 | 91 | 47965 | 47832.73 | 69.6 | 47964 | 47815.27 | 76.6 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47997 | 47846.03 | 83.05 | 47970 | 47854.77 | 63.47 | 47983 | 47837.47 | 66.1 | 47994 | 47866.53 | 59.53 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 47959 | 47815.17 | 67.55 | 47973 | 47863.53 | 67.3 | 48090 | 47831.73 | 108.29 | 47999 | 47810 | 102.62 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48012 | 47852.37 | 88.23 | 48002 | 47834.47 | 75.25 | 47957 | 47856.5 | 71.38 | 47979 | 47846.3 | 79.58 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2334: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47970 | 47857.6 | 61.56 | 47974 | 47860.57 | 83.4 | 47985 | 47841.37 | 83.33 | 48016 | 47857.93 | 80.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48057 | 47894.67 | 84.9 | 47986 | 47856.03 | 77.18 | 48017 | 47836 | 76.2 | 48025 | 47848.67 | 70.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48067 | 47877.27 | 70.49 | 48067 | 47868.37 | 89.96 | 47960 | 47867.07 | 67.08 | 48024 | 47849.87 | 72.61 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47865.43 | 71.56 | 48096 | 47840.37 | 97.09 | 48030 | 47855.27 | 79.85 | 48029 | 47847.23 | 90.2 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2335: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47993 | 47850.57 | 75.47 | 48010 | 47877.1 | 74.91 | 48003 | 47828.13 | 114.68 | 48041 | 47867.13 | 74.19 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47982 | 47856.47 | 81.14 | 48081 | 47850.5 | 73.37 | 48033 | 47860.53 | 87.26 | 47993 | 47858.43 | 86.78 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48059 | 47876 | 88.89 | 47978 | 47843.5 | 76.05 | 47970 | 47867 | 63.03 | 47996 | 47857.13 | 84.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48016 | 47851.97 | 74.44 | 47948 | 47848.83 | 67.03 | 48029 | 47825.8 | 63.68 | 48027 | 47845.27 | 96.44 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2336: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48033 | 47858.03 | 76.76 | 48077 | 47848.13 | 100.18 | 47967 | 47832.2 | 79.98 | 47971 | 47849.3 | 83.01 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48000 | 47861.3 | 84.69 | 48025 | 47861.37 | 72.3 | 48032 | 47823.83 | 101.51 | 48043 | 47863.1 | 87.03 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48051 | 47907.73 | 77.27 | 47993 | 47864.2 | 76.6 | 47960 | 47831.37 | 75.98 | 48098 | 47871.6 | 92.92 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48021 | 47851.93 | 80.68 | 47990 | 47861.6 | 68.72 | 47940 | 47824.3 | 60.56 | 47979 | 47849.33 | 73.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2337: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48067 | 47865.93 | 79.66 | 47977 | 47860.63 | 76.74 | 47978 | 47866.5 | 67.57 | 47976 | 47854.8 | 59.08 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47965 | 47854.07 | 64.58 | 47957 | 47855.57 | 70.13 | 48090 | 47887.67 | 82.34 | 47966 | 47838.6 | 63.15 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48092 | 47864.67 | 79.98 | 48092 | 47864.67 | 79.98 | 48112 | 47844.97 | 110.85 | 47945 | 47840.17 | 60.56 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47995 | 47860.03 | 93.25 | 47990 | 47844.83 | 80.31 | 48015 | 47871.93 | 64.9 | 48039 | 47866.63 | 91.73 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2338: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48002 | 47844.03 | 68.81 | 48002 | 47844.03 | 68.81 | 47998 | 47865.57 | 70.59 | 48008 | 47838.6 | 81.28 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47964 | 47864.73 | 63.01 | 47964 | 47864.73 | 63.01 | 47983 | 47848.3 | 68.07 | 47998 | 47858.77 | 61.59 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48035 | 47861 | 70.01 | 48035 | 47861 | 70.01 | 47962 | 47856.27 | 61.44 | 47942 | 47832.03 | 60.48 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47841.27 | 77.04 | 48042 | 47841.27 | 77.04 | 47976 | 47809.13 | 85.75 | 47991 | 47810.1 | 89.97 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2339: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56093 | 55893.87 | 103.21 | 56148 | 55945 | 80.61 | 56182 | 55942.17 | 98.7 | 56047 | 55916.13 | 85 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56152 | 55916 | 105.66 | 56131 | 55959.53 | 72.93 | 56110 | 55936.77 | 76.84 | 56051 | 55898.37 | 77.95 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56065 | 55928.83 | 83.98 | 56104 | 55955.53 | 72.05 | 56120 | 55945.33 | 80.11 | 56077 | 55903.77 | 83.29 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56030 | 55909.7 | 59.99 | 56057 | 55941.67 | 87.74 | 56083 | 55909.87 | 72.49 | 56168 | 55943.4 | 116.23 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2340: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56133 | 55944.5 | 86.47 | 56108 | 55940.9 | 94.81 | 56055 | 55922.33 | 79.46 | 56131 | 55911.13 | 113.25 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56124 | 55930.8 | 81.75 | 56130 | 55927.27 | 102.67 | 56098 | 55902.5 | 89.02 | 56205 | 55937.6 | 104.6 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56100 | 55935.07 | 82.69 | 56086 | 55939.1 | 83.46 | 56147 | 55900.13 | 85.57 | 56088 | 55925.9 | 71.94 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56151 | 55970.2 | 79.4 | 56144 | 55959.33 | 88.91 | 56105 | 55913.97 | 85.75 | 56045 | 55929.27 | 67.48 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2341: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56139 | 55909.33 | 104.41 | 56107 | 55949.2 | 80.46 | 56020 | 55898.47 | 69.87 | 56155 | 55955.43 | 91.27 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56114 | 55947.03 | 86.19 | 56147 | 55923.97 | 84.33 | 56086 | 55908.3 | 84.58 | 55996 | 55914.43 | 64.7 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56108 | 55933.53 | 89.43 | 56092 | 55926.57 | 82.01 | 56091 | 55914.23 | 75.41 | 56109 | 55929.4 | 102.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56120 | 55946.63 | 82.67 | 56170 | 55908.63 | 89.4 | 56083 | 55945.7 | 60.2 | 56137 | 55959.2 | 78.54 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2342: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56168 | 55962.37 | 104.1 | 56088 | 55941.73 | 88.05 | 56080 | 55927.8 | 74.91 | 56125 | 55936.5 | 96.18 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56172 | 55960.07 | 92.73 | 56066 | 55931.37 | 76.16 | 56083 | 55955.5 | 81.91 | 56029 | 55916 | 87.14 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56099 | 55953.03 | 78.58 | 56098 | 55965 | 83.41 | 56168 | 55952.97 | 96.98 | 56068 | 55935.03 | 84.74 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56099 | 55933.73 | 76.18 | 56177 | 55936 | 89.32 | 56073 | 55933.33 | 80.87 | 56092 | 55925.3 | 73.22 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2343: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56143 | 55942.57 | 98.83 | 56139 | 55931.73 | 78.41 | 56100 | 55948.57 | 85.87 | 56075 | 55925.97 | 87.59 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56069 | 55937.1 | 100.55 | 56076 | 55938.93 | 75.2 | 56077 | 55947.6 | 69.34 | 56159 | 55938.77 | 86.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56059 | 55947.2 | 70.21 | 56059 | 55947.2 | 70.21 | 56060 | 55940.7 | 70.49 | 56136 | 55945.4 | 84.8 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56146 | 55944 | 88.23 | 56146 | 55942.13 | 75.78 | 56175 | 55940 | 97.49 | 56091 | 55929.03 | 98.32 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2344: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56123 | 55919.67 | 87.96 | 56123 | 55919.67 | 87.96 | 56129 | 55913.2 | 84.72 | 56070 | 55951.27 | 71.9 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56195 | 55923.87 | 111.28 | 56195 | 55923.87 | 111.28 | 56103 | 55914.03 | 84.23 | 56053 | 55928.33 | 69.87 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56193 | 55940.7 | 96.72 | 56193 | 55940.7 | 96.72 | 56091 | 55940.33 | 90.3 | 56061 | 55941.63 | 69.33 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56062 | 55915.77 | 74.41 | 56062 | 55915.77 | 74.41 | 56074 | 55928.83 | 69.66 | 56115 | 55956.57 | 79.61 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2345: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

**Results With Post Optimization and No Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47328 | 47223.07 | 62.12 | 47343 | 47206.77 | 61.74 | 47394 | 47211.87 | 80.39 | 47344 | 47225.17 | 77.3 |
| | | 2op | 47367 | 47307.3 | 29.62 | 47359 | 47280.23 | 21.13 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47337 | 47228.8 | 72.62 | 47443 | 47284.9 | 62.51 | 47336 | 47210.63 | 75.73 | 47321 | 47177.3 | 66.83 |
| | | 2op | 47399 | 47329.33 | 29.56 | 47368 | 47305 | 30 | 47325 | 47275.7 | 9.31 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47345 | 47230.7 | 74.53 | 47421 | 47308.03 | 53 | 47338 | 47206.13 | 72.12 | 47341 | 47208.73 | 87.12 |
| | | 2op | 47395 | 47316.93 | 33.89 | 47412 | 47335.6 | 37.79 | 47365 | 47279.37 | 20.61 | 47274 | 47274 | 0 |
| | 50 | rnd | 47322 | 47245.77 | 62.29 | 47442 | 47333.13 | 56.8 | 47386 | 47245.73 | 69.47 | 47359 | 47243.27 | 86.58 |
| | | 2op | 47401 | 47322.47 | 30.49 | 47430 | 47364.13 | 27.05 | 47344 | 47276.33 | 12.78 | 47274 | 47274 | 0 |

Table A.2346: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47367 | 47151.6 | 112.31 | 47343 | 47133.33 | 141.44 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47367 | 47307.3 | 29.62 | 47359 | 47280.23 | 21.13 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47313 | 47137 | 108.53 | 47457 | 47211.37 | 113.48 | 47325 | 47273.73 | 14.48 | 47274 | 47274 | 0 |
| | | 2op | 47399 | 47329.33 | 29.56 | 47368 | 47305 | 30 | 47325 | 47275.7 | 9.31 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47360 | 47217.77 | 101.45 | 47437 | 47288.87 | 78.89 | 47392 | 47165.53 | 111.05 | 47274 | 47274 | 0 |
| | | 2op | 47395 | 47316.93 | 33.89 | 47412 | 47335.6 | 37.79 | 47365 | 47279.37 | 20.61 | 47274 | 47274 | 0 |
| | 50 | rnd | 47342 | 47214.43 | 89.46 | 47497 | 47325.77 | 88.15 | 47358 | 47168.6 | 106.91 | 47274 | 47274 | 0 |
| | | 2op | 47401 | 47322.47 | 30.49 | 47430 | 47364.13 | 27.05 | 47344 | 47276.33 | 12.78 | 47274 | 47274 | 0 |

Table A.2347: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47329 | 47207.83 | 66.03 | 47344 | 47241.63 | 67.08 | 47365 | 47205.9 | 76.91 | 47429 | 47206.93 | 96.41 |
| | | 2op | 47390 | 47319.7 | 34 | 47360 | 47283.57 | 22.98 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47397 | 47227.57 | 51.81 | 47416 | 47268.07 | 77 | 47345 | 47172.8 | 89.31 | 47310 | 47174.8 | 86.64 |
| | | 2op | 47398 | 47334.07 | 34.58 | 47398 | 47314.33 | 38.84 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47336 | 47248.33 | 61.89 | 47388 | 47310.8 | 47.3 | 47340 | 47203.67 | 70.03 | 47356 | 47180.4 | 112.18 |
| | | 2op | 47377 | 47307.37 | 32.86 | 47414 | 47340.7 | 32.72 | 47357 | 47276.77 | 15.15 | 47274 | 47274 | 0 |
| | 50 | rnd | 47386 | 47252.1 | 59.59 | 47401 | 47337.93 | 43.3 | 47402 | 47253.6 | 67.49 | 47409 | 47242 | 77.51 |
| | | 2op | 47408 | 47322.27 | 35.97 | 47426 | 47366 | 25 | 47359 | 47283.93 | 22.75 | 47274 | 47274 | 0 |

Table A.2348: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47359 | 47179.6 | 104.28 | 47318 | 47126.23 | 117.36 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | | 2op | 47390 | 47319.7 | 34 | 47360 | 47283.57 | 22.98 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47354 | 47158.13 | 115.22 | 47427 | 47180.97 | 116.18 | 47274 | 47253.6 | 67.1 | 47274 | 47274 | 0 |
| | | 2op | 47398 | 47334.07 | 34.58 | 47398 | 47314.33 | 38.84 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47332 | 47202.9 | 89.83 | 47422 | 47280.5 | 75.52 | 47348 | 47170.33 | 91.64 | 47274 | 47274 | 0 |
| | | 2op | 47377 | 47307.37 | 32.86 | 47414 | 47340.7 | 32.72 | 47357 | 47276.77 | 15.15 | 47274 | 47274 | 0 |
| | 50 | rnd | 47322 | 47190.9 | 103.69 | 47484 | 47355.17 | 76.06 | 47369 | 47148.1 | 134.14 | 47274 | 47271.8 | 12.05 |
| | | 2op | 47408 | 47322.27 | 35.97 | 47426 | 47366 | 25 | 47359 | 47283.93 | 22.75 | 47274 | 47274 | 0 |

Table A.2349: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47320 | 47218.1 | 55.34 | 47355 | 47220.3 | 69.19 | 47354 | 47209.63 | 74.77 | 47362 | 47197.83 | 71.68 |
| | | 2op | 47371 | 47320.73 | 25.6 | 47366 | 47300.37 | 30.57 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47312 | 47240.9 | 47.77 | 47374 | 47220.6 | 66.15 | 47328 | 47223.47 | 65.37 | 47330 | 47211.03 | 88.71 |
| | | 2op | 47407 | 47336.87 | 31.21 | 47401 | 47315.2 | 35.65 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47368 | 47237.47 | 67.51 | 47394 | 47262.5 | 68 | 47320 | 47183.97 | 72.58 | 47399 | 47213.5 | 87.51 |
| | | 2op | 47396 | 47339.3 | 24.28 | 47401 | 47338.33 | 31.56 | 47313 | 47275.3 | 7.12 | 47274 | 47274 | 0 |
| | 50 | rnd | 47452 | 47308.57 | 58.84 | 47412 | 47300.4 | 67.26 | 47353 | 47243.83 | 70.32 | 47304 | 47183.93 | 91.43 |
| | | 2op | 47427 | 47345.1 | 29.65 | 47436 | 47345.37 | 44.07 | 47290 | 47274.53 | 2.92 | 47274 | 47274 | 0 |

Table A.2350: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47381 | 47230.13 | 96.13 | 47330 | 47182.23 | 108.84 | 47274 | 47265.97 | 44 | 47274 | 47274 | 0 |
| | | 2op | 47371 | 47320.73 | 25.6 | 47366 | 47301.17 | 30.17 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| | 50 | rnd | 47433 | 47252.27 | 82.69 | 47387 | 47236.5 | 81.8 | 47274 | 47252.83 | 55.15 | 47274 | 47274 | 0 |
| | | 2op | 47407 | 47336.87 | 31.21 | 47401 | 47315.2 | 35.65 | 47274 | 47274 | 0 | 47274 | 47274 | 0 |
| 51 | 20 | rnd | 47374 | 47291.77 | 53.36 | 47372 | 47280.27 | 52.95 | 47419 | 47240.6 | 95.12 | 47274 | 47274 | 0 |
| | | 2op | 47390 | 47341.07 | 25.94 | 47408 | 47337.87 | 30.87 | 47313 | 47275.3 | 7.12 | 47274 | 47274 | 0 |
| | 50 | rnd | 47417 | 47315.9 | 48.49 | 47474 | 47303.2 | 64.41 | 47367 | 47204.63 | 82.47 | 47274 | 47274 | 0 |
| | | 2op | 47443 | 47348.3 | 36.4 | 47436 | 47334.73 | 40.48 | 47290 | 47274.53 | 2.92 | 47274 | 47274 | 0 |

Table A.2351: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151322 | 151152.63 | 125.35 | 151271 | 151147.33 | 116.02 | 151231 | 151110.33 | 160.91 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151169.1 | 51.02 | 151291 | 151166.2 | 60.73 | 151255 | 151124.43 | 146.59 | 151171 | 151150.7 | 3.83 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151279 | 151120.77 | 125.61 | 151216 | 151149.03 | 53.11 | 151291 | 151149.17 | 112.13 | 151228 | 151151.3 | 21.59 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151249 | 151138.93 | 45.97 | 151229 | 151160.2 | 48.91 | 151279 | 151161.67 | 53.54 | 151215 | 151086.2 | 177.9 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2352: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151224 | 150938.63 | 309.59 | 151256 | 151153.53 | 19.35 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151210 | 150973.53 | 253.6 | 151249 | 151037.9 | 283.29 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151244 | 150990.97 | 295.72 | 151249 | 150918.53 | 355.02 | 151150 | 151147.2 | 15.34 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151254 | 151102.93 | 177.62 | 151295 | 151061.53 | 238.86 | 151227 | 151117.5 | 117.12 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2353: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151288 | 151139.57 | 118.36 | 151260 | 151139.43 | 113.88 | 151220 | 151145.6 | 28.64 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151272 | 151151.3 | 47.2 | 151237 | 151156.8 | 51.07 | 151226 | 151121.77 | 149.72 | 151150 | 151149.8 | 1.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151262 | 151142.3 | 117.27 | 151293 | 151153.13 | 64.68 | 151229 | 151087.33 | 184.83 | 151259 | 151153 | 34.39 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151236 | 151140.43 | 47.58 | 151249 | 151160.63 | 43.71 | 151273 | 151173.67 | 47.23 | 151223 | 151125.5 | 110.01 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2354: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151275 | 151065.8 | 202.88 | 151245 | 151128.6 | 108.42 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151220 | 150989.1 | 280.14 | 151267 | 151039.07 | 309.08 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151280 | 151023.7 | 289.64 | 151306 | 151071 | 235.96 | 151170 | 151129.17 | 117.94 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151233 | 151044.47 | 209.06 | 151237 | 151052.37 | 266.35 | 151172 | 151046.43 | 256.19 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2355: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151241 | 151159.63 | 44.85 | 151263 | 151159.03 | 49.54 | 151228 | 151133.9 | 107.77 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151165.7 | 46.99 | 151217 | 151126.1 | 104.71 | 151297 | 151119.27 | 178.83 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151240 | 151146.23 | 49.16 | 151245 | 151157.07 | 45.82 | 151256 | 151169.07 | 57.18 | 151150 | 151149.27 | 4.02 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151299 | 151167.47 | 51.98 | 151259 | 151159.23 | 58.32 | 151222 | 151151.7 | 43.52 | 151295 | 151147.47 | 38.1 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2356: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151265 | 151124.2 | 156.37 | 151255 | 151095.3 | 202.53 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151266 | 151083.4 | 283.29 | 151227 | 150968.7 | 306.24 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| 51 | 20 | rnd | 151290 | 151109.23 | 210.85 | 151290 | 151112.23 | 210.97 | 151249 | 151105.17 | 170.81 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |
| | 50 | rnd | 151228 | 151081.07 | 207.51 | 151235 | 151076.93 | 207.62 | 151266 | 151093.37 | 218.88 | 151150 | 151150 | 0 |
| | | 2op | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 | 151150 | 151150 | 0 |

Table A.2357: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167325 | 166955.17 | 205.51 | 167284 | 166868.83 | 248.66 | 167320 | 166836.37 | 259.86 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167309 | 166965.7 | 180.76 | 167416 | 167042.27 | 237.21 | 167304 | 166918.57 | 180.5 | 167256 | 166586.87 | 187.24 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167332 | 166960.43 | 228.42 | 167331 | 167031.3 | 182.67 | 167335 | 166817.03 | 263.63 | 167127 | 166653.47 | 228.62 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167363 | 166965.77 | 172.33 | 167351 | 167124.5 | 175.11 | 167282 | 166869.1 | 247.93 | 167235 | 166857.63 | 212.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2358: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167083 | 166465.67 | 294.78 | 166879 | 166513.23 | 271.97 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166980 | 166376 | 300.81 | 166903 | 166410.9 | 325.13 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167096 | 166520.43 | 344.98 | 166930 | 166509.13 | 287.68 | 166880 | 166536.73 | 153.41 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166921 | 166505.13 | 307.56 | 166768 | 166518.6 | 227.41 | 166911 | 166501.33 | 291.39 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2359: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167387 | 166917.97 | 218.43 | 167216 | 166874.57 | 199.53 | 167287 | 166731.03 | 229.52 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167403 | 166940.03 | 232.47 | 167337 | 166942.97 | 216.17 | 167350 | 166823.83 | 198.99 | 167018 | 166578.4 | 143.63 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167395 | 166992.37 | 185.38 | 167318 | 167002.63 | 203.72 | 167292 | 166878.47 | 208.76 | 167126 | 166740 | 227.78 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167314 | 166955.27 | 193.81 | 167404 | 167183.33 | 141.43 | 167284 | 166907.6 | 217.01 | 167156 | 166867.97 | 194.35 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2360: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166930 | 166544.23 | 300.66 | 166749 | 166470.63 | 256.37 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166976 | 166466.13 | 344.2 | 166876 | 166408 | 317.92 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 166952 | 166532.33 | 267.19 | 166967 | 166482.87 | 267.92 | 166751 | 166491.67 | 152.46 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 166964 | 166578.67 | 336.85 | 167015 | 166527.3 | 314.2 | 166894 | 166541.67 | 217.32 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2361: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167318 | 167006.8 | 203.65 | 167301 | 166973.4 | 193.54 | 167368 | 166960.43 | 219.45 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167360 | 167025 | 183.2 | 167395 | 167012.03 | 227 | 167321 | 166876.83 | 170.75 | 166815 | 166529.83 | 53.86 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167330 | 167008.57 | 155.69 | 167315 | 167009.43 | 169.14 | 167234 | 166925.63 | 200.5 | 166974 | 166549.3 | 111.57 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167373 | 167032.73 | 199.07 | 167413 | 167015.2 | 192.34 | 167363 | 166940.4 | 227.5 | 167245 | 166841.43 | 222.73 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2362: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166934 | 166528.37 | 295.43 | 166921 | 166517.4 | 318.91 | 166773 | 166526.6 | 49.18 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167029 | 166545.23 | 326.64 | 166862 | 166544.97 | 217.39 | 166929 | 166544.03 | 81.85 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| 51 | 20 | rnd | 167068 | 166723.37 | 199.72 | 167124 | 166727.47 | 199.16 | 167149 | 166739.63 | 193.94 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |
| | 50 | rnd | 167016 | 166713.73 | 187.05 | 167016 | 166715.1 | 187.35 | 166922 | 166696.03 | 179.51 | 166520 | 166520 | 0 |
| | | 2op | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 | 166520 | 166520 | 0 |

Table A.2363: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163162 | 162964 | 82.69 | 163168 | 162983 | 90.22 | 163195 | 162993.23 | 89.87 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163191 | 162980.97 | 85.15 | 163085 | 162956.7 | 69.52 | 163112 | 162984.5 | 79.44 | 163118 | 162973.13 | 71.26 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163151 | 162984.43 | 88.72 | 163150 | 163015.8 | 69.48 | 163093 | 162972.6 | 73.01 | 163182 | 162988.37 | 71.15 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163078 | 162971.73 | 65.78 | 163073 | 162981.23 | 66.59 | 163126 | 162949.43 | 92.28 | 163120 | 162980.43 | 70.72 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2364: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163097 | 162964.47 | 81.77 | 163080 | 162929.63 | 89.01 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163171 | 162939.33 | 118.26 | 163114 | 162934.1 | 84.08 | 163089 | 162980.57 | 50.75 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163106 | 162983.1 | 75.81 | 163120 | 162955.2 | 111.5 | 163086 | 162917.43 | 101.17 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163129 | 162970.5 | 111.37 | 163141 | 162953.2 | 108.07 | 163177 | 162928.1 | 105.23 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2365: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163148 | 162965.5 | 68.67 | 163119 | 162971.9 | 75.51 | 163068 | 162973.47 | 45.34 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163098 | 162965.7 | 64.09 | 163095 | 162948 | 70.81 | 163100 | 162993.53 | 71.77 | 163083 | 162990.17 | 29.74 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163099 | 162990.73 | 76.52 | 163182 | 162995.73 | 73.74 | 163133 | 162968.67 | 70.55 | 163083 | 162969.97 | 56.31 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163155 | 162973.47 | 112.53 | 163103 | 162966.57 | 94.87 | 163093 | 162941.97 | 80.95 | 163116 | 162976.83 | 80.34 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2366: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163070 | 162932.63 | 94.57 | 163100 | 162920.9 | 117.33 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163067 | 162925.13 | 113.67 | 163068 | 162937.23 | 102.08 | 163082 | 162960.2 | 81.58 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163120 | 162971.23 | 65.97 | 163085 | 162952.1 | 71.66 | 163092 | 162950.57 | 71.54 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162945.23 | 109.16 | 163167 | 162943.3 | 86.03 | 163075 | 162940.57 | 108.62 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2367: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163134 | 162978.3 | 80.52 | 163117 | 162984.67 | 79.61 | 163118 | 162947.5 | 78.29 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163124 | 162973.1 | 87.98 | 163093 | 162997.8 | 56.61 | 163144 | 162984.17 | 77.96 | 163065 | 162961.67 | 114.09 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163161 | 162984.13 | 75.67 | 163133 | 162975.77 | 66.1 | 163154 | 162991.3 | 82.11 | 163104 | 162981.7 | 36.81 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163118 | 162985.87 | 71.3 | 163108 | 162979.93 | 91.08 | 163143 | 162997.37 | 64.08 | 163177 | 162976.97 | 111.1 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2368: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163047 | 162938.13 | 99.39 | 163116 | 162950.73 | 91.84 | 163056 | 162912.03 | 86.1 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163075 | 162970.9 | 64.49 | 163101 | 162944.57 | 78.29 | 163081 | 162948.13 | 78.24 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| 51 | 20 | rnd | 163043 | 162914.07 | 85.06 | 163043 | 162914.07 | 85.06 | 163047 | 162929.43 | 100.07 | 162988 | 162988 | 0 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |
| | 50 | rnd | 163150 | 162967.63 | 89 | 163150 | 162967.63 | 89 | 163144 | 162920.8 | 93.27 | 162995 | 162986.37 | 10.35 |
| | | 2op | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 | 162988 | 162988 | 0 |

Table A.2369: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179884 | 179702.27 | 91.18 | 179868 | 179681.67 | 88.27 | 179865 | 179629.23 | 78.58 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179973 | 179737.87 | 97.25 | 179892 | 179717.17 | 94.65 | 179862 | 179682.43 | 102.86 | 179822 | 179620.43 | 44.13 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179881 | 179721.77 | 85.33 | 179893 | 179678.23 | 111.08 | 179921 | 179699.43 | 100.01 | 179866 | 179653 | 86.12 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179846 | 179703.67 | 74.2 | 179961 | 179702.6 | 121.55 | 179869 | 179711.2 | 73.49 | 179975 | 179703.97 | 96.23 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2370: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179812 | 179677.5 | 88.01 | 179815 | 179690.97 | 76.49 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179878 | 179699.8 | 92.46 | 179860 | 179671.17 | 101.55 | 179839 | 179625.2 | 78.25 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179922 | 179737.67 | 99.98 | 179841 | 179684.13 | 97.48 | 179856 | 179686.1 | 79.61 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179874 | 179707.1 | 86.07 | 179970 | 179709.27 | 120.48 | 179901 | 179686.87 | 90.38 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2371: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179865 | 179702.3 | 101.36 | 179891 | 179687.47 | 96.02 | 179937 | 179673.83 | 102.83 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179885 | 179702.5 | 87.81 | 179920 | 179702.07 | 87.97 | 179898 | 179707.27 | 87.84 | 179734 | 179615.7 | 53.58 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179913 | 179738.73 | 87.62 | 179952 | 179730.4 | 92.83 | 180023 | 179712.1 | 102.42 | 179785 | 179645.03 | 55.96 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179949 | 179706.1 | 104.97 | 179836 | 179674.03 | 89.98 | 179931 | 179711.4 | 82.88 | 179932 | 179705.83 | 98.77 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2372: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179843 | 179698.07 | 83.7 | 179907 | 179688.4 | 91.56 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179870 | 179732.7 | 74.4 | 179892 | 179698.73 | 85 | 179872 | 179655.6 | 71.1 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179927 | 179724.2 | 85.27 | 179900 | 179686.1 | 111.9 | 179888 | 179681.8 | 86.82 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179833 | 179681.07 | 92.49 | 179848 | 179702.13 | 84.07 | 179920 | 179682.33 | 85.62 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2373: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179831 | 179719 | 80.84 | 179996 | 179707.37 | 90.83 | 179910 | 179710.17 | 85.27 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179854 | 179739.67 | 62.47 | 179911 | 179696.83 | 124.46 | 179854 | 179703.67 | 89.17 | 179759 | 179612.07 | 27.75 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179843 | 179709.4 | 89.13 | 179841 | 179686.77 | 81.47 | 179959 | 179708.97 | 82.57 | 179733 | 179613.83 | 26.73 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179845 | 179687.6 | 85.28 | 179877 | 179694.7 | 102.34 | 179952 | 179712.87 | 103.4 | 179879 | 179657.97 | 76.54 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2374: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179816 | 179685.17 | 86.78 | 179882 | 179677.47 | 89.57 | 179828 | 179676.57 | 87.56 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179901 | 179693.7 | 103.67 | 179958 | 179710.83 | 110.59 | 179872 | 179665.33 | 94.3 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| 51 | 20 | rnd | 179879 | 179695.03 | 85.52 | 179879 | 179695.03 | 85.52 | 179858 | 179678.13 | 98.57 | 179607 | 179607 | 0 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |
| | 50 | rnd | 179916 | 179710.17 | 93.31 | 179916 | 179710.17 | 93.31 | 179827 | 179686.13 | 90.2 | 179642 | 179609.13 | 8.16 |
| | | 2op | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 | 179607 | 179607 | 0 |

Table A.2375: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343123 | 342867.97 | 134.26 | 343158 | 342851.93 | 215.75 | 343012 | 342805.37 | 114.07 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343171 | 342878.6 | 134.05 | 343131 | 342833.07 | 243.58 | 343099 | 342755.8 | 290.48 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343011 | 342846 | 122.13 | 343203 | 342882.63 | 168.5 | 343022 | 342814.7 | 173.26 | 342915 | 342771.93 | 34.32 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343120 | 342896.7 | 96.94 | 343118 | 342872.3 | 137.17 | 343084 | 342881.3 | 179.5 | 343110 | 342726.5 | 234.13 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2376: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343090 | 342627.93 | 408.14 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343130 | 342584.93 | 446.18 | 342835 | 342694.9 | 241.36 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343107 | 342631.63 | 402.65 | 343032 | 342629.67 | 374.91 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342996 | 342643.97 | 288.44 | 343092 | 342626.77 | 384.89 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2377: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343109 | 342870 | 117.2 | 343163 | 342796.17 | 306.15 | 343051 | 342799.57 | 106.84 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343100 | 342903.2 | 107.83 | 343049 | 342828.03 | 216.63 | 343173 | 342797.07 | 225.63 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343049 | 342871.6 | 102.32 | 343156 | 342873.77 | 154.27 | 343126 | 342818.87 | 208.11 | 343007 | 342786.9 | 66 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343181 | 342884.13 | 133.46 | 343066 | 342787.4 | 276.02 | 343136 | 342845.23 | 256.17 | 343090 | 342820 | 223.44 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2378: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343093 | 342585.37 | 392.07 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343091 | 342580.7 | 393.26 | 342861 | 342717.93 | 190.04 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343064 | 342596.8 | 428.76 | 343168 | 342543.17 | 452.8 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343111 | 342806 | 235.38 | 343034 | 342764.27 | 252.67 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2379: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343125 | 342898.8 | 104.66 | 343129 | 342886.23 | 152.23 | 343091 | 342732.27 | 283.51 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343147 | 342945.97 | 91.11 | 343169 | 342926.93 | 94.31 | 343118 | 342760.43 | 244.79 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343118 | 342905 | 141.81 | 343092 | 342881.43 | 154.54 | 343208 | 342836.2 | 264.59 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343114 | 342874.8 | 108.34 | 343126 | 342884.17 | 100.63 | 343089 | 342893.83 | 133.37 | 342936 | 342760.27 | 70.6 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2380: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343140 | 342504.6 | 458.31 | 343140 | 342511.6 | 464.4 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 342994 | 342546.4 | 432.62 | 342994 | 342524.03 | 428.31 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| 51 | 20 | rnd | 343079 | 342748.17 | 305.22 | 343079 | 342748.17 | 305.22 | 343067 | 342714.33 | 229.44 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |
| | 50 | rnd | 343074 | 342683 | 321.63 | 343074 | 342683 | 321.63 | 343073 | 342567.6 | 373.35 | 342763 | 342763 | 0 |
| | | 2op | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 | 342763 | 342763 | 0 |

Table A.2381: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226223 | 225146.3 | 706.13 | 226756 | 225249.67 | 895.19 | 226217 | 224996.4 | 643.26 | 226451 | 225242.47 | 790.03 |
| | | 2op | 226435 | 225692.5 | 250.67 | 226609 | 225591.47 | 226.61 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226629 | 224966.53 | 876.61 | 226304 | 225159.87 | 611.93 | 226616 | 225261.5 | 622.12 | 227086 | 225248.2 | 898.4 |
| | | 2op | 226415 | 225765.93 | 282.23 | 226281 | 225709.87 | 276.35 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226717 | 225011.93 | 778.71 | 226523 | 225191.5 | 604.25 | 226529 | 225150.3 | 700.12 | 226476 | 225048.53 | 676.18 |
| | | 2op | 226364 | 225742.3 | 325.1 | 226698 | 226053.63 | 403.4 | 226370 | 225592.23 | 228.89 | 225517 | 225517 | 0 |
| | 50 | rnd | 226542 | 225019.7 | 902.9 | 227430 | 225435.2 | 834.72 | 226510 | 225319.83 | 825 | 226693 | 225005.33 | 850.79 |
| | | 2op | 226768 | 225740.7 | 388.93 | 226610 | 226198.87 | 228.9 | 226537 | 225579.07 | 284.59 | 225517 | 225517 | 0 |

Table A.2382: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226996 | 225740.83 | 705.6 | 226669 | 225473.03 | 675.88 | 226732 | 225243.57 | 791.22 | 226468 | 225211 | 738.34 |
| | | 2op | 226683 | 225923.1 | 377.65 | 226713 | 225731.23 | 397.41 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227332 | 225759.27 | 640.3 | 226934 | 225628.8 | 684.19 | 226798 | 225190.73 | 780.58 | 227269 | 225514.2 | 941.39 |
| | | 2op | 226563 | 225917.97 | 345.71 | 226891 | 225834.47 | 448.71 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226940 | 225933.47 | 610.29 | 227481 | 225965 | 618.34 | 226681 | 225172.17 | 836.09 | 226622 | 225269.9 | 790.65 |
| | | 2op | 226875 | 225828.8 | 362.86 | 226750 | 226117.4 | 363.06 | 226212 | 225560.93 | 167.46 | 225517 | 225517 | 0 |
| | 50 | rnd | 226941 | 225835.17 | 568.15 | 227096 | 226134.87 | 616.76 | 226906 | 225320.6 | 723.96 | 226606 | 225125.97 | 887.35 |
| | | 2op | 226787 | 225978.47 | 320.93 | 226647 | 226165.17 | 220 | 226317 | 225583.57 | 205.49 | 225517 | 225517 | 0 |

Table A.2383: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226793 | 225139.63 | 1001.81 | 226537 | 225078.2 | 852.16 | 227010 | 225286.23 | 869.92 | 226654 | 225032 | 824.1 |
| | | 2op | 226736 | 225879.97 | 351.65 | 226291 | 225677.63 | 264.55 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226635 | 225297.83 | 592.26 | 226531 | 225231.33 | 670.52 | 227570 | 225494.2 | 831.67 | 226312 | 224948.63 | 929.61 |
| | | 2op | 226844 | 225861.63 | 326.95 | 226879 | 225775.93 | 391.87 | 226233 | 225540.87 | 130.72 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226733 | 225230.2 | 829.31 | 226558 | 225145.87 | 625.6 | 227135 | 225109.67 | 734.67 | 226609 | 224999.33 | 851.49 |
| | | 2op | 226624 | 225759.37 | 343.29 | 226690 | 225967.23 | 363.35 | 226840 | 225565.07 | 241.63 | 225517 | 225517 | 0 |
| | 50 | rnd | 226840 | 225052.83 | 919.62 | 226399 | 225157.37 | 848.99 | 226733 | 225232.13 | 824.8 | 226723 | 225197.03 | 752.23 |
| | | 2op | 226314 | 225776.33 | 291.33 | 226599 | 226212.7 | 236.64 | 226512 | 225692.87 | 304.03 | 225517 | 225517 | 0 |

Table A.2384: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226800 | 225920.87 | 598.13 | 226883 | 225637.63 | 643.67 | 226884 | 225486.57 | 681.11 | 226456 | 225038.6 | 690.35 |
| | | 2op | 226795 | 225918.5 | 404.95 | 226691 | 225629.57 | 314.95 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227185 | 225638.7 | 727.17 | 226792 | 225441.43 | 906.66 | 226874 | 225221.33 | 865.92 | 226134 | 225097.23 | 671.09 |
| | | 2op | 226542 | 225848.17 | 313.02 | 226623 | 225711.13 | 328.73 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 226995 | 225844.63 | 645.26 | 226955 | 225913.83 | 733.8 | 227383 | 225342.3 | 658.96 | 226387 | 224877.07 | 969.09 |
| | | 2op | 226691 | 225927.23 | 374.45 | 226691 | 226024.83 | 386.61 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227188 | 225838.83 | 796.39 | 227309 | 226324.43 | 525.01 | 227057 | 225484.07 | 832.05 | 226633 | 225154.33 | 873.97 |
| | | 2op | 226217 | 225780.7 | 262.57 | 227141 | 226211 | 246.11 | 226789 | 225608.03 | 293.46 | 225517 | 225517 | 0 |

Table A.2385: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226265 | 225139.13 | 907.65 | 226527 | 225163.07 | 818.68 | 226664 | 225134.2 | 705.25 | 226698 | 224937.13 | 928.79 |
| | | 2op | 226619 | 225921.17 | 361.33 | 226611 | 225848.3 | 399.77 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 226916 | 225157.43 | 794.01 | 226946 | 225065.6 | 977.93 | 226991 | 225203.4 | 759.85 | 226308 | 225023.83 | 788.33 |
| | | 2op | 226297 | 225872.63 | 313.82 | 226824 | 225974.77 | 345.74 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 227180 | 225186.4 | 1068 | 226555 | 225430.23 | 678.3 | 226484 | 225193.8 | 721.83 | 226480 | 225165.97 | 649.12 |
| | | 2op | 226887 | 226087.6 | 377 | 226887 | 226109.17 | 372.31 | 226601 | 225643.23 | 286.56 | 225517 | 225517 | 0 |
| | 50 | rnd | 227229 | 225319.93 | 826.71 | 226886 | 225123.2 | 1034.48 | 226318 | 224949.2 | 814.2 | 226531 | 225310.23 | 714.46 |
| | | 2op | 226424 | 225893.7 | 323.94 | 226404 | 225992.37 | 282.95 | 226181 | 225632.73 | 237.05 | 225517 | 225517 | 0 |

Table A.2386: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226720 | 225878.6 | 624.73 | 227184 | 225632.07 | 769.49 | 226376 | 225252.13 | 637.37 | 226380 | 225086.17 | 767.64 |
| | | 2op | 226540 | 225912.63 | 394.07 | 226504 | 225831.3 | 392.91 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| | 50 | rnd | 227396 | 225942.73 | 657.86 | 226745 | 225734.5 | 636.99 | 226885 | 225224.7 | 760.07 | 226501 | 225059.43 | 923.67 |
| | | 2op | 226902 | 226036.7 | 330.64 | 226902 | 225962.53 | 361.27 | 225517 | 225517 | 0 | 225517 | 225517 | 0 |
| 51 | 20 | rnd | 227245 | 226027.97 | 587.97 | 227044 | 225950.6 | 537.92 | 226836 | 225491.23 | 661.73 | 226772 | 225165.97 | 702.34 |
| | | 2op | 226912 | 226229.83 | 352.59 | 226912 | 226190.63 | 338.16 | 226671 | 225590.73 | 280.88 | 225517 | 225517 | 0 |
| | 50 | rnd | 227521 | 226158.47 | 648.17 | 227082 | 225969.1 | 670.63 | 226785 | 225325.3 | 769.89 | 226709 | 225336.23 | 651.35 |
| | | 2op | 226628 | 226179.2 | 201.25 | 227025 | 226234.4 | 324.28 | 226758 | 225603.5 | 277.92 | 225517 | 225517 | 0 |

Table A.2387: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440918 | 438629 | 1318.13 | 441469 | 438664.9 | 1332.21 | 442079 | 438477.23 | 1231.64 | 441312 | 438675.77 | 1234.51 |
| | | 2op | 438680 | 437898.77 | 407.68 | 438642 | 437497 | 284.6 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440961 | 438194.43 | 1246.16 | 440185 | 438430.83 | 1093.63 | 440555 | 438831.67 | 1175.19 | 440145 | 438339.8 | 1030.8 |
| | | 2op | 438887 | 437776.27 | 381.84 | 438278 | 437560.6 | 288.92 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 440731 | 438155.2 | 1211.97 | 440331 | 437968.07 | 1240.61 | 440297 | 438560.2 | 1280.21 | 440544 | 438110.77 | 1305.49 |
| | | 2op | 438599 | 437765.77 | 375.07 | 438735 | 437604.47 | 363.02 | 437775 | 437410.57 | 68.83 | 437398 | 437398 | 0 |
| | 50 | rnd | 440419 | 438128 | 1275.49 | 441245 | 438556.2 | 1341.44 | 440917 | 438656.43 | 1118.17 | 441191 | 438825.5 | 1259.97 |
| | | 2op | 438507 | 437879.73 | 308.96 | 439035 | 437880.13 | 425.06 | 438297 | 437455.4 | 218.67 | 437398 | 437398 | 0 |

Table A.2388: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441370 | 439335.23 | 1230.34 | 441125 | 438779.9 | 1096.1 | 440394 | 438436.23 | 1329.59 | 440646 | 438355.07 | 1545.38 |
| | | 2op | 438680 | 437898.77 | 407.68 | 438642 | 437497 | 284.6 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 442903 | 439955.4 | 1265.9 | 440792 | 438878.2 | 959.15 | 440614 | 438473.77 | 1252.12 | 440874 | 438311.43 | 1338.47 |
| | | 2op | 438887 | 437776.27 | 381.84 | 438278 | 437560.6 | 288.92 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441278 | 438950.1 | 1307.56 | 441913 | 439226.23 | 1063.16 | 440790 | 438396.57 | 1013.73 | 440361 | 438273.67 | 1262.72 |
| | | 2op | 438599 | 437765.77 | 375.07 | 438735 | 437604.47 | 363.02 | 437775 | 437410.57 | 68.83 | 437398 | 437398 | 0 |
| | 50 | rnd | 441176 | 439177 | 1153.94 | 442548 | 439821.53 | 1189.61 | 440536 | 438812.77 | 1141.29 | 440197 | 438220.8 | 1002.45 |
| | | 2op | 438507 | 437879.73 | 308.96 | 439035 | 437880.13 | 425.06 | 438297 | 437455.4 | 218.67 | 437398 | 437398 | 0 |

Table A.2389: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441351 | 438668.23 | 1013.9 | 440984 | 438451.27 | 1320.04 | 440118 | 437911.5 | 1366.12 | 440021 | 438344.5 | 1234.66 |
| | | 2op | 438989 | 437979.8 | 477.85 | 438417 | 437454.47 | 219.59 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440850 | 438402.37 | 1208 | 441680 | 438671.1 | 1321.64 | 441063 | 438393.83 | 1376.42 | 440051 | 437912.63 | 1163.38 |
| | | 2op | 438962 | 438031.43 | 425.33 | 438971 | 437554.67 | 387.13 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441685 | 438500.1 | 1376.79 | 440565 | 438375.43 | 1277.26 | 440377 | 438126.37 | 1154.28 | 440247 | 437981.77 | 1429.8 |
| | | 2op | 438548 | 437765.37 | 382.13 | 439390 | 437702.33 | 490.22 | 438357 | 437429.97 | 175.09 | 437398 | 437398 | 0 |
| | 50 | rnd | 441622 | 438744.37 | 1111.44 | 440908 | 438393.37 | 1245.36 | 441200 | 438677.77 | 1105.43 | 439938 | 437871.27 | 1325.81 |
| | | 2op | 438576 | 437859.53 | 307.65 | 438527 | 437628.3 | 339.94 | 437825 | 437412.23 | 77.96 | 437398 | 437398 | 0 |

Table A.2390: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441987 | 439523.83 | 1220.36 | 441030 | 438698.9 | 1362.33 | 440863 | 438490.27 | 1225.79 | 440676 | 438381.8 | 1197.4 |
| | | 2op | 438989 | 437979.8 | 477.85 | 438417 | 437454.47 | 219.59 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441798 | 439196.53 | 1173.04 | 441734 | 438967.27 | 1059.51 | 440772 | 438543.47 | 1177.38 | 440469 | 438434.07 | 989.61 |
| | | 2op | 438962 | 438031.43 | 425.33 | 438971 | 437554.67 | 387.13 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441210 | 439664.73 | 1041.71 | 441840 | 439125.57 | 1346.13 | 441451 | 438988.47 | 1308.57 | 440889 | 438600.53 | 1244.5 |
| | | 2op | 438548 | 437765.37 | 382.13 | 439390 | 437702.33 | 490.22 | 438357 | 437429.97 | 175.09 | 437398 | 437398 | 0 |
| | 50 | rnd | 442246 | 439762.23 | 1183.1 | 441668 | 440032.73 | 1047.09 | 441119 | 438730.87 | 1253.88 | 440396 | 438418.2 | 1077.26 |
| | | 2op | 438576 | 437859.53 | 307.65 | 438527 | 437628.3 | 339.94 | 437825 | 437412.23 | 77.96 | 437398 | 437398 | 0 |

Table A.2391: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 440597 | 438306.7 | 1310.83 | 440494 | 438604.3 | 967.29 | 441978 | 438503.93 | 1117.13 | 440304 | 437982.37 | 1291.64 |
| | | 2op | 438481 | 437936.3 | 316.67 | 438481 | 437751.67 | 340.4 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 440755 | 438672.93 | 1195.54 | 441008 | 438401.87 | 1613.41 | 441365 | 438503.73 | 1436.87 | 441129 | 438344.37 | 1304.22 |
| | | 2op | 438750 | 438070.27 | 360.37 | 438533 | 437920.2 | 356.93 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 441182 | 438845.6 | 1329.26 | 441231 | 438923.9 | 1363.58 | 440925 | 438557.57 | 1344.76 | 440166 | 438301.8 | 929.55 |
| | | 2op | 439240 | 437945.6 | 372.02 | 438664 | 437881.3 | 306.67 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441432 | 438879.67 | 1199.45 | 441432 | 438542.83 | 1513.11 | 441429 | 438650.3 | 1323.07 | 440472 | 438328.1 | 1180.34 |
| | | 2op | 438806 | 437967.03 | 330.47 | 438989 | 437950.27 | 369.01 | 438193 | 437440 | 165.61 | 437398 | 437398 | 0 |

Table A.2392: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441543 | 439510.7 | 1251.26 | 441407 | 439517.77 | 1319.53 | 441532 | 438532.9 | 1635.93 | 441010 | 438329.03 | 1551.12 |
| | | 2op | 438481 | 437936.3 | 316.67 | 438481 | 437751.67 | 340.4 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441310 | 439445.43 | 1034.3 | 441648 | 439456.83 | 1116.93 | 440169 | 438402.27 | 1285.38 | 440042 | 438236.13 | 1041.71 |
| | | 2op | 438750 | 438070.27 | 360.37 | 438533 | 437920.2 | 356.93 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| 51 | 20 | rnd | 442452 | 439947.1 | 1117.44 | 442439 | 439924.13 | 1098.58 | 441367 | 438398.27 | 1556.03 | 440312 | 438623.57 | 1300.69 |
| | | 2op | 439695 | 438061.97 | 536.42 | 439695 | 437995.03 | 504.24 | 437398 | 437398 | 0 | 437398 | 437398 | 0 |
| | 50 | rnd | 441900 | 439537 | 1200.92 | 441900 | 439545.57 | 1121.74 | 441712 | 439339.63 | 1160.32 | 440590 | 438385.07 | 1244.08 |
| | | 2op | 440178 | 438143.67 | 637.83 | 439642 | 438110.93 | 598.66 | 438193 | 437440 | 165.61 | 437398 | 437398 | 0 |

Table A.2393: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115876 | 114810.13 | 502.7 | 115553 | 114666.33 | 450.23 | 116248 | 114811.33 | 564.26 | 115420 | 114584.37 | 517.36 |
| | | 2op | 116327 | 115525.47 | 221.84 | 115802 | 115485.33 | 151.71 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 115431 | 114772.17 | 426.02 | 115621 | 114661.17 | 423.71 | 115768 | 114871.47 | 532.51 | 115601 | 114849.4 | 560.44 |
| | | 2op | 115767 | 115456.6 | 186.34 | 116023 | 115537.6 | 200.88 | 115547 | 115501.8 | 72.39 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115953 | 114741.63 | 638.13 | 115653 | 114806.33 | 595.07 | 115619 | 114648.23 | 488.37 | 115930 | 114819.53 | 502.83 |
| | | 2op | 115633 | 115437.33 | 123.2 | 115893 | 115570.1 | 177.56 | 115633 | 115411.53 | 142.09 | 115514 | 115514 | 0 |
| | 50 | rnd | 115690 | 114774.6 | 475.75 | 115446 | 114751.17 | 456.26 | 115654 | 114830.5 | 497.95 | 115717 | 114705.07 | 560.4 |
| | | 2op | 115803 | 115507.73 | 142.89 | 116424 | 115750 | 237.71 | 115858 | 115508.63 | 147.62 | 115514 | 115514 | 0 |

Table A.2394: *j02459_7*: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115847 | 115144.17 | 452.49 | 115993 | 114966.17 | 455.82 | 115744 | 114827.03 | 664.09 | 115808 | 114876.57 | 555.67 |
| | | 2op | 116264 | 115651.47 | 169.45 | 115760 | 115544.7 | 58.64 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116082 | 115246.43 | 484.48 | 116255 | 115543.77 | 456.64 | 116177 | 114927.83 | 594.07 | 115754 | 114670.17 | 543.26 |
| | | 2op | 115956 | 115612.3 | 114.35 | 116049 | 115674.1 | 182.68 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115893 | 115069.53 | 527.66 | 116373 | 115382.3 | 480.39 | 115957 | 115001.77 | 553.59 | 115753 | 114843.43 | 563.73 |
| | | 2op | 116023 | 115649.67 | 155.73 | 116406 | 115895.97 | 174.43 | 115639 | 115524.9 | 33.51 | 115514 | 115514 | 0 |
| | 50 | rnd | 116164 | 115122.8 | 542.66 | 116516 | 115670.27 | 478.33 | 116084 | 115020.03 | 486.64 | 115490 | 114664.33 | 445.38 |
| | | 2op | 115990 | 115640.97 | 116.61 | 116348 | 115999.6 | 149.36 | 115819 | 115559.27 | 90.85 | 115514 | 115514 | 0 |

Table A.2395: *j02459_7*: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115650 | 114856.67 | 517.37 | 115592 | 114918.4 | 501.3 | 115774 | 114999.83 | 392.1 | 115283 | 114585.63 | 557.15 |
| | | 2op | 115647 | 115496.53 | 132.75 | 115690 | 115491.97 | 110.25 | 115514 | 115510.53 | 18.99 | 115514 | 115514 | 0 |
| | 50 | rnd | 115678 | 114754.07 | 457.41 | 115604 | 114849.77 | 502.5 | 115742 | 114600.03 | 499.21 | 115724 | 114705.97 | 525.73 |
| | | 2op | 116039 | 115483.67 | 209.74 | 116035 | 115553.33 | 242.13 | 115670 | 115509.27 | 79.91 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 115911 | 114890.87 | 587.04 | 115907 | 114797.63 | 577.49 | 115503 | 114763.7 | 509.22 | 116175 | 114743.03 | 640.99 |
| | | 2op | 115933 | 115472.4 | 181.3 | 116399 | 115691.43 | 283.42 | 115654 | 115493.9 | 105.78 | 115514 | 115514 | 0 |
| | 50 | rnd | 115862 | 114884.67 | 534.74 | 115233 | 114636.3 | 490.59 | 115908 | 114864.9 | 572.34 | 115851 | 114823.7 | 513.33 |
| | | 2op | 116025 | 115445.3 | 202.6 | 116438 | 115787.1 | 169.6 | 116023 | 115499.03 | 162.76 | 115514 | 115514 | 0 |

Table A.2396: *j02459_7*: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115961 | 115251.23 | 465.95 | 116014 | 114912.7 | 524.44 | 115976 | 114843.4 | 494.71 | 115737 | 114668.2 | 426.4 |
| | | 2op | 115952 | 115616.1 | 121.5 | 115998 | 115558.23 | 115.55 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116064 | 115341.33 | 424.47 | 115908 | 115136.5 | 465.82 | 115983 | 114721.67 | 579.85 | 115778 | 114784.53 | 549.5 |
| | | 2op | 116123 | 115657.5 | 161.98 | 115933 | 115589.03 | 120.34 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116155 | 115259.57 | 551.41 | 116131 | 115432.9 | 459.62 | 116014 | 115115.3 | 627.35 | 115713 | 114743.93 | 547.53 |
| | | 2op | 115970 | 115645.97 | 140.12 | 116166 | 115861.17 | 179.95 | 115790 | 115526.8 | 53.47 | 115514 | 115514 | 0 |
| | 50 | rnd | 116188 | 115253.73 | 506.75 | 116551 | 115688.13 | 428.58 | 116026 | 115164.53 | 446.61 | 115847 | 114743.63 | 463.18 |
| | | 2op | 116021 | 115607.63 | 139.56 | 116197 | 115998.43 | 105.36 | 115636 | 115535.63 | 39.77 | 115514 | 115514 | 0 |

Table A.2397: *j*02459_7: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115900 | 114934.47 | 402.5 | 116164 | 114929.4 | 571.79 | 115381 | 114658.13 | 463.67 | 115460 | 114632.77 | 620.94 |
| | | 2op | 116308 | 115501.6 | 213.26 | 115993 | 115474.5 | 180.22 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116054 | 114898.67 | 469.94 | 116031 | 114621.17 | 615.14 | 115831 | 114763.43 | 480.57 | 115837 | 114792.47 | 608.15 |
| | | 2op | 116067 | 115508.5 | 236 | 116004 | 115497.63 | 212.65 | 115514 | 115510.93 | 11.72 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116113 | 115265.23 | 406.89 | 116142 | 115329.8 | 492.6 | 115365 | 114724.63 | 473.9 | 115856 | 114623.7 | 539.41 |
| | | 2op | 116089 | 115675.23 | 265.95 | 116373 | 115698.33 | 348.96 | 116077 | 115469.37 | 180.16 | 115514 | 115514 | 0 |
| | 50 | rnd | 116175 | 115398.37 | 539.16 | 116164 | 115364.5 | 429.88 | 115592 | 114641.5 | 534.9 | 115604 | 114842.9 | 548.75 |
| | | 2op | 116176 | 115823.83 | 242.1 | 116176 | 115711.83 | 289.05 | 115645 | 115487.77 | 81.48 | 115514 | 115514 | 0 |

Table A.2398: *j*02459_7: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 116122 | 115105.17 | 451.19 | 116233 | 115344.93 | 490.87 | 115682 | 114727.33 | 433.13 | 115682 | 114816.4 | 533.12 |
| | | 2op | 116502 | 115710.9 | 267.42 | 116502 | 115686 | 230.38 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| | 50 | rnd | 116051 | 115201.9 | 390.26 | 115952 | 115290.17 | 425.89 | 115645 | 114961.23 | 392.1 | 115617 | 114781.03 | 453.88 |
| | | 2op | 116034 | 115691.03 | 167.72 | 115990 | 115649.07 | 137.37 | 115514 | 115514 | 0 | 115514 | 115514 | 0 |
| 51 | 20 | rnd | 116075 | 115397.3 | 397.81 | 116044 | 115392.9 | 386.29 | 115990 | 115108.07 | 516.83 | 115913 | 114669.37 | 709.08 |
| | | 2op | 116460 | 115742.13 | 283.51 | 116450 | 115750.13 | 277.64 | 116132 | 115534.6 | 112.83 | 115514 | 115514 | 0 |
| | 50 | rnd | 116141 | 115389.13 | 344.09 | 116389 | 115479.93 | 461.81 | 116207 | 115222.77 | 574.03 | 116174 | 114855.43 | 727.06 |
| | | 2op | 116471 | 115948.57 | 307.04 | 116455 | 115910.17 | 320.67 | 115795 | 115539.17 | 67.86 | 115514 | 115514 | 0 |

Table A.2399: *j*02459_7: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38492 | 38181.7 | 174.35 | 38482 | 38151.33 | 220.5 | 38581 | 38256.53 | 240.69 | 38531 | 38211.8 | 225.03 |
| | | 2op | 38423 | 38356.63 | 71.86 | 38437 | 38410.57 | 8.83 | 38557 | 38305.23 | 109.24 | 38224 | 38224 | 0 |
| | 50 | rnd | 38559 | 38177.03 | 217.62 | 38527 | 38169.83 | 229.28 | 38580 | 38145.57 | 279.67 | 38588 | 38197.73 | 176.85 |
| | | 2op | 38415 | 38385.83 | 42.63 | 38442 | 38424.57 | 14.6 | 38524 | 38401.57 | 39.38 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38566 | 38280.63 | 196.7 | 38579 | 38297.23 | 175.48 | 38615 | 38220.33 | 249.36 | 38580 | 38151.07 | 275.96 |
| | | 2op | 38418 | 38380.13 | 55.48 | 38442 | 38424.87 | 14.38 | 38418 | 38403.77 | 10.63 | 38409 | 38259.93 | 73.25 |
| | 50 | rnd | 38681 | 38291.27 | 175.6 | 38656 | 38360.9 | 193.31 | 38677 | 38202.77 | 223.89 | 38542 | 38224.7 | 201.97 |
| | | 2op | 38440 | 38386.93 | 42.63 | 38442 | 38431.2 | 13.65 | 38529 | 38411.7 | 23.79 | 38519 | 38324.87 | 92.83 |

Table A.2400: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38650 | 38374.8 | 131.44 | 38683 | 38356 | 120.77 | 38593 | 38220.43 | 162.4 | 38526 | 38147.33 | 234.82 |
| | | 2op | 38442 | 38361.93 | 72.29 | 38442 | 38411.73 | 10.5 | 38557 | 38305.23 | 109.24 | 38224 | 38224 | 0 |
| | 50 | rnd | 38585 | 38357.93 | 151.71 | 38699 | 38434.53 | 148.35 | 38548 | 38313.5 | 154.56 | 38534 | 38166.03 | 215.66 |
| | | 2op | 38420 | 38384.37 | 44.3 | 38442 | 38424.7 | 14.74 | 38524 | 38401.57 | 39.38 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38572 | 38270.6 | 193.9 | 38648 | 38424.87 | 116.99 | 38642 | 38377.23 | 178.6 | 38586 | 38258.33 | 229.55 |
| | | 2op | 38437 | 38387.33 | 58.92 | 38472 | 38432.63 | 14.75 | 38418 | 38403.87 | 10.74 | 38409 | 38259.93 | 73.25 |
| | 50 | rnd | 38579 | 38326.77 | 176.62 | 38634 | 38405.8 | 154.94 | 38662 | 38430.53 | 146.84 | 38638 | 38244.97 | 198.63 |
| | | 2op | 38442 | 38373.77 | 61.05 | 38529 | 38440.1 | 19.69 | 38529 | 38409.8 | 23.9 | 38519 | 38324.87 | 92.83 |

Table A.2401: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38658 | 38232.1 | 192.45 | 38647 | 38221.33 | 209.93 | 38567 | 38128.33 | 284.34 | 38686 | 38216.17 | 224.51 |
| | | 2op | 38413 | 38366 | 68.07 | 38441 | 38412.87 | 13.73 | 38441 | 38271.2 | 80.57 | 38224 | 38224 | 0 |
| | 50 | rnd | 38485 | 38125.9 | 236.6 | 38649 | 38198.93 | 234.3 | 38563 | 38228.93 | 232.99 | 38619 | 38200.03 | 248.5 |
| | | 2op | 38413 | 38368.3 | 65.65 | 38442 | 38420.2 | 13.72 | 38524 | 38397.07 | 37.54 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38584 | 38254.63 | 233.02 | 38629 | 38346.73 | 208.63 | 38567 | 38177.2 | 222.68 | 38486 | 38199.9 | 182.12 |
| | | 2op | 38436 | 38375.93 | 61.48 | 38442 | 38420.63 | 13.49 | 38432 | 38405.97 | 13.59 | 38411 | 38253.03 | 66.24 |
| | 50 | rnd | 38657 | 38302.53 | 216.36 | 38601 | 38338.27 | 165.07 | 38539 | 38183 | 231.85 | 38633 | 38182 | 226.91 |
| | | 2op | 38414 | 38371.17 | 59.94 | 38442 | 38429.7 | 11.93 | 38437 | 38412.03 | 14.01 | 38530 | 38312.9 | 101.16 |

Table A.2402: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38662 | 38327.07 | 169.46 | 38690 | 38423.23 | 160.36 | 38664 | 38245.27 | 207.07 | 38537 | 38174.77 | 228.22 |
| | | 2op | 38413 | 38366 | 68.07 | 38441 | 38412.87 | 13.73 | 38441 | 38271.2 | 80.57 | 38224 | 38224 | 0 |
| | 50 | rnd | 38569 | 38264.8 | 182.89 | 38659 | 38442 | 129.52 | 38644 | 38322.47 | 174.19 | 38518 | 38177.9 | 242.61 |
| | | 2op | 38413 | 38368.3 | 65.65 | 38445 | 38421.23 | 14.39 | 38524 | 38397.07 | 37.54 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38612 | 38326.67 | 180.44 | 38586 | 38426.07 | 116.53 | 38594 | 38344.73 | 188.11 | 38546 | 38122.67 | 249.77 |
| | | 2op | 38440 | 38390.17 | 59.55 | 38446 | 38433.03 | 12.51 | 38432 | 38407.5 | 13.14 | 38411 | 38253.03 | 66.24 |
| | 50 | rnd | 38572 | 38334.33 | 143.74 | 38666 | 38410.6 | 130.7 | 38636 | 38389.07 | 134.22 | 38492 | 38227.13 | 197.37 |
| | | 2op | 38445 | 38377.6 | 65.92 | 38504 | 38440.07 | 16.59 | 38437 | 38413.77 | 13.48 | 38530 | 38312.9 | 101.16 |

Table A.2403: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38650 | 38377.53 | 192.77 | 38573 | 38274.07 | 222.5 | 38634 | 38120 | 245.46 | 38612 | 38185.97 | 238.01 |
| | | 2op | 38425 | 38405.3 | 8.32 | 38425 | 38405.2 | 8.93 | 38436 | 38296.5 | 90.8 | 38224 | 38224 | 0 |
| | 50 | rnd | 38690 | 38365 | 169.54 | 38647 | 38302.93 | 205.03 | 38535 | 38181.13 | 200.91 | 38571 | 38214.37 | 238.86 |
| | | 2op | 38437 | 38407.23 | 8.73 | 38430 | 38405.03 | 9.02 | 38427 | 38333.67 | 85.76 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38641 | 38379.7 | 142.09 | 38579 | 38414.23 | 112.95 | 38677 | 38297 | 251.16 | 38553 | 38152.83 | 229.71 |
| | | 2op | 38442 | 38420.43 | 13.86 | 38442 | 38438.17 | 7.55 | 38432 | 38393.87 | 21.42 | 38224 | 38224 | 0 |
| | 50 | rnd | 38663 | 38469.47 | 121.64 | 38652 | 38491.87 | 95.78 | 38586 | 38247.33 | 210.49 | 38687 | 38171.97 | 260.43 |
| | | 2op | 38442 | 38428.23 | 13.99 | 38442 | 38428.27 | 14.81 | 38437 | 38400.2 | 15.67 | 38432 | 38247.33 | 61.02 |

Table A.2404: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38690 | 38386.67 | 168.99 | 38621 | 38388.83 | 151.41 | 38663 | 38230.6 | 253.63 | 38655 | 38185.2 | 221.33 |
| | | 2op | 38458 | 38415.2 | 15.69 | 38441 | 38414.57 | 15.11 | 38436 | 38296.5 | 90.8 | 38224 | 38224 | 0 |
| | 50 | rnd | 38638 | 38393.47 | 172.91 | 38627 | 38416.4 | 152.36 | 38626 | 38221.27 | 222.95 | 38626 | 38210.33 | 195.38 |
| | | 2op | 38442 | 38404.2 | 40.62 | 38442 | 38402.13 | 36.75 | 38427 | 38333.67 | 85.76 | 38224 | 38224 | 0 |
| 51 | 20 | rnd | 38589 | 38325.97 | 163.55 | 38633 | 38347.37 | 149.23 | 38667 | 38307.57 | 200.75 | 38573 | 38214.4 | 188.94 |
| | | 2op | 38442 | 38422.33 | 14.66 | 38442 | 38439.17 | 2.52 | 38437 | 38398.43 | 24.31 | 38224 | 38224 | 0 |
| | 50 | rnd | 38567 | 38346.97 | 178.75 | 38639 | 38341.77 | 178.93 | 38523 | 38237.47 | 215.27 | 38491 | 38126.27 | 229.08 |
| | | 2op | 38442 | 38430.13 | 12.49 | 38442 | 38431.57 | 11.6 | 38432 | 38400.5 | 14.15 | 38432 | 38247.33 | 61.02 |

Table A.2405: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47910 | 47600 | 224.54 | 47923 | 47473.93 | 264.22 | 47899 | 47562.3 | 283.96 | 47846 | 47431.87 | 287.17 |
| | | 2op | 47758 | 47482.57 | 160.26 | 47758 | 47738.97 | 51.81 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 47824 | 47493.63 | 260.9 | 47949 | 47428.83 | 371.53 | 47851 | 47514.47 | 212.22 | 47939 | 47515.83 | 257.85 |
| | | 2op | 47758 | 47470.63 | 160.21 | 47758 | 47755.9 | 4.84 | 47755 | 47406.6 | 131.8 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47878 | 47486.83 | 285.96 | 47957 | 47599.3 | 200.77 | 47820 | 47494.27 | 309.7 | 47939 | 47512.67 | 305.14 |
| | | 2op | 47758 | 47557.33 | 173.85 | 47758 | 47756.57 | 3.37 | 47758 | 47554.53 | 193.51 | 47349 | 47349 | 0 |
| | 50 | rnd | 48032 | 47455.63 | 283.47 | 47950 | 47529.37 | 281.65 | 47838 | 47525.13 | 218.63 | 47833 | 47475.07 | 251.89 |
| | | 2op | 47758 | 47492.97 | 148.14 | 47758 | 47756.8 | 1.49 | 47758 | 47714.73 | 101.66 | 47349 | 47349 | 0 |

Table A.2406: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47944 | 47606.53 | 234.24 | 47961 | 47651.3 | 168.31 | 47976 | 47562.77 | 346.76 | 47899 | 47546.2 | 261.82 |
| | | 2op | 47758 | 47498 | 163.46 | 47758 | 47749.5 | 9.12 | 47742 | 47373.5 | 93.48 | 47349 | 47349 | 0 |
| | 50 | rnd | 48034 | 47654.6 | 260.33 | 48050 | 47638.93 | 203.41 | 47917 | 47538.73 | 290.72 | 47862 | 47600.7 | 190.43 |
| | | 2op | 47758 | 47510.73 | 170.79 | 47758 | 47755.03 | 6.15 | 47758 | 47392.03 | 107 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47969 | 47594.77 | 230.58 | 48052 | 47642.8 | 264.34 | 47972 | 47630.7 | 178.07 | 48023 | 47503.47 | 271.02 |
| | | 2op | 47830 | 47628.4 | 166.43 | 47830 | 47762.7 | 18.3 | 47758 | 47598.47 | 178.25 | 47349 | 47349 | 0 |
| | 50 | rnd | 47978 | 47661.03 | 185.08 | 48050 | 47716.03 | 198.73 | 48050 | 47595 | 229.28 | 47849 | 47528.27 | 252.6 |
| | | 2op | 47758 | 47507.4 | 176.35 | 47830 | 47750.17 | 49.64 | 47758 | 47720.67 | 85.75 | 47742 | 47362.1 | 71.75 |

Table A.2407: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47919 | 47514.43 | 268.33 | 47982 | 47536.1 | 269.66 | 47864 | 47477.83 | 251.91 | 47925 | 47482.5 | 256.88 |
| | | 2op | 47758 | 47506.07 | 161.06 | 47758 | 47741 | 53.47 | 47349 | 47349 | 0 | 47349 | 47349 | 0 |
| | 50 | rnd | 48043 | 47482.77 | 316.04 | 47923 | 47503.43 | 239.68 | 47914 | 47470.27 | 340.86 | 47916 | 47568.33 | 236.33 |
| | | 2op | 47758 | 47469.37 | 165.84 | 47758 | 47754.03 | 6.39 | 47758 | 47391.37 | 122.14 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 48032 | 47581.73 | 279.41 | 47968 | 47578.73 | 253.31 | 47909 | 47563.83 | 270.74 | 47839 | 47510.6 | 228.83 |
| | | 2op | 47758 | 47493.4 | 167.52 | 47758 | 47756.87 | 3.06 | 47758 | 47509.03 | 177.54 | 47349 | 47349 | 0 |
| | 50 | rnd | 47848 | 47504.93 | 240.62 | 47837 | 47481.2 | 308.86 | 47986 | 47562.3 | 298.49 | 47916 | 47524.33 | 246.58 |
| | | 2op | 47758 | 47555.47 | 171.47 | 47758 | 47757.2 | 1.35 | 47758 | 47713.13 | 97.34 | 47738 | 47373.37 | 92.94 |

Table A.2408: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48050 | 47670.47 | 186.95 | 48052 | 47709.87 | 224.23 | 47932 | 47586 | 255.28 | 47943 | 47560.4 | 313.84 |
| | | 2op | 47758 | 47498.63 | 160.5 | 47758 | 47735.37 | 61.01 | 47758 | 47376.27 | 103.77 | 47349 | 47349 | 0 |
| | 50 | rnd | 47910 | 47571.03 | 258 | 48050 | 47745.97 | 169.62 | 48002 | 47587.27 | 263.25 | 48027 | 47545.97 | 262.63 |
| | | 2op | 47758 | 47490.33 | 175.79 | 47758 | 47752.17 | 8.22 | 47758 | 47435.87 | 157.87 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47933 | 47573.63 | 247.13 | 48050 | 47665.9 | 184.85 | 47976 | 47661.67 | 251.89 | 47866 | 47553.37 | 174.66 |
| | | 2op | 47758 | 47527.27 | 165.73 | 47758 | 47750.87 | 32.29 | 47758 | 47580.33 | 176.02 | 47349 | 47349 | 0 |
| | 50 | rnd | 48043 | 47684.4 | 223.81 | 47897 | 47653.67 | 215.26 | 47954 | 47621.33 | 229.39 | 48039 | 47512.13 | 279.09 |
| | | 2op | 47758 | 47497.17 | 166.77 | 47758 | 47736.1 | 68.02 | 47758 | 47710.23 | 96.6 | 47349 | 47349 | 0 |

Table A.2409: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48036 | 47559.73 | 266.91 | 47950 | 47584.7 | 237.13 | 47906 | 47566.23 | 218.64 | 47910 | 47539.4 | 262.32 |
| | | 2op | 47758 | 47620.13 | 163.57 | 47758 | 47622.03 | 169.9 | 47758 | 47375.9 | 102.38 | 47349 | 47349 | 0 |
| | 50 | rnd | 47964 | 47642.3 | 229.11 | 48046 | 47648.23 | 278.94 | 47944 | 47451.63 | 342.38 | 47943 | 47457.27 | 280.78 |
| | | 2op | 47758 | 47685.67 | 125.24 | 47758 | 47693.8 | 116.15 | 47747 | 47362.27 | 72.66 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 48025 | 47703.67 | 207.35 | 48052 | 47698.63 | 196.24 | 47917 | 47610.17 | 218.58 | 47848 | 47578.77 | 181.18 |
| | | 2op | 47758 | 47748.2 | 17.28 | 47758 | 47755.67 | 5.5 | 47758 | 47573.83 | 188.61 | 47349 | 47349 | 0 |
| | 50 | rnd | 48052 | 47718.3 | 165.3 | 47943 | 47678.63 | 214.76 | 48050 | 47548.6 | 315.71 | 47898 | 47502.57 | 241.79 |
| | | 2op | 47758 | 47753.63 | 7.16 | 47758 | 47748.33 | 32.36 | 47758 | 47521.03 | 184.88 | 47349 | 47349 | 0 |

Table A.2410: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47667.7 | 170.93 | 47961 | 47648.8 | 214.43 | 47967 | 47606.47 | 197.48 | 48027 | 47525.53 | 293.73 |
| | | 2op | 47814 | 47650.1 | 153.95 | 47814 | 47647.83 | 152.91 | 47758 | 47375.6 | 101.26 | 47349 | 47349 | 0 |
| | 50 | rnd | 48034 | 47689 | 221.39 | 48046 | 47632.47 | 215.6 | 47949 | 47584.13 | 234.23 | 47836 | 47558.2 | 261.46 |
| | | 2op | 47758 | 47682.73 | 127.34 | 47758 | 47703.9 | 106.59 | 47758 | 47364.57 | 75.06 | 47349 | 47349 | 0 |
| 51 | 20 | rnd | 47918 | 47537.83 | 262.81 | 48052 | 47688.43 | 212.41 | 47952 | 47612.8 | 262.35 | 48043 | 47548.93 | 314.69 |
| | | 2op | 47758 | 47750.9 | 8.92 | 47758 | 47756 | 5.19 | 47758 | 47471.8 | 171.24 | 47349 | 47349 | 0 |
| | 50 | rnd | 47875 | 47608.03 | 203.47 | 47978 | 47615.6 | 176.48 | 47958 | 47636.5 | 218.07 | 47862 | 47546.23 | 215.16 |
| | | 2op | 47758 | 47743.6 | 61.81 | 47758 | 47752.7 | 8.73 | 47758 | 47544.43 | 191.49 | 47349 | 47349 | 0 |

Table A.2411: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54750 | 54213.5 | 266.11 | 55042 | 54361.5 | 406.41 | 54729 | 54358.1 | 271.44 | 54880 | 54300.37 | 341.91 |
| | | 2op | 54753 | 54722.77 | 20.06 | 54959 | 54733.4 | 47.51 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54914 | 54337.93 | 382.98 | 54960 | 54266.5 | 418.26 | 54884 | 54329 | 412.07 | 54827 | 54397.83 | 274.96 |
| | | 2op | 54745 | 54718.43 | 18.75 | 54754 | 54745.1 | 4.03 | 54745 | 54706.33 | 7.3 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54975 | 54385.23 | 360.22 | 54945 | 54367.57 | 333.35 | 54815 | 54274.07 | 283.99 | 54895 | 54293.73 | 318.65 |
| | | 2op | 54745 | 54719.57 | 19.25 | 54766 | 54747.2 | 7.7 | 54745 | 54713.93 | 14.74 | 54705 | 54705 | 0 |
| | 50 | rnd | 54922 | 54498.27 | 260.15 | 54925 | 54383.23 | 279.57 | 54739 | 54270.33 | 356.22 | 54716 | 54283.9 | 274.34 |
| | | 2op | 54753 | 54733.53 | 18.11 | 54754 | 54751.03 | 4.82 | 54959 | 54737.9 | 46.09 | 54705 | 54705 | 0 |

Table A.2412: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54985 | 54504.9 | 301.62 | 55102 | 54519.5 | 316.35 | 54876 | 54361.5 | 341.33 | 54921 | 54336.9 | 344.49 |
| | | 2op | 54745 | 54723.73 | 19.69 | 54756 | 54730.13 | 18.94 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54947 | 54461.03 | 278.47 | 55165 | 54768.57 | 228.34 | 54985 | 54403.53 | 257.66 | 55100 | 54313.33 | 364.19 |
| | | 2op | 54754 | 54726.5 | 20.14 | 54769 | 54746.1 | 5.9 | 54741 | 54706.2 | 6.57 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 55025 | 54378.63 | 417.59 | 55169 | 54641.93 | 242.38 | 54856 | 54458.83 | 318.61 | 54955 | 54322.97 | 270.66 |
| | | 2op | 54745 | 54728.9 | 19.45 | 54756 | 54747.13 | 4.74 | 54747 | 54720.07 | 19.11 | 54741 | 54706.2 | 6.57 |
| | 50 | rnd | 55121 | 54462.8 | 297.48 | 55155 | 54798.83 | 226.64 | 54986 | 54583.97 | 330.7 | 54951 | 54374 | 319.72 |
| | | 2op | 54745 | 54726.43 | 19.58 | 54754 | 54751.47 | 4.81 | 54745 | 54725.83 | 19 | 54705 | 54705 | 0 |

Table A.2413: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54814 | 54322.9 | 320.56 | 54866 | 54364.2 | 293.07 | 54827 | 54341.97 | 352.12 | 54872 | 54356.33 | 359.93 |
| | | 2op | 54745 | 54719.9 | 19.71 | 54747 | 54724.53 | 18.32 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54802 | 54304.4 | 377.65 | 55008 | 54384.9 | 369.44 | 54757 | 54177.23 | 390.15 | 54788 | 54203.73 | 333.19 |
| | | 2op | 54745 | 54720.47 | 18.78 | 54755 | 54744.97 | 5.82 | 54745 | 54706.5 | 7.33 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54832 | 54363.33 | 294.76 | 54783 | 54292.47 | 347.24 | 54615 | 54243.57 | 259.54 | 54853 | 54379.4 | 243.98 |
| | | 2op | 54745 | 54721.6 | 20.34 | 54756 | 54746.9 | 6.19 | 54747 | 54720.03 | 20.27 | 54705 | 54705 | 0 |
| | 50 | rnd | 54847 | 54430.17 | 312.42 | 55030 | 54460.63 | 350.63 | 54776 | 54307.6 | 328.01 | 54805 | 54323.33 | 325.92 |
| | | 2op | 54745 | 54723.67 | 19.76 | 54762 | 54750.33 | 5.03 | 54959 | 54737.6 | 45.91 | 54705 | 54705 | 0 |

Table A.2414: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55146 | 54598.43 | 302.57 | 55107 | 54558.7 | 356.76 | 55084 | 54432.3 | 355.28 | 55018 | 54299.83 | 353.09 |
| | | 2op | 54745 | 54724.67 | 19.19 | 54754 | 54726.63 | 19.43 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 54880 | 54490.27 | 288.05 | 55051 | 54641.1 | 241.07 | 54912 | 54427.13 | 338.98 | 54912 | 54335.63 | 378.13 |
| | | 2op | 54753 | 54728.53 | 19.54 | 54754 | 54744.8 | 6.43 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 55168 | 54548.93 | 286.84 | 55028 | 54637 | 209.84 | 54927 | 54426.27 | 340.17 | 54801 | 54293 | 354.18 |
| | | 2op | 54754 | 54733 | 17.74 | 54754 | 54747.2 | 7.54 | 54746 | 54715.57 | 16.45 | 54705 | 54705 | 0 |
| | 50 | rnd | 54951 | 54554.27 | 241.99 | 55170 | 54771.8 | 233.32 | 55046 | 54538.97 | 271.59 | 55141 | 54457.27 | 342.9 |
| | | 2op | 54745 | 54731.8 | 18.5 | 54754 | 54751.3 | 3.99 | 54747 | 54724.33 | 18.8 | 54705 | 54705 | 0 |

Table A.2415: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55168 | 54488.43 | 393.38 | 54946 | 54490.27 | 336.98 | 54939 | 54354.97 | 361.88 | 54834 | 54348.53 | 281.78 |
| | | 2op | 54754 | 54737.13 | 16.53 | 54959 | 54741.37 | 44.62 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 55087 | 54508.53 | 273.09 | 55160 | 54528.03 | 383.81 | 54832 | 54270.77 | 300.29 | 54945 | 54355.3 | 334.98 |
| | | 2op | 54754 | 54741.4 | 12.57 | 54754 | 54738.43 | 14.24 | 54720 | 54705.5 | 2.74 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 55065 | 54567.2 | 255.19 | 55035 | 54685.2 | 224.12 | 54936 | 54405.53 | 319.27 | 55031 | 54326.07 | 372.7 |
| | | 2op | 54754 | 54745.03 | 8.13 | 54755 | 54746.93 | 3.75 | 54747 | 54713.87 | 16.32 | 54705 | 54705 | 0 |
| | 50 | rnd | 55002 | 54647.07 | 227.93 | 55117 | 54715.6 | 216.92 | 54984 | 54397.27 | 512.4 | 54856 | 54220.83 | 395.98 |
| | | 2op | 54769 | 54748.63 | 5.75 | 54754 | 54745.87 | 5.98 | 54746 | 54708.8 | 13.04 | 54705 | 54705 | 0 |

Table A.2416: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55048 | 54584.17 | 296.33 | 54874 | 54534.73 | 252.18 | 54921 | 54406.13 | 301.68 | 54842 | 54340.5 | 374.99 |
| | | 2op | 54754 | 54731.87 | 19.17 | 54754 | 54726.6 | 20.62 | 54705 | 54705 | 0 | 54705 | 54705 | 0 |
| | 50 | rnd | 55135 | 54593.13 | 331.15 | 54950 | 54477.47 | 320.2 | 54866 | 54333 | 333.53 | 54899 | 54383.23 | 348.37 |
| | | 2op | 54754 | 54741.33 | 13.1 | 54754 | 54738.9 | 14.51 | 54741 | 54706.2 | 6.57 | 54705 | 54705 | 0 |
| 51 | 20 | rnd | 54978 | 54590.43 | 301.87 | 54995 | 54595.53 | 271.87 | 55037 | 54525 | 328.09 | 54942 | 54183.1 | 423.38 |
| | | 2op | 54754 | 54746.27 | 8.78 | 54769 | 54749.07 | 5.66 | 54747 | 54712.43 | 15.38 | 54705 | 54705 | 0 |
| | 50 | rnd | 55168 | 54664.23 | 273.76 | 55120 | 54563.6 | 383.8 | 55060 | 54420.2 | 312.8 | 54913 | 54309.4 | 397.13 |
| | | 2op | 54754 | 54748.33 | 4.87 | 54754 | 54745.97 | 8.97 | 54754 | 54711.53 | 15.12 | 54705 | 54705 | 0 |

Table A.2417: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11220.9 | 130.96 | 11478 | 11291.13 | 129.81 | 11478 | 11259.27 | 185.05 | 11478 | 11178.23 | 187.02 |
| | | 2op | 11109 | 11035.2 | 40.73 | 11373 | 11219.13 | 88.79 | 11109 | 11109 | 0 | 11017 | 11003.93 | 3.55 |
| | 50 | rnd | 11394 | 11176.67 | 144.22 | 11478 | 11289.67 | 119.15 | 11478 | 11223.9 | 179.08 | 11411 | 11179.47 | 161.68 |
| | | 2op | 11195 | 11047.27 | 51.39 | 11373 | 11272.83 | 48.2 | 11305 | 11148.8 | 73.82 | 11109 | 11053.13 | 46.29 |
| 51 | 20 | rnd | 11411 | 11209.47 | 157.21 | 11478 | 11329.83 | 98.74 | 11478 | 11286.77 | 145.57 | 11478 | 11261.27 | 134.55 |
| | | 2op | 11109 | 11027.4 | 31.52 | 11256 | 11118.8 | 37.3 | 11305 | 11191.93 | 91.34 | 11109 | 11109 | 0 |
| | 50 | rnd | 11411 | 11199.93 | 137.98 | 11478 | 11324.83 | 106.98 | 11478 | 11261.33 | 154.55 | 11478 | 11279.67 | 138 |
| | | 2op | 11195 | 11074.13 | 50.45 | 11394 | 11180.9 | 95.46 | 11411 | 11260.3 | 72.61 | 11109 | 11109 | 0 |

Table A.2418: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11238.77 | 134.18 | 11478 | 11266.53 | 131.6 | 11478 | 11248.17 | 133.35 | 11478 | 11260.27 | 110.99 |
| | | 2op | 11109 | 11034.73 | 39.93 | 11373 | 11232.6 | 85.03 | 11109 | 11109 | 0 | 11017 | 11003.93 | 3.55 |
| | 50 | rnd | 11478 | 11234.2 | 179.14 | 11478 | 11284.7 | 114.61 | 11478 | 11301.13 | 132.08 | 11478 | 11260.4 | 100.65 |
| | | 2op | 11305 | 11063.37 | 77.98 | 11373 | 11261.73 | 65.6 | 11373 | 11133.57 | 70.64 | 11109 | 11053.13 | 46.29 |
| 51 | 20 | rnd | 11478 | 11176.1 | 163.29 | 11478 | 11252.97 | 151.64 | 11478 | 11241.13 | 129.5 | 11478 | 11211.97 | 154.45 |
| | | 2op | 11109 | 11030.93 | 35.76 | 11285 | 11119.77 | 41.15 | 11305 | 11199.43 | 81.6 | 11109 | 11105.93 | 16.8 |
| | 50 | rnd | 11478 | 11191.17 | 146.62 | 11478 | 11305.87 | 115.65 | 11478 | 11288.83 | 141.04 | 11478 | 11243.13 | 173.1 |
| | | 2op | 11109 | 11072.8 | 44.42 | 11373 | 11213.83 | 85.29 | 11373 | 11277.3 | 56.23 | 11109 | 11109 | 0 |

Table A.2419: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11215.17 | 155.76 | 11478 | 11287.8 | 96.19 | 11478 | 11217.4 | 136.17 | 11478 | 11154.13 | 175.89 |
| | | 2op | 11285 | 11035.8 | 62.56 | 11305 | 11207.87 | 90.56 | 11305 | 11115.53 | 35.78 | 11017 | 11003.47 | 2.56 |
| | 50 | rnd | 11413 | 11201.07 | 170.54 | 11478 | 11306.63 | 121.11 | 11411 | 11217.87 | 130.81 | 11411 | 11211.2 | 117.81 |
| | | 2op | 11109 | 11031.2 | 38.92 | 11373 | 11251.23 | 78.84 | 11394 | 11134.3 | 69.28 | 11109 | 11026.73 | 36.79 |
| 51 | 20 | rnd | 11411 | 11199.27 | 161.01 | 11413 | 11265 | 108.35 | 11478 | 11333.67 | 98.33 | 11478 | 11270 | 115.08 |
| | | 2op | 11109 | 11045.67 | 42.04 | 11196 | 11111.9 | 15.88 | 11305 | 11183.9 | 88.62 | 11109 | 11109 | 0 |
| | 50 | rnd | 11413 | 11234.43 | 119.67 | 11478 | 11296 | 118.58 | 11478 | 11344.1 | 108.14 | 11478 | 11284.37 | 134.81 |
| | | 2op | 11305 | 11064.53 | 69.69 | 11373 | 11219.23 | 90.84 | 11394 | 11286.77 | 61.72 | 11305 | 11115.53 | 35.78 |

Table A.2420: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11221.73 | 176.41 | 11478 | 11307.8 | 131.58 | 11478 | 11266.87 | 145.04 | 11478 | 11202.83 | 159.35 |
| | | 2op | 11285 | 11032.73 | 61.09 | 11394 | 11256.53 | 76.64 | 11151 | 11110.4 | 7.67 | 11017 | 11003.47 | 2.56 |
| | 50 | rnd | 11478 | 11216.03 | 131.76 | 11478 | 11283.83 | 141.79 | 11478 | 11256.73 | 114.41 | 11478 | 11272.47 | 137.25 |
| | | 2op | 11213 | 11032.07 | 48.08 | 11394 | 11279.17 | 57.77 | 11305 | 11139.37 | 69.52 | 11109 | 11026.73 | 36.79 |
| 51 | 20 | rnd | 11478 | 11187.13 | 134.11 | 11478 | 11219.77 | 141.83 | 11411 | 11235.27 | 93.71 | 11478 | 11207.23 | 170.94 |
| | | 2op | 11109 | 11041.07 | 40.67 | 11305 | 11138.7 | 67.96 | 11305 | 11155.7 | 79.66 | 11109 | 11109 | 0 |
| | 50 | rnd | 11478 | 11186.97 | 178.68 | 11478 | 11306.23 | 145.64 | 11478 | 11317.3 | 127.66 | 11478 | 11292.67 | 158.5 |
| | | 2op | 11305 | 11063.67 | 65.54 | 11373 | 11210.83 | 101.36 | 11373 | 11276.83 | 52.59 | 11109 | 11108.53 | 2.56 |

Table A.2421: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11413 | 11226.6 | 140.92 | 11478 | 11313.93 | 138.51 | 11413 | 11184.93 | 171.6 | 11394 | 11133.73 | 171.11 |
| | | 2op | 11109 | 11078.33 | 44.11 | 11478 | 11260.4 | 84.69 | 11109 | 11016.87 | 30.36 | 11003 | 11003 | 0 |
| | 50 | rnd | 11411 | 11261.1 | 101.19 | 11478 | 11301.37 | 128.75 | 11478 | 11191.97 | 125.55 | 11394 | 11146.7 | 157.54 |
| | | 2op | 11256 | 11103.47 | 54.02 | 11373 | 11235.37 | 90.65 | 11109 | 11039 | 45.05 | 11095 | 11006.07 | 16.8 |
| 51 | 20 | rnd | 11413 | 11261.3 | 96.26 | 11478 | 11292.13 | 106.36 | 11478 | 11214.9 | 185.06 | 11411 | 11135.9 | 186.95 |
| | | 2op | 11109 | 11093.67 | 34.87 | 11285 | 11121.17 | 41.48 | 11151 | 11076.67 | 46.8 | 11017 | 11004.4 | 4.27 |
| | 50 | rnd | 11413 | 11264.07 | 76.77 | 11478 | 11319.23 | 124.68 | 11478 | 11263.6 | 98.22 | 11478 | 11161.93 | 166.14 |
| | | 2op | 11109 | 11099.8 | 28.07 | 11305 | 11173 | 81.49 | 11109 | 11090.13 | 37.28 | 11109 | 11008.87 | 19.64 |

Table A.2422: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11238.53 | 148.89 | 11478 | 11296.57 | 137.26 | 11478 | 11198.87 | 186.94 | 11394 | 11182.2 | 159.84 |
| | | 2op | 11109 | 11078.33 | 44.11 | 11305 | 11273.3 | 59.4 | 11109 | 11016.87 | 30.36 | 11003 | 11003 | 0 |
| | 50 | rnd | 11478 | 11182.73 | 169.82 | 11478 | 11282.43 | 111.08 | 11478 | 11216.17 | 136.14 | 11478 | 11169.17 | 167.18 |
| | | 2op | 11256 | 11098.57 | 45.74 | 11394 | 11242.77 | 89.21 | 11137 | 11036.87 | 45.11 | 11095 | 11006.07 | 16.8 |
| 51 | 20 | rnd | 11478 | 11221.43 | 140.64 | 11478 | 11281.8 | 140.47 | 11478 | 11249.27 | 119.78 | 11478 | 11216.37 | 148.08 |
| | | 2op | 11109 | 11093.67 | 34.87 | 11305 | 11122.07 | 49.73 | 11151 | 11083.73 | 45.77 | 11017 | 11004.4 | 4.27 |
| | 50 | rnd | 11413 | 11222.47 | 128.87 | 11478 | 11274.73 | 156 | 11478 | 11241.97 | 157.43 | 11413 | 11183.57 | 168.53 |
| | | 2op | 11305 | 11103.27 | 49.58 | 11305 | 11149.17 | 74.89 | 11305 | 11096.2 | 54.04 | 11017 | 11005.8 | 5.7 |

Table A.2423: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13891.07 | 156.44 | 14157 | 14018.53 | 95.43 | 14133 | 13822.47 | 165.15 | 14157 | 13780.1 | 195.92 |
| | | 2op | 13995 | 13830.27 | 85.46 | 14133 | 13995.77 | 47.25 | 13995 | 13948.3 | 49.53 | 13721 | 13721 | 0 |
| | 50 | rnd | 14161 | 13906.93 | 172.03 | 14161 | 14004.53 | 138.08 | 14161 | 13942.3 | 115.43 | 14079 | 13827.23 | 186.88 |
| | | 2op | 14001 | 13846.97 | 77.1 | 14157 | 14037.77 | 56.45 | 13995 | 13965.8 | 25.88 | 13922 | 13737.77 | 46.44 |
| 51 | 20 | rnd | 14161 | 13906.33 | 141.54 | 14161 | 13977.3 | 163.28 | 14161 | 14005.2 | 105.4 | 14137 | 13897.33 | 134.62 |
| | | 2op | 14038 | 13862.5 | 75.05 | 14157 | 14009.7 | 41.74 | 14157 | 13994.27 | 48.2 | 13995 | 13800.23 | 91.94 |
| | 50 | rnd | 14161 | 13925.2 | 153.52 | 14161 | 13999.03 | 113.07 | 14161 | 14010.93 | 121.66 | 14121 | 13854.37 | 154.62 |
| | | 2op | 13995 | 13884.07 | 78.94 | 14157 | 14018.23 | 55.22 | 14157 | 14034.83 | 51.84 | 13995 | 13837.5 | 89.88 |

Table A.2424: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14119 | 13860.73 | 121.57 | 14161 | 13964.8 | 115.05 | 14161 | 13932.5 | 110.8 | 14133 | 13869.1 | 151.73 |
| | | 2op | 14038 | 13865.8 | 107.24 | 14157 | 14018.57 | 53.86 | 13995 | 13945.8 | 49.18 | 13721 | 13721 | 0 |
| | 50 | rnd | 14157 | 13834 | 202.26 | 14137 | 13960.9 | 109.08 | 14161 | 13961.27 | 150.03 | 14161 | 13879.5 | 195.43 |
| | | 2op | 14133 | 13895.17 | 106.23 | 14157 | 14023.73 | 54.03 | 14038 | 13960.37 | 41.02 | 13922 | 13737.77 | 46.44 |
| 51 | 20 | rnd | 14157 | 13877.4 | 183.32 | 14137 | 13900.47 | 119.17 | 14161 | 13943.13 | 131.65 | 14161 | 13930.37 | 153.67 |
| | | 2op | 14038 | 13871.53 | 86.78 | 14157 | 14000.63 | 64.1 | 14157 | 13991.63 | 44.77 | 13995 | 13802.1 | 92.73 |
| | 50 | rnd | 14071 | 13816.93 | 190.23 | 14161 | 13950.93 | 128.14 | 14139 | 13966.03 | 128.29 | 14161 | 13861.97 | 175.41 |
| | | 2op | 13995 | 13903.37 | 79.39 | 14157 | 14021.17 | 65.19 | 14157 | 14006.67 | 47.49 | 13968 | 13822.53 | 83.88 |

Table A.2425: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13919.53 | 155.04 | 14161 | 14010.63 | 143.74 | 14133 | 13862.9 | 161.52 | 14094 | 13796.4 | 135.01 |
| | | 2op | 14018 | 13868.83 | 98.6 | 14133 | 13995.27 | 53.9 | 13995 | 13902.6 | 84.55 | 13721 | 13721 | 0 |
| | 50 | rnd | 14137 | 13899.77 | 169.17 | 14161 | 14010.5 | 106.7 | 14139 | 13881.43 | 179.66 | 14066 | 13800.07 | 148.12 |
| | | 2op | 14038 | 13860.6 | 96.07 | 14157 | 14014.4 | 49.34 | 13995 | 13965.97 | 25.88 | 13827 | 13724.53 | 19.35 |
| 51 | 20 | rnd | 14161 | 13957.13 | 117.05 | 14161 | 13990.13 | 144.3 | 14157 | 13986.1 | 118.45 | 14127 | 13856.17 | 176.54 |
| | | 2op | 14038 | 13844.3 | 89.5 | 14157 | 14007.27 | 43.81 | 14038 | 13986.67 | 32.08 | 13968 | 13804 | 81.96 |
| | 50 | rnd | 14161 | 13968.97 | 137 | 14161 | 13978.17 | 119.27 | 14161 | 14022.17 | 115.04 | 14157 | 13894.17 | 175.08 |
| | | 2op | 14038 | 13866.53 | 85.19 | 14157 | 14024.7 | 55.34 | 14157 | 14016.77 | 47.06 | 14038 | 13814.23 | 94.75 |

Table A.2426: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13831.93 | 181.28 | 14161 | 13962.2 | 142.96 | 14161 | 13943.83 | 141.08 | 14105 | 13766.5 | 190.04 |
| | | 2op | 14038 | 13894.77 | 102.54 | 14157 | 14031 | 57.46 | 14038 | 13905.93 | 87.9 | 13721 | 13721 | 0 |
| | 50 | rnd | 14128 | 13860.97 | 127.11 | 14157 | 13978.3 | 141.06 | 14157 | 13970.4 | 107.8 | 14139 | 13865.5 | 183.49 |
| | | 2op | 14038 | 13900.8 | 104.35 | 14157 | 14052.4 | 66.76 | 14038 | 13972.1 | 32.31 | 13827 | 13724.53 | 19.35 |
| 51 | 20 | rnd | 14137 | 13853.67 | 152.6 | 14161 | 13905.17 | 128.03 | 14161 | 13927.3 | 151.01 | 14161 | 13945.83 | 180.65 |
| | | 2op | 14038 | 13860.47 | 97.04 | 14157 | 14009.7 | 54.25 | 14157 | 14007.83 | 47.01 | 13968 | 13808.87 | 91.77 |
| | 50 | rnd | 14139 | 13869 | 175.32 | 14161 | 13989.87 | 107.16 | 14161 | 13977.7 | 138.77 | 14161 | 13817.57 | 183.28 |
| | | 2op | 14038 | 13886.73 | 105.5 | 14157 | 14008.6 | 58.15 | 14157 | 14032.67 | 64.23 | 14038 | 13823.37 | 98.58 |

Table A.2427: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13950.23 | 147.59 | 14161 | 14013.37 | 125.12 | 14137 | 13875.83 | 167.18 | 14099 | 13778.4 | 189.13 |
| | | 2op | 13995 | 13865.97 | 56.54 | 14157 | 14013.13 | 77.12 | 13995 | 13740.2 | 57.11 | 13721 | 13721 | 0 |
| | 50 | rnd | 14139 | 13998.23 | 118.05 | 14161 | 14009.57 | 106.61 | 14137 | 13818.17 | 197.45 | 14123 | 13835.73 | 146.61 |
| | | 2op | 13995 | 13873.6 | 72.1 | 14157 | 13996.37 | 72.96 | 14004 | 13766.13 | 91.44 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14161 | 13954.07 | 153.2 | 14161 | 13982.8 | 133.04 | 14157 | 13932.77 | 161.09 | 14071 | 13867.87 | 145.04 |
| | | 2op | 13995 | 13883.6 | 79.32 | 14038 | 13975.33 | 38.48 | 14038 | 13836.17 | 96.88 | 13721 | 13721 | 0 |
| | 50 | rnd | 14139 | 13992.17 | 123.23 | 14137 | 13963.9 | 82.04 | 14139 | 13914.8 | 142.87 | 14133 | 13773.5 | 159.69 |
| | | 2op | 13995 | 13898.6 | 79.65 | 14038 | 13978.27 | 39.73 | 13995 | 13817.5 | 83.05 | 13721 | 13721 | 0 |

Table A.2428: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13872 | 191.25 | 14139 | 13970.57 | 95.87 | 14127 | 13803.7 | 173.1 | 14139 | 13842.1 | 171.19 |
| | | 2op | 14038 | 13936.67 | 68.9 | 14157 | 14005.87 | 46.96 | 13995 | 13743.7 | 65.25 | 13721 | 13721 | 0 |
| | 50 | rnd | 14161 | 13845.67 | 192.96 | 14157 | 13944.3 | 152.97 | 14058 | 13794.97 | 153.72 | 14064 | 13800.23 | 157.74 |
| | | 2op | 14038 | 13983.47 | 48.58 | 14071 | 13994.6 | 27.43 | 14004 | 13766.13 | 91.44 | 13721 | 13721 | 0 |
| 51 | 20 | rnd | 14137 | 13896.13 | 141.01 | 14161 | 13927.67 | 119.73 | 14139 | 13902.87 | 159.17 | 14127 | 13818.07 | 178.83 |
| | | 2op | 14038 | 13952.57 | 62.15 | 13995 | 13978.47 | 13.79 | 14038 | 13852.7 | 96.18 | 13721 | 13721 | 0 |
| | 50 | rnd | 14137 | 13877.47 | 126.32 | 14133 | 13924.93 | 130.64 | 14161 | 13971.73 | 139.64 | 14161 | 13852.57 | 153.55 |
| | | 2op | 14038 | 13971.27 | 42.96 | 14064 | 13985.2 | 31.24 | 14018 | 13834.73 | 102.25 | 13721 | 13721 | 0 |

Table A.2429: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18143 | 17939.27 | 123.52 | 18301 | 17963.53 | 159.49 | 18172 | 17828.63 | 219.55 | 18172 | 17775.6 | 173.04 |
| | | 2op | 18017 | 18009.33 | 11.03 | 18017 | 18017 | 0 | 18017 | 18013.93 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18156 | 17895.3 | 107.83 | 18301 | 18061.1 | 122.38 | 18301 | 17807.47 | 242.82 | 18184 | 17841.37 | 175.94 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17994.77 | 4.2 |
| 51 | 20 | rnd | 18184 | 17925.53 | 187.68 | 18301 | 17989.4 | 149.59 | 18301 | 17949.97 | 177.07 | 18171 | 17860.8 | 179.6 |
| | | 2op | 18017 | 18012.4 | 9.36 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |
| | 50 | rnd | 18184 | 17987.5 | 171.23 | 18184 | 17984.07 | 129.52 | 18216 | 18000.4 | 146.22 | 18172 | 17882.83 | 167.63 |
| | | 2op | 18017 | 18012.4 | 9.36 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |

Table A.2430: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18093 | 17884.8 | 152.66 | 18136 | 17982.3 | 138.03 | 18301 | 17980.27 | 162.94 | 18261 | 17880.73 | 193.21 |
| | | 2op | 18017 | 18009.33 | 11.03 | 18017 | 18017 | 0 | 18017 | 18013.93 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18175 | 17863.6 | 187.19 | 18184 | 18007.4 | 160.58 | 18172 | 17957.13 | 183.07 | 18301 | 17915.9 | 190.34 |
| | | 2op | 18017 | 18010.1 | 10.72 | 18017 | 18016.73 | 1.46 | 18017 | 18017 | 0 | 18017 | 17994.77 | 4.2 |
| 51 | 20 | rnd | 18184 | 17888.03 | 176.35 | 18171 | 17978 | 137.58 | 18301 | 17961.93 | 135.49 | 18176 | 17940.83 | 177.2 |
| | | 2op | 18017 | 18012.4 | 9.36 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |
| | 50 | rnd | 18114 | 17844.6 | 182.53 | 18125 | 17924.83 | 175.74 | 18156 | 17952.77 | 124.13 | 18176 | 17909.27 | 163.04 |
| | | 2op | 18017 | 18012.4 | 9.36 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 |

Table A.2431: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17919.8 | 160.16 | 18171 | 17956 | 165.31 | 18292 | 17812.77 | 189.07 | 18184 | 17817.83 | 235.51 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18009.33 | 11.03 | 17994 | 17994 | 0 |
| | 50 | rnd | 18172 | 17894.93 | 165.98 | 18301 | 18039.33 | 124.83 | 18172 | 17860.83 | 187.54 | 18142 | 17868.37 | 176.77 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18175 | 17919.23 | 156.19 | 18186 | 17970.2 | 140.13 | 18301 | 17953.87 | 216.88 | 18109 | 17830.6 | 177.33 |
| | | 2op | 18017 | 18013.93 | 7.95 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17999.37 | 9.89 |
| | 50 | rnd | 18142 | 17930.7 | 115.78 | 18301 | 18040.4 | 100.72 | 18301 | 18001.47 | 130.45 | 18301 | 17854.23 | 233.03 |
| | | 2op | 18017 | 18013.17 | 8.72 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18002.43 | 11.27 |

Table A.2432: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17883.53 | 201.13 | 18171 | 17966.27 | 149.8 | 18165 | 17976.53 | 132.92 | 18171 | 17863.13 | 185.53 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18009.33 | 11.03 | 17994 | 17994 | 0 |
| | 50 | rnd | 18109 | 17897.6 | 147.39 | 18301 | 17967.57 | 159.08 | 18172 | 17981.03 | 117.52 | 18172 | 17923.03 | 192.4 |
| | | 2op | 18017 | 18007.8 | 11.46 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18275 | 17887.53 | 165.01 | 18165 | 17990.17 | 131.92 | 18275 | 18020.17 | 118.4 | 18165 | 17870.97 | 164.35 |
| | | 2op | 18017 | 18013.93 | 7.95 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17999.37 | 9.89 |
| | 50 | rnd | 18301 | 17951.17 | 162.24 | 18301 | 17969.07 | 141.73 | 18301 | 17969.53 | 141.27 | 18142 | 17933.9 | 121.8 |
| | | 2op | 18017 | 18013.17 | 8.72 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18002.43 | 11.27 |

Table A.2433: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18165 | 17948.77 | 163.99 | 18165 | 18022.43 | 105.98 | 18301 | 17869.4 | 222.14 | 18275 | 17901.4 | 192.21 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17997.07 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18184 | 17964.77 | 124.71 | 18301 | 18005.27 | 136.03 | 18184 | 17908.4 | 185.73 | 18044 | 17777.53 | 187.56 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18184 | 17974.67 | 150.65 | 18184 | 18000.4 | 163.49 | 18301 | 17985.3 | 152.65 | 18119 | 17831.87 | 156.64 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18014.7 | 7.02 | 17994 | 17994 | 0 |
| | 50 | rnd | 18142 | 17975.63 | 158.3 | 18184 | 17995.43 | 157.27 | 18184 | 17887.53 | 189.51 | 18172 | 17873.53 | 181.16 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18012.4 | 9.36 | 17994 | 17994 | 0 |

Table A.2434: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17899.37 | 213.71 | 18181 | 18009.43 | 123.21 | 18152 | 17901.77 | 139.94 | 18301 | 17900.93 | 151.42 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17997.07 | 7.95 | 17994 | 17994 | 0 |
| | 50 | rnd | 18084 | 17882.47 | 136 | 18301 | 18041.43 | 126.84 | 18301 | 17912.1 | 186.67 | 18152 | 17896.37 | 164.9 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18000.13 | 10.34 | 17994 | 17994 | 0 |
| 51 | 20 | rnd | 18181 | 17941.8 | 180.88 | 18165 | 17958.17 | 154.52 | 18142 | 17899.17 | 161.5 | 18301 | 17878.7 | 207.05 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18014.7 | 7.02 | 17994 | 17994 | 0 |
| | 50 | rnd | 18176 | 18020.17 | 110.14 | 18152 | 17959.17 | 123.7 | 18184 | 17991.07 | 120.84 | 18216 | 17921.07 | 132.3 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18012.4 | 9.36 | 17994 | 17994 | 0 |

Table A.2435: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21199 | 20944.33 | 160.49 | 21178 | 20926.37 | 171.02 | 21104 | 20797.03 | 192.01 | 21212 | 20883.13 | 190.11 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20854.27 | 77.34 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21212 | 20935.3 | 183.85 | 21206 | 20946.8 | 173.88 | 21177 | 20813.33 | 259.85 | 21206 | 20831 | 221.23 |
| | | 2op | 21008 | 20839.43 | 40.14 | 21193 | 20938.3 | 117.93 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21152 | 20897.73 | 167.99 | 21212 | 21020 | 141.5 | 21163 | 20928.1 | 175.16 | 21181 | 20882.37 | 178.41 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20906.67 | 123.95 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21210 | 20969.37 | 164.75 | 21212 | 20987.57 | 182.96 | 21271 | 20971.73 | 148.71 | 21212 | 20865.4 | 207.35 |
| | | 2op | 20889 | 20831 | 10.95 | 21190 | 20952.13 | 106.78 | 21051 | 20840.4 | 42.58 | 20829 | 20829 | 0 |

Table A.2436: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21184 | 20871.63 | 192.98 | 21178 | 20943.4 | 168.19 | 21271 | 20915.33 | 264.89 | 21150 | 20869.97 | 195.18 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20855.87 | 80.5 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21162 | 20832.93 | 238.36 | 21188 | 20980 | 136.35 | 21271 | 20922.7 | 171.8 | 21196 | 20870 | 228.23 |
| | | 2op | 21008 | 20839.43 | 40.14 | 21210 | 20956.83 | 139.94 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21172 | 20870.6 | 166.3 | 21196 | 20944.8 | 190.01 | 21186 | 20972.2 | 158.25 | 21192 | 20846.07 | 239.38 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20918.37 | 119.82 | 21115 | 20838.53 | 52.22 | 20829 | 20829 | 0 |
| | 50 | rnd | 21245 | 20832.27 | 282.16 | 21193 | 20959.97 | 152.69 | 21212 | 20971.2 | 146.25 | 21172 | 20905.3 | 210.23 |
| | | 2op | 20889 | 20831 | 10.95 | 21187 | 20942.9 | 106.84 | 21193 | 20849.13 | 68.16 | 20829 | 20829 | 0 |

Table A.2437: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21166 | 20838.57 | 188.77 | 21212 | 20938.93 | 178.11 | 21212 | 20857.57 | 256.52 | 21132 | 20857.67 | 213.98 |
| | | 2op | 20997 | 20836.6 | 32.21 | 21139 | 20844.93 | 63.44 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21198 | 20981.47 | 136 | 21218 | 20989.03 | 127.72 | 21184 | 20785.93 | 224.18 | 21162 | 20832.6 | 183.47 |
| | | 2op | 21077 | 20844.87 | 60.44 | 21187 | 20879.87 | 100.4 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21173 | 20939.63 | 147.73 | 21249 | 20978.57 | 187.7 | 21178 | 20852.23 | 193.01 | 21160 | 20873.87 | 170.82 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20912.07 | 103.31 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21182 | 20950.13 | 159.11 | 21169 | 20975.8 | 143.36 | 21151 | 20956.23 | 127.95 | 21195 | 20885.3 | 215.16 |
| | | 2op | 21042 | 20839.4 | 42.31 | 21193 | 20940.77 | 111.32 | 21187 | 20848.03 | 74.89 | 20829 | 20829 | 0 |

Table A.2438: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20875.5 | 206.23 | 21222 | 20954.17 | 175.82 | 21166 | 20855.53 | 210.46 | 21233 | 20848.9 | 212.81 |
| | | 2op | 20997 | 20836.6 | 32.21 | 21139 | 20846.73 | 63.74 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21233 | 20883.97 | 220.04 | 21212 | 20994.43 | 139.03 | 21149 | 20830.8 | 189.28 | 21157 | 20849.47 | 181.59 |
| | | 2op | 21077 | 20844.87 | 60.44 | 21193 | 20876.87 | 100.83 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21172 | 20840.23 | 235.77 | 21161 | 20933.57 | 160.1 | 21203 | 20919.37 | 197.75 | 21212 | 20872.57 | 191.61 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20908.03 | 91.81 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21153 | 20876.27 | 188.17 | 21182 | 20980.17 | 159.82 | 21187 | 21005.73 | 112.11 | 21168 | 20901.3 | 158.16 |
| | | 2op | 21042 | 20839.4 | 42.31 | 21187 | 20969.3 | 107.16 | 21187 | 20848.03 | 74.89 | 20829 | 20829 | 0 |

Table A.2439: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21218 | 20982.5 | 156.94 | 21203 | 20969.83 | 147.54 | 21160 | 20800.27 | 233.24 | 21130 | 20761.17 | 192.23 |
| | | 2op | 20829 | 20829 | 0 | 21210 | 20902.1 | 103.93 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21218 | 20941.7 | 182.14 | 21217 | 20957.23 | 147.9 | 21160 | 20802.07 | 212.69 | 21087 | 20795.5 | 177.88 |
| | | 2op | 21008 | 20838.77 | 35.08 | 21068 | 20887.27 | 87.68 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21203 | 20913.6 | 202.61 | 21210 | 21007.63 | 169.23 | 21271 | 20972.43 | 173.14 | 21114 | 20830.47 | 199.72 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20892.03 | 95.71 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21203 | 20935.13 | 142.86 | 21206 | 21007.2 | 126.19 | 21202 | 20881.77 | 189.38 | 21186 | 20839.33 | 215.68 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21193 | 20931.07 | 119.05 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |

Table A.2440: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21249 | 20889.43 | 208.74 | 21271 | 20971.7 | 140.18 | 21169 | 20869.83 | 205.33 | 21246 | 20852.7 | 204.59 |
| | | 2op | 20829 | 20829 | 0 | 21193 | 20873.93 | 90.02 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| | 50 | rnd | 21271 | 20912.57 | 165.19 | 21233 | 21000.47 | 141.31 | 21190 | 20823.57 | 190.26 | 21160 | 20824.27 | 185.27 |
| | | 2op | 21008 | 20838.77 | 35.08 | 21193 | 20886.93 | 107.68 | 20829 | 20829 | 0 | 20829 | 20829 | 0 |
| 51 | 20 | rnd | 21203 | 20900.17 | 184.61 | 21203 | 20947.57 | 184.32 | 21196 | 20904 | 226.02 | 21224 | 20838.07 | 227.45 |
| | | 2op | 20889 | 20831 | 10.95 | 21193 | 20902.83 | 104.34 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |
| | 50 | rnd | 21196 | 20896.97 | 185.99 | 21166 | 20909.43 | 174.93 | 21211 | 20917.43 | 212.32 | 21178 | 20856.97 | 190.14 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21193 | 20932.3 | 131.8 | 20889 | 20831 | 10.95 | 20829 | 20829 | 0 |

Table A.2441: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.17 | 3.71 | 596 | 593.33 | 1.49 | 596 | 593.77 | 1.65 | 596 | 591.1 | 3 |
| | | 2op | 596 | 592.5 | 2.56 | 595 | 594.93 | 0.25 | 596 | 594.63 | 0.72 | 594 | 593.67 | 1.06 |
| | 50 | rnd | 596 | 592.23 | 2.49 | 596 | 594.17 | 1.29 | 596 | 594.47 | 1.2 | 595 | 591.63 | 2.95 |
| | | 2op | 595 | 593.03 | 1.87 | 596 | 595 | 0.26 | 596 | 595.13 | 0.43 | 595 | 594.1 | 0.31 |
| 51 | 20 | rnd | 596 | 592.23 | 2.58 | 596 | 594.17 | 1.42 | 596 | 594 | 1.86 | 596 | 593.07 | 1.74 |
| | | 2op | 595 | 592.93 | 2 | 596 | 594.93 | 0.52 | 596 | 595.03 | 0.32 | 596 | 594.83 | 0.46 |
| | 50 | rnd | 596 | 593 | 2.05 | 596 | 594.43 | 1.01 | 596 | 594.73 | 0.98 | 596 | 593 | 2.17 |
| | | 2op | 595 | 593.17 | 2 | 596 | 595.1 | 0.31 | 596 | 595.33 | 0.48 | 595 | 594.6 | 0.56 |

Table A.2442: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.43 | 2.97 | 596 | 593.77 | 1.89 | 596 | 593.3 | 1.8 | 596 | 591.57 | 2.67 |
| | | 2op | 596 | 592.4 | 2.47 | 596 | 594.63 | 0.96 | 596 | 594.53 | 0.94 | 595 | 593.67 | 1.15 |
| | 50 | rnd | 596 | 592.13 | 2.99 | 596 | 594.5 | 1.38 | 596 | 594.77 | 1.07 | 596 | 591.8 | 2.64 |
| | | 2op | 595 | 592.8 | 1.9 | 596 | 594.73 | 0.78 | 596 | 594.77 | 0.77 | 595 | 593.83 | 1.02 |
| 51 | 20 | rnd | 595 | 591.17 | 2.41 | 596 | 593.9 | 1.71 | 596 | 594.27 | 1.44 | 596 | 593.17 | 2.13 |
| | | 2op | 595 | 593.27 | 1.86 | 596 | 594.93 | 0.37 | 596 | 595.23 | 0.43 | 595 | 594.7 | 0.53 |
| | 50 | rnd | 596 | 592.53 | 2.22 | 596 | 594.6 | 1.19 | 596 | 594.77 | 0.86 | 596 | 594.13 | 1.7 |
| | | 2op | 595 | 593.13 | 2.11 | 596 | 595 | 0.69 | 596 | 595.13 | 0.57 | 596 | 594.33 | 1.09 |

Table A.2443: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.2 | 2.62 | 596 | 594.5 | 1.17 | 595 | 592.97 | 2.11 | 596 | 590.93 | 3.22 |
| | | 2op | 595 | 591.9 | 2.17 | 595 | 594.93 | 0.25 | 596 | 594.5 | 0.57 | 594 | 593.03 | 1.45 |
| | 50 | rnd | 596 | 591.57 | 2.97 | 596 | 594.2 | 1.3 | 596 | 594.2 | 1.1 | 596 | 591 | 2.75 |
| | | 2op | 595 | 592.63 | 1.99 | 596 | 595.03 | 0.32 | 596 | 595.07 | 0.45 | 595 | 594 | 0.26 |
| 51 | 20 | rnd | 596 | 591.93 | 3.02 | 596 | 593.9 | 1.4 | 596 | 594.7 | 1.06 | 596 | 593.43 | 1.59 |
| | | 2op | 595 | 593.23 | 1.77 | 596 | 595 | 0.37 | 596 | 595.13 | 0.35 | 596 | 594.83 | 0.46 |
| | 50 | rnd | 596 | 591.73 | 2.73 | 596 | 594.5 | 1.31 | 596 | 595 | 1.17 | 596 | 593.13 | 2.19 |
| | | 2op | 596 | 593.27 | 1.84 | 596 | 595.1 | 0.55 | 596 | 595.07 | 0.25 | 596 | 594.63 | 0.56 |

Table A.2444: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 590.9 | 3.36 | 596 | 594.07 | 1.62 | 596 | 593.7 | 2.02 | 596 | 591.73 | 2.39 |
| | | 2op | 596 | 592.03 | 2.27 | 596 | 594.73 | 0.94 | 596 | 594.27 | 1.14 | 594 | 593.03 | 1.45 |
| | 50 | rnd | 595 | 591.13 | 2.62 | 596 | 594.6 | 1.07 | 596 | 594.53 | 1.22 | 596 | 592.63 | 2.17 |
| | | 2op | 596 | 592.53 | 2.22 | 596 | 595.03 | 0.93 | 596 | 594.77 | 0.9 | 595 | 594.1 | 0.4 |
| 51 | 20 | rnd | 596 | 590.87 | 3.41 | 596 | 593.77 | 1.65 | 596 | 594.67 | 1.35 | 595 | 593.3 | 1.56 |
| | | 2op | 595 | 593.4 | 1.57 | 596 | 594.9 | 0.4 | 596 | 595.1 | 0.31 | 596 | 594.87 | 0.51 |
| | 50 | rnd | 596 | 591.77 | 2.33 | 596 | 594.93 | 0.87 | 596 | 594.63 | 1.3 | 596 | 593.37 | 1.97 |
| | | 2op | 596 | 593.4 | 1.79 | 596 | 595.13 | 0.63 | 596 | 595.27 | 0.45 | 596 | 594.47 | 0.9 |

Table A.2445: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.67 | 2.41 | 596 | 594.43 | 1.3 | 596 | 590.6 | 3.68 | 595 | 589.97 | 4.09 |
| | | 2op | 596 | 594.1 | 0.92 | 596 | 595.1 | 0.48 | 594 | 590.33 | 2.04 | 589 | 589 | 0 |
| | 50 | rnd | 596 | 593 | 1.72 | 596 | 593.57 | 1.96 | 595 | 590.7 | 2.71 | 595 | 589.27 | 3.78 |
| | | 2op | 595 | 593.73 | 1.2 | 596 | 594.9 | 0.55 | 594 | 593.2 | 1.35 | 592 | 589.17 | 0.65 |
| 51 | 20 | rnd | 596 | 591.67 | 2.64 | 596 | 593.6 | 1.65 | 596 | 592.8 | 2.14 | 595 | 591.1 | 2.51 |
| | | 2op | 595 | 593.73 | 1.26 | 596 | 594.93 | 0.37 | 595 | 594.53 | 0.51 | 594 | 591.4 | 2.18 |
| | 50 | rnd | 596 | 593.57 | 1.83 | 596 | 593.73 | 1.84 | 596 | 592.47 | 1.87 | 595 | 588.97 | 4 |
| | | 2op | 596 | 594.53 | 0.9 | 596 | 594.77 | 0.5 | 596 | 594.23 | 0.5 | 594 | 589.63 | 1.5 |

Table A.2446: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.83 | 2.76 | 596 | 594.17 | 1.37 | 595 | 591.57 | 2.65 | 595 | 589.03 | 3.42 |
| | | 2op | 596 | 594.33 | 0.71 | 596 | 595.1 | 0.55 | 594 | 590.47 | 2.13 | 589 | 589 | 0 |
| | 50 | rnd | 595 | 591.77 | 2.01 | 595 | 593.6 | 1.33 | 595 | 591.6 | 2.31 | 595 | 588.7 | 3.65 |
| | | 2op | 596 | 594.07 | 1.2 | 596 | 594.87 | 0.43 | 595 | 591.97 | 1.97 | 592 | 589.17 | 0.65 |
| 51 | 20 | rnd | 596 | 592.83 | 1.97 | 596 | 594.5 | 1.22 | 596 | 593 | 2.03 | 596 | 591.9 | 2.25 |
| | | 2op | 595 | 594.13 | 0.35 | 596 | 595.07 | 0.25 | 595 | 594.33 | 0.48 | 595 | 591.63 | 2.33 |
| | 50 | rnd | 596 | 592.83 | 1.53 | 596 | 593.9 | 1.6 | 596 | 593.17 | 1.82 | 595 | 589.27 | 3.69 |
| | | 2op | 596 | 594.67 | 0.55 | 596 | 595.07 | 0.58 | 595 | 594.17 | 0.91 | 594 | 589.7 | 1.51 |

Table A.2447: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 770.4 | 4.49 | 777 | 775.07 | 1.86 | 777 | 773.33 | 2.22 | 777 | 770.57 | 5.29 |
| | | 2op | 775 | 768.93 | 3.3 | 777 | 774.07 | 1.93 | 776 | 773.03 | 1.87 | 772 | 769.47 | 0.82 |
| | 50 | rnd | 777 | 772 | 3.22 | 777 | 774.87 | 1.43 | 777 | 775 | 1.51 | 777 | 771.07 | 3.45 |
| | | 2op | 775 | 769.97 | 3.5 | 777 | 774.93 | 1.51 | 777 | 775 | 1.44 | 770 | 769.5 | 0.51 |
| 51 | 20 | rnd | 777 | 772.33 | 2.82 | 777 | 774.23 | 2.18 | 777 | 774.37 | 1.85 | 777 | 772.6 | 2.11 |
| | | 2op | 770 | 768.47 | 1.93 | 777 | 772.9 | 2.09 | 777 | 773.53 | 1.66 | 775 | 771.57 | 2.08 |
| | 50 | rnd | 777 | 772.8 | 2.86 | 777 | 774.97 | 1.54 | 777 | 775.47 | 1.5 | 777 | 773.7 | 2.73 |
| | | 2op | 771 | 769.27 | 1.53 | 777 | 774.17 | 1.95 | 777 | 774.57 | 1.89 | 774 | 771.77 | 1.74 |

Table A.2448: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.3 | 4.87 | 777 | 774.67 | 2.15 | 777 | 774.2 | 2.62 | 777 | 773.3 | 3 |
| | | 2op | 775 | 768.67 | 3.26 | 777 | 774.33 | 2.23 | 777 | 773.37 | 1.99 | 772 | 769.47 | 1.04 |
| | 50 | rnd | 777 | 772.03 | 5.08 | 777 | 775.33 | 1.47 | 777 | 775.2 | 1.63 | 777 | 772.2 | 2.89 |
| | | 2op | 775 | 770.03 | 3.5 | 777 | 775.1 | 1.63 | 777 | 775.3 | 1.86 | 770 | 769.67 | 0.55 |
| 51 | 20 | rnd | 777 | 771.07 | 5.25 | 777 | 773.8 | 2.19 | 777 | 774.03 | 1.92 | 777 | 772.9 | 2.48 |
| | | 2op | 775 | 768.77 | 2.25 | 777 | 773.03 | 1.85 | 777 | 773.4 | 1.22 | 775 | 772.1 | 2.01 |
| | 50 | rnd | 777 | 772.13 | 4.68 | 777 | 774.53 | 1.53 | 777 | 775.47 | 1.43 | 777 | 774.13 | 1.93 |
| | | 2op | 773 | 769.4 | 1.61 | 777 | 774.7 | 1.91 | 777 | 775.2 | 1.67 | 775 | 772.3 | 1.66 |

Table A.2449: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 770.13 | 3.3 | 777 | 774.73 | 1.53 | 777 | 774 | 2.44 | 777 | 770.87 | 6.67 |
| | | 2op | 775 | 768.8 | 3.01 | 777 | 773.13 | 2.13 | 777 | 771.9 | 1.92 | 770 | 769.07 | 1.34 |
| | 50 | rnd | 776 | 771.57 | 3.1 | 777 | 775.1 | 1.52 | 777 | 775.33 | 1.37 | 777 | 770.53 | 3.64 |
| | | 2op | 775 | 770.03 | 2.99 | 777 | 774.53 | 1.55 | 777 | 774.63 | 1.59 | 770 | 769.47 | 0.51 |
| 51 | 20 | rnd | 777 | 770.9 | 3.58 | 777 | 774.17 | 1.68 | 777 | 774.63 | 1.97 | 777 | 773.6 | 2.19 |
| | | 2op | 770 | 768.33 | 1.84 | 777 | 772.9 | 2.5 | 777 | 774.07 | 1.46 | 776 | 771.5 | 1.91 |
| | 50 | rnd | 777 | 771.7 | 3.23 | 777 | 775.07 | 1.53 | 777 | 775.3 | 0.95 | 777 | 774.37 | 2.24 |
| | | 2op | 775 | 770.13 | 2.3 | 777 | 775.13 | 1.72 | 777 | 775.17 | 1.93 | 777 | 771.83 | 2.18 |

Table A.2450: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.6 | 2.77 | 777 | 774.8 | 1.85 | 777 | 774.63 | 1.59 | 777 | 771.4 | 3.19 |
| | | 2op | 774 | 769.27 | 2.94 | 777 | 774.4 | 2.25 | 777 | 772.47 | 1.83 | 770 | 769.1 | 1.35 |
| | 50 | rnd | 777 | 772.7 | 2.9 | 777 | 775.03 | 1.27 | 777 | 774.73 | 1.57 | 777 | 772.27 | 2.61 |
| | | 2op | 775 | 769.63 | 2.74 | 777 | 775.17 | 1.68 | 777 | 775.1 | 1.52 | 770 | 769.47 | 0.68 |
| 51 | 20 | rnd | 777 | 771.13 | 4.68 | 777 | 773.83 | 2.18 | 777 | 774.1 | 1.84 | 777 | 773.6 | 2.31 |
| | | 2op | 775 | 768.43 | 2.25 | 777 | 773.53 | 1.59 | 777 | 774.2 | 1.4 | 776 | 772.4 | 1.69 |
| | 50 | rnd | 777 | 773.77 | 1.91 | 777 | 774.83 | 1.8 | 777 | 775.77 | 1.04 | 777 | 773.53 | 2.85 |
| | | 2op | 775 | 770.13 | 2.39 | 777 | 774.13 | 1.63 | 777 | 775.13 | 1.78 | 777 | 773.2 | 2.33 |

Table A.2451: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 771.23 | 3.37 | 777 | 774.83 | 1.84 | 777 | 771.3 | 3.74 | 777 | 769.13 | 5.63 |
| | | 2op | 774 | 769.9 | 1.42 | 777 | 774.2 | 1.54 | 770 | 766.8 | 2.22 | 765 | 765 | 0 |
| | 50 | rnd | 777 | 772.4 | 3.06 | 777 | 773.67 | 2.04 | 777 | 770.9 | 3.84 | 777 | 770.13 | 3.95 |
| | | 2op | 775 | 769.9 | 2.01 | 777 | 774.33 | 1.65 | 770 | 768.47 | 1.63 | 765 | 765 | 0 |
| 51 | 20 | rnd | 775 | 772.37 | 2.47 | 777 | 772.77 | 2.8 | 777 | 773.2 | 2.41 | 777 | 771.73 | 3.58 |
| | | 2op | 772 | 769.63 | 0.81 | 775 | 771.53 | 1.85 | 774 | 771 | 1.44 | 770 | 767.43 | 2.06 |
| | 50 | rnd | 777 | 772.83 | 2.12 | 777 | 773.4 | 2.11 | 777 | 772.33 | 2.41 | 777 | 770.33 | 3.99 |
| | | 2op | 774 | 770.17 | 1.32 | 777 | 772.5 | 1.8 | 774 | 770.9 | 1.71 | 770 | 765.37 | 1.27 |

Table A.2452: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 770.7 | 3.26 | 776 | 774.07 | 1.44 | 777 | 771.47 | 3.17 | 775 | 766.7 | 9.4 |
| | | 2op | 775 | 769.77 | 1.57 | 777 | 773.63 | 1.47 | 770 | 766.6 | 2.04 | 765 | 765 | 0 |
| | 50 | rnd | 777 | 772.43 | 2.66 | 777 | 775.1 | 1.54 | 777 | 772.6 | 3.66 | 776 | 768.33 | 5.44 |
| | | 2op | 777 | 770.77 | 2.75 | 777 | 774.3 | 1.68 | 775 | 768.93 | 2.07 | 770 | 765.33 | 1.27 |
| 51 | 20 | rnd | 777 | 771.77 | 2.84 | 777 | 773.43 | 2.4 | 777 | 773.03 | 2.67 | 777 | 771.1 | 3.14 |
| | | 2op | 772 | 769.7 | 0.79 | 776 | 772.3 | 1.32 | 774 | 771.1 | 1.56 | 770 | 766.73 | 1.93 |
| | 50 | rnd | 777 | 773.87 | 1.98 | 777 | 774.17 | 1.95 | 777 | 774.3 | 2.64 | 776 | 769.57 | 4.97 |
| | | 2op | 775 | 770.53 | 1.8 | 777 | 772.8 | 1.65 | 776 | 771.4 | 1.94 | 770 | 765.97 | 1.75 |

Table A.2453: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 915.57 | 2.93 | 921 | 917.83 | 2.55 | 921 | 916.67 | 2.71 | 921 | 915.43 | 3.26 |
| | | 2op | 916 | 912.9 | 2.73 | 921 | 918 | 1.84 | 921 | 916.9 | 1.77 | 916 | 915.9 | 0.55 |
| | 50 | rnd | 921 | 915.83 | 2.98 | 921 | 917.73 | 1.74 | 921 | 918.43 | 2.03 | 921 | 914.47 | 2.86 |
| | | 2op | 921 | 915.13 | 2.61 | 921 | 917.8 | 1.83 | 921 | 918.2 | 1.9 | 916 | 915.97 | 0.18 |
| 51 | 20 | rnd | 921 | 915.97 | 2.41 | 921 | 917.73 | 2.18 | 921 | 917.47 | 2.21 | 921 | 916.23 | 2.76 |
| | | 2op | 916 | 914.57 | 2.33 | 921 | 917.07 | 1.78 | 921 | 917.97 | 2.14 | 921 | 916.23 | 0.97 |
| | 50 | rnd | 921 | 915.37 | 3.22 | 921 | 917.47 | 1.89 | 921 | 918.2 | 1.54 | 921 | 917.2 | 2.51 |
| | | 2op | 918 | 915.73 | 1.26 | 921 | 918.6 | 2.08 | 921 | 918.6 | 1.9 | 921 | 916.47 | 1.17 |

Table A.2454: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.67 | 3.31 | 921 | 917.13 | 2.81 | 921 | 916.2 | 2.75 | 919 | 915.23 | 2.49 |
| | | 2op | 919 | 914.2 | 3.08 | 921 | 918.53 | 1.89 | 921 | 917.67 | 1.84 | 919 | 915.93 | 1.84 |
| | 50 | rnd | 921 | 915.3 | 2.9 | 921 | 917.8 | 2.35 | 921 | 918.53 | 1.96 | 919 | 914.9 | 3.41 |
| | | 2op | 921 | 914.97 | 2.61 | 921 | 918.63 | 1.97 | 921 | 919 | 1.89 | 919 | 916.37 | 1 |
| 51 | 20 | rnd | 919 | 914.1 | 3.6 | 921 | 916.37 | 2.43 | 921 | 917.8 | 2.16 | 921 | 916.8 | 2.94 |
| | | 2op | 916 | 914.53 | 2.1 | 921 | 916.97 | 1.43 | 921 | 917.6 | 1.63 | 918 | 916.17 | 0.75 |
| | 50 | rnd | 919 | 914.1 | 3.2 | 921 | 916.7 | 2.1 | 921 | 917.23 | 2.14 | 921 | 915.6 | 3.39 |
| | | 2op | 917 | 915.2 | 1.65 | 921 | 918.73 | 2.05 | 921 | 919.27 | 1.78 | 921 | 916.63 | 1.56 |

Table A.2455: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 915.03 | 2.47 | 921 | 917.5 | 2.49 | 921 | 916.8 | 2.19 | 919 | 913.77 | 3.43 |
| | | 2op | 916 | 914.27 | 2.18 | 921 | 917.93 | 2.21 | 918 | 916.27 | 0.64 | 916 | 916 | 0 |
| | 50 | rnd | 919 | 914.77 | 3.41 | 921 | 917.67 | 1.79 | 921 | 917.73 | 1.53 | 919 | 914.93 | 3.48 |
| | | 2op | 921 | 915.1 | 3.04 | 921 | 918.2 | 1.99 | 921 | 917.9 | 2.02 | 916 | 915.83 | 0.91 |
| 51 | 20 | rnd | 921 | 915 | 3.24 | 921 | 916.83 | 2.53 | 921 | 917.3 | 1.66 | 921 | 916.83 | 3.01 |
| | | 2op | 916 | 915.1 | 1.73 | 921 | 916.77 | 1.43 | 921 | 917 | 1.46 | 921 | 916.47 | 1.31 |
| | 50 | rnd | 919 | 914.7 | 3.03 | 921 | 917.57 | 2.01 | 921 | 917.87 | 1.5 | 921 | 916.87 | 3.12 |
| | | 2op | 921 | 915.13 | 2.43 | 921 | 918.23 | 1.77 | 921 | 919.33 | 1.49 | 916 | 916 | 0 |

Table A.2456: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.27 | 3.68 | 921 | 917.47 | 1.89 | 921 | 916.53 | 2.56 | 921 | 915.47 | 2.6 |
| | | 2op | 919 | 914.4 | 2.54 | 921 | 918.4 | 2.08 | 921 | 917.1 | 1.58 | 921 | 916.17 | 1.46 |
| | 50 | rnd | 921 | 914 | 3.26 | 921 | 916.9 | 2.09 | 921 | 917.87 | 2.06 | 921 | 916.2 | 2.91 |
| | | 2op | 921 | 915.33 | 3.12 | 921 | 918.4 | 1.96 | 921 | 918.9 | 1.92 | 918 | 916.23 | 0.73 |
| 51 | 20 | rnd | 919 | 914.63 | 2.39 | 919 | 915.9 | 2.06 | 921 | 916.6 | 2.34 | 921 | 916.47 | 3.32 |
| | | 2op | 917 | 915.03 | 2.14 | 921 | 916.87 | 1.89 | 921 | 918.07 | 1.98 | 921 | 916.43 | 1.1 |
| | 50 | rnd | 921 | 915.13 | 2.96 | 921 | 917 | 2 | 921 | 918.13 | 1.57 | 921 | 916 | 2.57 |
| | | 2op | 919 | 914.57 | 2.43 | 921 | 918.6 | 1.89 | 921 | 918.8 | 1.83 | 919 | 916.27 | 0.83 |

Table A.2457: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.87 | 2.66 | 921 | 917.53 | 2.08 | 921 | 914.43 | 2.87 | 921 | 913.03 | 3.93 |
| | | 2op | 916 | 915.67 | 1.27 | 921 | 918.2 | 1.79 | 919 | 915.7 | 2.31 | 914 | 906.27 | 1.46 |
| | 50 | rnd | 921 | 915.53 | 2.84 | 921 | 917.53 | 2.11 | 921 | 915.07 | 2.92 | 919 | 913.43 | 3.84 |
| | | 2op | 921 | 915.97 | 1.22 | 921 | 917.27 | 1.46 | 916 | 916 | 0 | 912 | 906.7 | 1.62 |
| 51 | 20 | rnd | 921 | 916.1 | 2.59 | 921 | 917.2 | 3.13 | 921 | 917.43 | 1.92 | 921 | 913.77 | 4.42 |
| | | 2op | 916 | 916 | 0 | 921 | 916.43 | 1.28 | 918 | 916.57 | 0.9 | 919 | 915.13 | 3.2 |
| | 50 | rnd | 921 | 917.17 | 2.12 | 921 | 917.77 | 2.61 | 921 | 916.4 | 2.42 | 919 | 913.5 | 3.04 |
| | | 2op | 916 | 916 | 0 | 921 | 916.63 | 1.43 | 918 | 916.13 | 0.51 | 919 | 909.87 | 3.65 |

Table A.2458: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.07 | 3.17 | 921 | 916.97 | 2.4 | 918 | 912.73 | 2.83 | 918 | 910.83 | 4.74 |
| | | 2op | 918 | 915.27 | 1.84 | 921 | 917.1 | 1.54 | 921 | 916.97 | 2.14 | 919 | 907.23 | 3.07 |
| | 50 | rnd | 919 | 915.63 | 2.58 | 921 | 918.2 | 1.65 | 919 | 914.97 | 2.94 | 918 | 912.83 | 3.33 |
| | | 2op | 918 | 914.73 | 2.36 | 921 | 917.47 | 1.66 | 919 | 915.4 | 2.08 | 919 | 907.67 | 3.45 |
| 51 | 20 | rnd | 921 | 916 | 2.49 | 921 | 917.33 | 2.51 | 921 | 916.63 | 2.54 | 921 | 914.47 | 3.21 |
| | | 2op | 916 | 915.83 | 0.91 | 917 | 916.07 | 0.25 | 918 | 916.07 | 0.37 | 919 | 915.37 | 2.62 |
| | 50 | rnd | 921 | 916.5 | 3.29 | 921 | 916.67 | 3.03 | 921 | 916.1 | 2.6 | 921 | 914.7 | 3.05 |
| | | 2op | 916 | 915.97 | 0.18 | 921 | 916.5 | 1.17 | 919 | 916.23 | 1.07 | 919 | 912.73 | 4.23 |

Table A.2459: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1573 | 1556.5 | 11.2 | 1577 | 1554.13 | 12.09 | 1572 | 1555.43 | 11.5 | 1577 | 1553.13 | 14.23 |
| | | 2op | 1567 | 1554.67 | 2.76 | 1569 | 1559.07 | 4.89 | 1557 | 1553.17 | 0.75 | 1553 | 1553 | 0 |
| | 50 | rnd | 1573 | 1558.77 | 7.03 | 1576 | 1560.7 | 6.65 | 1568 | 1551.4 | 11.31 | 1573 | 1552.73 | 14.14 |
| | | 2op | 1568 | 1554.77 | 3.94 | 1572 | 1565.63 | 4.63 | 1567 | 1556.43 | 3.5 | 1555 | 1553.07 | 0.37 |
| 51 | 20 | rnd | 1578 | 1556.83 | 10.4 | 1576 | 1557.53 | 11.08 | 1578 | 1560.23 | 9.35 | 1575 | 1557.33 | 9.8 |
| | | 2op | 1562 | 1554.7 | 2.48 | 1572 | 1563.5 | 6.14 | 1572 | 1559.7 | 5.93 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1558.13 | 11.19 | 1577 | 1559.6 | 8.27 | 1577 | 1561.9 | 9.43 | 1571 | 1556 | 9.86 |
| | | 2op | 1566 | 1555.83 | 3.43 | 1573 | 1562.8 | 5.71 | 1572 | 1563.6 | 4.52 | 1557 | 1553.27 | 0.87 |

Table A.2460: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1577 | 1559.2 | 13.02 | 1572 | 1562.3 | 7.52 | 1573 | 1559.27 | 10.53 | 1573 | 1556.77 | 11.97 |
| | | 2op | 1567 | 1554.67 | 2.76 | 1569 | 1559.07 | 4.89 | 1557 | 1553.17 | 0.75 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1559.5 | 9.35 | 1574 | 1562.3 | 6.33 | 1575 | 1560.97 | 7.58 | 1568 | 1554.47 | 12.82 |
| | | 2op | 1568 | 1554.4 | 3.32 | 1575 | 1565.83 | 4.9 | 1567 | 1556.43 | 3.5 | 1555 | 1553.07 | 0.37 |
| 51 | 20 | rnd | 1571 | 1559.37 | 10.84 | 1575 | 1561.13 | 8.24 | 1573 | 1562.27 | 9.95 | 1570 | 1554.17 | 11.41 |
| | | 2op | 1562 | 1554.8 | 2.55 | 1572 | 1563.8 | 5.35 | 1572 | 1559.03 | 5.18 | 1553 | 1553 | 0 |
| | 50 | rnd | 1573 | 1555.07 | 10.32 | 1581 | 1563.57 | 8.08 | 1577 | 1561.87 | 6.19 | 1573 | 1556.37 | 8.88 |
| | | 2op | 1566 | 1556.27 | 3.71 | 1573 | 1563.77 | 5.37 | 1572 | 1564.4 | 4.72 | 1557 | 1553.27 | 0.87 |

Table A.2461: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1556.6 | 10.21 | 1575 | 1556.6 | 10.75 | 1576 | 1556.03 | 10.9 | 1574 | 1552.93 | 13.69 |
| | | 2op | 1570 | 1554.47 | 3.28 | 1569 | 1559.33 | 4.72 | 1562 | 1553.8 | 1.95 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1558.27 | 8.18 | 1574 | 1557.87 | 8.99 | 1573 | 1557.47 | 7.86 | 1571 | 1553.97 | 12.12 |
| | | 2op | 1562 | 1554.1 | 2.11 | 1572 | 1564.6 | 5.08 | 1563 | 1554.93 | 2.39 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1560.9 | 10.13 | 1574 | 1556.7 | 9.75 | 1573 | 1558.23 | 8.83 | 1570 | 1551.53 | 13.6 |
| | | 2op | 1566 | 1556.3 | 4.15 | 1573 | 1563.53 | 5.45 | 1567 | 1558.17 | 3.95 | 1553 | 1553 | 0 |
| | 50 | rnd | 1576 | 1560.07 | 9.3 | 1572 | 1559.7 | 10.01 | 1572 | 1558 | 7.95 | 1578 | 1557.07 | 12.3 |
| | | 2op | 1562 | 1554.43 | 2.21 | 1573 | 1565.13 | 5 | 1572 | 1563.13 | 5.08 | 1563 | 1553.6 | 2.04 |

Table A.2462: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1557.83 | 8.45 | 1576 | 1562.1 | 7.81 | 1573 | 1558.3 | 9 | 1580 | 1557.3 | 10.89 |
| | | 2op | 1570 | 1554.47 | 3.28 | 1569 | 1559.33 | 4.72 | 1562 | 1553.8 | 1.95 | 1553 | 1553 | 0 |
| | 50 | rnd | 1575 | 1558.57 | 9.18 | 1576 | 1563.6 | 7.2 | 1574 | 1562.13 | 7.81 | 1574 | 1553.93 | 10.01 |
| | | 2op | 1570 | 1554.67 | 3.67 | 1572 | 1564.6 | 5.08 | 1563 | 1555.03 | 2.46 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1577 | 1559.7 | 8.21 | 1580 | 1560.83 | 8.23 | 1574 | 1560.3 | 8.75 | 1573 | 1555.67 | 10.36 |
| | | 2op | 1563 | 1555.67 | 3.46 | 1569 | 1562.57 | 4.75 | 1572 | 1559.33 | 4.84 | 1553 | 1553 | 0 |
| | 50 | rnd | 1576 | 1560.13 | 9.98 | 1579 | 1563.43 | 8.34 | 1579 | 1562.13 | 8.1 | 1574 | 1557.07 | 11.25 |
| | | 2op | 1569 | 1555.03 | 3.8 | 1570 | 1563.87 | 4.51 | 1572 | 1563.83 | 4.72 | 1563 | 1553.6 | 2.04 |

Table A.2463: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1575 | 1560.47 | 8.13 | 1576 | 1559.83 | 8.79 | 1568 | 1552.5 | 16.38 | 1571 | 1551.67 | 14.01 |
| | | 2op | 1567 | 1555.5 | 3.64 | 1569 | 1556.1 | 4.47 | 1563 | 1553.33 | 1.83 | 1553 | 1553 | 0 |
| | 50 | rnd | 1570 | 1556.93 | 8.1 | 1578 | 1558.9 | 9.79 | 1572 | 1558.4 | 10.1 | 1577 | 1555.4 | 11.85 |
| | | 2op | 1566 | 1555.97 | 3.01 | 1562 | 1554.77 | 1.79 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1574 | 1561.27 | 8.5 | 1578 | 1562.87 | 6.83 | 1570 | 1557.03 | 9.21 | 1568 | 1552.77 | 10.66 |
| | | 2op | 1569 | 1557.83 | 4.02 | 1578 | 1566.43 | 4.36 | 1563 | 1554.03 | 2.33 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1563.6 | 6.03 | 1577 | 1561.93 | 7.66 | 1571 | 1555.4 | 12.59 | 1573 | 1555.33 | 12.57 |
| | | 2op | 1566 | 1559.3 | 3.7 | 1574 | 1561.73 | 5.09 | 1557 | 1553.2 | 0.81 | 1553 | 1553 | 0 |

Table A.2464: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1580 | 1559.73 | 9.01 | 1575 | 1557.27 | 11.32 | 1573 | 1553.13 | 14.47 | 1570 | 1554.07 | 11.52 |
| | | 2op | 1568 | 1556 | 4.3 | 1569 | 1557.37 | 4.99 | 1563 | 1553.33 | 1.83 | 1553 | 1553 | 0 |
| | 50 | rnd | 1574 | 1560.3 | 8.42 | 1572 | 1559.67 | 7.55 | 1578 | 1556.23 | 8.91 | 1570 | 1558.23 | 10.79 |
| | | 2op | 1564 | 1556.03 | 2.85 | 1564 | 1555.5 | 2.7 | 1555 | 1553.07 | 0.37 | 1553 | 1553 | 0 |
| 51 | 20 | rnd | 1578 | 1559.6 | 8.32 | 1576 | 1562.17 | 6.83 | 1575 | 1559.2 | 8.45 | 1574 | 1554.6 | 10.49 |
| | | 2op | 1564 | 1557.27 | 2.94 | 1571 | 1565.67 | 3.91 | 1559 | 1553.83 | 1.7 | 1553 | 1553 | 0 |
| | 50 | rnd | 1572 | 1559.27 | 7.11 | 1575 | 1561.13 | 7.06 | 1576 | 1556.5 | 8.74 | 1577 | 1559.2 | 9.08 |
| | | 2op | 1568 | 1559.7 | 3.99 | 1569 | 1560.33 | 4.34 | 1558 | 1553.37 | 1.19 | 1553 | 1553 | 0 |

Table A.2465: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1543.47 | 16.06 | 1570 | 1550.63 | 10.29 | 1566 | 1548.37 | 12.2 | 1568 | 1547.53 | 9.28 |
| | | 2op | 1563 | 1536 | 10.72 | 1562 | 1540.97 | 11.59 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1563 | 1544.97 | 11.03 | 1569 | 1555.07 | 8.41 | 1569 | 1554.6 | 10.57 | 1564 | 1549.67 | 10.32 |
| | | 2op | 1558 | 1534.23 | 8.46 | 1564 | 1545 | 10.79 | 1561 | 1533.4 | 7.37 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1569 | 1548.7 | 12.03 | 1569 | 1554.8 | 8.36 | 1568 | 1556.1 | 7.96 | 1569 | 1552.27 | 10.55 |
| | | 2op | 1561 | 1539.9 | 11.66 | 1565 | 1547.47 | 11.27 | 1567 | 1544.07 | 12.77 | 1531 | 1531 | 0 |
| | 50 | rnd | 1567 | 1550.53 | 11.09 | 1567 | 1553.87 | 8.69 | 1567 | 1555.1 | 8.88 | 1568 | 1551.47 | 12.71 |
| | | 2op | 1566 | 1541.63 | 13.81 | 1567 | 1550.03 | 11.73 | 1566 | 1548.93 | 11.55 | 1550 | 1531.63 | 3.47 |

Table A.2466: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1555.33 | 10.36 | 1571 | 1557.4 | 7.84 | 1566 | 1553.47 | 11.26 | 1565 | 1548.37 | 11.71 |
| | | 2op | 1563 | 1536 | 10.72 | 1564 | 1540.67 | 12.25 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1571 | 1553.6 | 9.93 | 1570 | 1559.17 | 6.94 | 1572 | 1557.6 | 7.86 | 1564 | 1551.97 | 9.54 |
| | | 2op | 1566 | 1534.5 | 9.32 | 1571 | 1548.37 | 12.93 | 1561 | 1533.6 | 7.97 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1569 | 1554.97 | 11.41 | 1571 | 1559.4 | 7.39 | 1572 | 1559.87 | 6.67 | 1570 | 1552.73 | 10.27 |
| | | 2op | 1563 | 1540.4 | 12.29 | 1569 | 1552.13 | 11.23 | 1567 | 1550.63 | 12.94 | 1531 | 1531 | 0 |
| | 50 | rnd | 1570 | 1552.1 | 7.47 | 1567 | 1557.2 | 7.27 | 1570 | 1561.27 | 4.89 | 1567 | 1552 | 11.93 |
| | | 2op | 1566 | 1541.63 | 13.81 | 1567 | 1551.57 | 12.02 | 1569 | 1554.67 | 11.38 | 1550 | 1531.63 | 3.47 |

Table A.2467: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1563 | 1545.6 | 9.59 | 1566 | 1552.9 | 9.52 | 1565 | 1547.37 | 15.16 | 1567 | 1550.73 | 10.18 |
| | | 2op | 1557 | 1534.33 | 8.67 | 1565 | 1541.23 | 12.48 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1561 | 1545.53 | 11.42 | 1565 | 1554.3 | 7.31 | 1569 | 1550.47 | 10.01 | 1569 | 1551.57 | 10.49 |
| | | 2op | 1560 | 1533.47 | 7.6 | 1565 | 1550.3 | 11.86 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1548.07 | 8.7 | 1567 | 1553.1 | 8.07 | 1566 | 1554.67 | 8.31 | 1567 | 1549 | 11.02 |
| | | 2op | 1564 | 1537.4 | 11.01 | 1569 | 1548.73 | 11.13 | 1565 | 1542.53 | 12.83 | 1531 | 1531 | 0 |
| | 50 | rnd | 1566 | 1551.7 | 10.99 | 1567 | 1552.37 | 9.54 | 1567 | 1553.63 | 8.77 | 1566 | 1548.1 | 10.34 |
| | | 2op | 1563 | 1540.9 | 13.55 | 1567 | 1548.5 | 11.95 | 1568 | 1553.37 | 10.36 | 1531 | 1531 | 0 |

Table A.2468: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1568 | 1552.4 | 10.93 | 1569 | 1558.2 | 7.35 | 1569 | 1551.27 | 10.78 | 1566 | 1545.67 | 11.58 |
| | | 2op | 1557 | 1534.33 | 8.67 | 1563 | 1540.5 | 12.27 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1573 | 1555.5 | 10.29 | 1570 | 1557.93 | 6.77 | 1568 | 1554.77 | 7.59 | 1567 | 1546.6 | 13.18 |
| | | 2op | 1560 | 1533.47 | 7.6 | 1565 | 1550.8 | 11.59 | 1540 | 1531.3 | 1.64 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1565 | 1553.67 | 7.27 | 1568 | 1553.03 | 9.2 | 1569 | 1557.2 | 6.62 | 1565 | 1554.4 | 7.76 |
| | | 2op | 1564 | 1537.5 | 11.13 | 1566 | 1549.77 | 12.6 | 1566 | 1543.2 | 14 | 1531 | 1531 | 0 |
| | 50 | rnd | 1565 | 1554.97 | 8.61 | 1568 | 1558.43 | 7.33 | 1569 | 1559.7 | 5.91 | 1570 | 1557.83 | 5.55 |
| | | 2op | 1563 | 1540.9 | 13.55 | 1568 | 1550.93 | 13.96 | 1569 | 1554.37 | 12.41 | 1531 | 1531 | 0 |

Table A.2469: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1547.7 | 9.95 | 1567 | 1555.13 | 9.95 | 1569 | 1548.63 | 9.89 | 1566 | 1546.2 | 13.04 |
| | | 2op | 1569 | 1538.67 | 12.63 | 1573 | 1553.7 | 12.47 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1567 | 1549.8 | 9.78 | 1569 | 1550.77 | 10.53 | 1563 | 1547.23 | 12.29 | 1569 | 1546.7 | 11.46 |
| | | 2op | 1570 | 1540.37 | 13.31 | 1569 | 1543.4 | 13.84 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1567 | 1555.07 | 8.61 | 1569 | 1558.93 | 7.42 | 1569 | 1552.77 | 12.35 | 1570 | 1551.2 | 12.33 |
| | | 2op | 1564 | 1551.77 | 8.32 | 1566 | 1555.77 | 5.58 | 1561 | 1533.77 | 8.48 | 1531 | 1531 | 0 |
| | 50 | rnd | 1566 | 1553.43 | 8.63 | 1566 | 1553.17 | 8.72 | 1568 | 1548.27 | 12.82 | 1565 | 1544.83 | 12.66 |
| | | 2op | 1565 | 1552.73 | 10.4 | 1567 | 1553.8 | 8.62 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.2470: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1553 | 10.06 | 1570 | 1558.77 | 5.38 | 1564 | 1548.17 | 9.91 | 1570 | 1550.9 | 10.4 |
| | | 2op | 1569 | 1538.97 | 13.1 | 1573 | 1550.8 | 12.53 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| | 50 | rnd | 1570 | 1553.07 | 7.69 | 1570 | 1558.1 | 8.42 | 1566 | 1548 | 13.9 | 1560 | 1545.33 | 11.21 |
| | | 2op | 1570 | 1540.6 | 13.47 | 1569 | 1544.7 | 15.45 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |
| 51 | 20 | rnd | 1572 | 1556.4 | 9.2 | 1570 | 1558.33 | 9.37 | 1564 | 1552.6 | 8.46 | 1567 | 1550.87 | 9.64 |
| | | 2op | 1564 | 1553.2 | 8.42 | 1565 | 1557.07 | 2.66 | 1561 | 1533.77 | 8.48 | 1531 | 1531 | 0 |
| | 50 | rnd | 1567 | 1555.53 | 8.69 | 1570 | 1557.4 | 7.38 | 1569 | 1554.6 | 10.77 | 1571 | 1551.27 | 11.24 |
| | | 2op | 1565 | 1554.13 | 10.33 | 1565 | 1556.1 | 7.45 | 1531 | 1531 | 0 | 1531 | 1531 | 0 |

Table A.2471: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1558 | 1547.3 | 8.48 | 1566 | 1550.27 | 8 | 1567 | 1547.8 | 9.26 | 1565 | 1548.53 | 7.4 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1562 | 1548.17 | 9.43 | 1565 | 1548.8 | 7.48 | 1566 | 1550 | 9.87 | 1561 | 1551.47 | 6.48 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1559 | 1545.77 | 8.34 | 1565 | 1551.23 | 10.45 | 1567 | 1550.27 | 10.03 | 1559 | 1548.03 | 7.21 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1548.63 | 9.49 | 1565 | 1549.8 | 7.84 | 1568 | 1551.37 | 8.26 | 1566 | 1550.27 | 8.66 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1550 | 1548.07 | 0.37 | 1561 | 1548.5 | 2.39 | 1548 | 1548 | 0 |

Table A.2472: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1549.07 | 9.54 | 1567 | 1555.37 | 6.34 | 1568 | 1549.13 | 9.04 | 1562 | 1547.33 | 8.82 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1550.17 | 8.35 | 1565 | 1553 | 5.39 | 1566 | 1552.23 | 7.33 | 1561 | 1548.5 | 8.73 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1565 | 1552.7 | 6.68 | 1566 | 1553.43 | 6.83 | 1565 | 1553.47 | 7.34 | 1562 | 1550.8 | 8.7 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1549.33 | 8.41 | 1564 | 1551.3 | 6.79 | 1568 | 1553.87 | 7.29 | 1564 | 1550.3 | 9.51 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1550 | 1548.13 | 0.51 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 |

Table A.2473: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1545.77 | 9.94 | 1566 | 1548.3 | 8.96 | 1567 | 1547.53 | 11.36 | 1567 | 1551 | 8.52 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1558 | 1546.33 | 7.64 | 1565 | 1548.5 | 8.41 | 1565 | 1547.3 | 11.87 | 1564 | 1550.43 | 9.27 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1566 | 1548.83 | 8.71 | 1566 | 1550.17 | 8.59 | 1568 | 1550.6 | 9.2 | 1565 | 1543.83 | 13.08 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1561 | 1547.67 | 8.67 | 1566 | 1552.73 | 5.7 | 1566 | 1548.93 | 9.12 | 1563 | 1549.87 | 7.2 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1556 | 1548.6 | 2.04 | 1548 | 1548 | 0 |

Table A.2474: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1551.23 | 10.61 | 1564 | 1551.83 | 7.88 | 1563 | 1550.73 | 9.17 | 1563 | 1547.27 | 8.66 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1565 | 1547.77 | 9.46 | 1566 | 1553.17 | 6.58 | 1562 | 1552.43 | 5.85 | 1563 | 1546.9 | 10.66 |
| | | 2op | 1548 | 1548 | 0 | 1561 | 1548.43 | 2.37 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1562 | 1549.63 | 9.51 | 1567 | 1553.03 | 7.81 | 1565 | 1549.73 | 8.46 | 1564 | 1548.8 | 8.87 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1563 | 1550.43 | 7.38 | 1568 | 1552.5 | 8.39 | 1565 | 1553.6 | 7.39 | 1561 | 1550.5 | 7.17 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 |

Table A.2475: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1548.47 | 8.94 | 1561 | 1548.57 | 9.16 | 1560 | 1543.6 | 10.77 | 1566 | 1548.53 | 8.9 |
| | | 2op | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1564 | 1547.3 | 8.08 | 1565 | 1551.37 | 7.9 | 1565 | 1549.53 | 9.82 | 1564 | 1546.97 | 10.68 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1561 | 1548.77 | 6.11 | 1567 | 1555.3 | 6.44 | 1566 | 1548.5 | 8.4 | 1565 | 1548.07 | 10.01 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1558 | 1549.2 | 1.94 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1551.33 | 8.35 | 1563 | 1550.3 | 7.98 | 1566 | 1548.77 | 9 | 1568 | 1546.17 | 10.18 |
| | | 2op | 1550 | 1548.13 | 0.51 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.2476: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1553.67 | 8.95 | 1565 | 1551.7 | 9.86 | 1568 | 1547.73 | 10.51 | 1565 | 1548.47 | 10.21 |
| | | 2op | 1548 | 1548 | 0 | 1550 | 1548.07 | 0.37 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1548.97 | 7.3 | 1564 | 1553.8 | 6.59 | 1566 | 1547.43 | 10.62 | 1562 | 1547.4 | 9.25 |
| | | 2op | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| 51 | 20 | rnd | 1565 | 1551.07 | 7.95 | 1564 | 1554 | 8.1 | 1565 | 1548.73 | 9.64 | 1564 | 1547.47 | 11.39 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1550 | 1548.87 | 1.01 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |
| | 50 | rnd | 1567 | 1549.3 | 7.88 | 1570 | 1553.9 | 8.14 | 1565 | 1548.33 | 8.47 | 1562 | 1547.57 | 9.65 |
| | | 2op | 1550 | 1548.13 | 0.51 | 1550 | 1548.13 | 0.51 | 1548 | 1548 | 0 | 1548 | 1548 | 0 |

Table A.2477: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2762 | 2739.93 | 11.6 | 2780 | 2743.2 | 15.47 | 2758 | 2736.83 | 12.41 | 2767 | 2735.77 | 15.51 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.9 | 12.86 | 2765 | 2741.13 | 12.04 | 2771 | 2746.7 | 13.43 | 2763 | 2733.1 | 12.9 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2741.37 | 15.33 | 2771 | 2745.07 | 13.38 | 2764 | 2738.07 | 15.62 | 2773 | 2738.73 | 17.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2762 | 2735.7 | 17.59 | 2766 | 2742.03 | 14.95 | 2767 | 2740.5 | 11.45 | 2772 | 2741.27 | 15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2478: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2775 | 2745.43 | 12.37 | 2771 | 2749.2 | 10.96 | 2771 | 2742.87 | 15.5 | 2757 | 2740.63 | 10.76 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2759 | 2742.13 | 10.71 | 2762 | 2745.23 | 12.69 | 2764 | 2741.43 | 12.38 | 2765 | 2742.07 | 13.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2768 | 2741.8 | 13.04 | 2771 | 2748.23 | 9.55 | 2767 | 2741.37 | 14.88 | 2764 | 2736.3 | 14.14 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2771 | 2747.8 | 11.92 | 2764 | 2750.23 | 10.38 | 2768 | 2743.5 | 12.24 | 2763 | 2743.03 | 9.73 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2479: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2773 | 2740.47 | 17.39 | 2764 | 2740.67 | 14.86 | 2761 | 2741.47 | 11.95 | 2766 | 2741.37 | 19.15 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2772 | 2742.53 | 11.68 | 2761 | 2739.87 | 15.75 | 2761 | 2742.83 | 11.19 | 2768 | 2740.03 | 15.66 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2770 | 2739.2 | 13.97 | 2762 | 2739.87 | 15.91 | 2759 | 2737.03 | 15.24 | 2770 | 2739.6 | 18.61 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2775 | 2739.57 | 12.79 | 2772 | 2740.17 | 19.26 | 2767 | 2742.3 | 13.43 | 2759 | 2741.6 | 12.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2480: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2769 | 2744.13 | 18.01 | 2770 | 2744.57 | 13.78 | 2766 | 2741.4 | 13.77 | 2766 | 2746.3 | 10.41 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2746.93 | 12.22 | 2769 | 2745.27 | 13.67 | 2765 | 2742.2 | 13.94 | 2763 | 2743.27 | 12.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2764 | 2739.47 | 14.42 | 2774 | 2745.33 | 15.21 | 2764 | 2743.63 | 10.75 | 2767 | 2740.3 | 14.69 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2743.23 | 11.12 | 2779 | 2748.97 | 12.74 | 2760 | 2743.3 | 9.91 | 2762 | 2740.23 | 16.01 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2481: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2740.83 | 13.99 | 2767 | 2743 | 14.82 | 2767 | 2744.6 | 14.09 | 2770 | 2741.4 | 13.37 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2773 | 2739.73 | 12.51 | 2766 | 2743.4 | 11.52 | 2772 | 2742.53 | 15.67 | 2763 | 2743.23 | 11.83 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2767 | 2741.67 | 14.68 | 2765 | 2740.63 | 11.11 | 2768 | 2738.93 | 17.31 | 2773 | 2740.37 | 14.28 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2759 | 2737.9 | 18.6 | 2759 | 2739.83 | 11.53 | 2769 | 2740.83 | 15.59 | 2773 | 2742.83 | 13.22 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2482: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2766 | 2745.77 | 12.68 | 2771 | 2743.9 | 13.76 | 2760 | 2740.33 | 12.4 | 2765 | 2738.1 | 14.19 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2763 | 2741.57 | 12.93 | 2766 | 2742.73 | 14.41 | 2761 | 2743.03 | 10.45 | 2763 | 2736.83 | 13.97 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| 51 | 20 | rnd | 2769 | 2747.43 | 12.96 | 2766 | 2748.23 | 9.58 | 2766 | 2744.27 | 12.45 | 2768 | 2743.83 | 15.24 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |
| | 50 | rnd | 2769 | 2749.33 | 12.05 | 2763 | 2745.63 | 12.13 | 2764 | 2744.3 | 12.49 | 2761 | 2739.5 | 12.81 |
| | | 2op | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 | 2762 | 2762 | 0 |

Table A.2483: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2834 | 2810.1 | 14.44 | 2838 | 2814.1 | 13.2 | 2845 | 2809.4 | 16.84 | 2835 | 2808.7 | 12.44 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2813.87 | 16.35 | 2830 | 2811.4 | 14.13 | 2834 | 2807.53 | 17.03 | 2837 | 2805.97 | 14.87 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2834 | 2809.7 | 14.7 | 2842 | 2815.6 | 9.57 | 2844 | 2813.63 | 12.79 | 2837 | 2809.1 | 16.26 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2804.6 | 1.83 | 2804 | 2804 | 0 |
| | 50 | rnd | 2827 | 2808.7 | 10.57 | 2837 | 2811.73 | 18.95 | 2834 | 2812.4 | 12.84 | 2829 | 2806.13 | 12.85 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2805.6 | 2.7 | 2804 | 2804 | 0 |

Table A.2484: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2810.7 | 14.63 | 2843 | 2814.7 | 14.35 | 2837 | 2814.13 | 15.34 | 2839 | 2813.9 | 12.79 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2815.67 | 11.85 | 2838 | 2817.97 | 8.92 | 2840 | 2812.57 | 12.91 | 2835 | 2811.07 | 12.23 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2831 | 2813.4 | 12.44 | 2835 | 2819.47 | 12.86 | 2835 | 2810.73 | 18.79 | 2844 | 2811.87 | 12.11 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2804.6 | 1.83 | 2804 | 2804 | 0 |
| | 50 | rnd | 2837 | 2814.17 | 10.49 | 2838 | 2818.4 | 13.56 | 2832 | 2815.33 | 10.56 | 2842 | 2815.47 | 13.99 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.8 | 3.04 | 2810 | 2805.6 | 2.7 | 2804 | 2804 | 0 |

Table A.2485: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2827 | 2813.33 | 10.91 | 2830 | 2810.43 | 15.93 | 2838 | 2810.03 | 16.83 | 2838 | 2809.8 | 16.1 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2828 | 2813.37 | 8.71 | 2829 | 2813.1 | 9.13 | 2846 | 2812.37 | 16.9 | 2845 | 2813.27 | 13.93 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2805.8 | 2.8 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2833 | 2807.73 | 14.14 | 2832 | 2812.53 | 14.3 | 2838 | 2810.37 | 13.69 | 2838 | 2814.4 | 10.51 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806 | 2.88 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2808.77 | 12.38 | 2835 | 2811.57 | 16.53 | 2838 | 2813.83 | 15.64 | 2836 | 2813.47 | 11.78 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2805.4 | 2.58 | 2804 | 2804 | 0 |

Table A.2486: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2836 | 2814.27 | 12.29 | 2837 | 2810.37 | 15.64 | 2838 | 2814.8 | 14.12 | 2837 | 2814.8 | 10.91 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2815.6 | 12.92 | 2840 | 2817.7 | 10.38 | 2840 | 2814.5 | 14.17 | 2843 | 2812.33 | 11.7 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2805.8 | 2.8 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2837 | 2815.13 | 13.2 | 2849 | 2820.9 | 12.75 | 2836 | 2812.9 | 13.4 | 2833 | 2810.93 | 14.23 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806 | 2.88 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2812 | 15.11 | 2838 | 2819.33 | 12.65 | 2842 | 2815.93 | 12.49 | 2838 | 2812.47 | 17.08 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2807.2 | 3.04 | 2810 | 2805.4 | 2.58 | 2804 | 2804 | 0 |

Table A.2487: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2837 | 2810.47 | 16.11 | 2833 | 2807.57 | 17.14 | 2833 | 2813.1 | 12.89 | 2833 | 2809.67 | 15.24 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2839 | 2809.97 | 15.41 | 2839 | 2811.97 | 14.07 | 2840 | 2811.47 | 11.83 | 2837 | 2811.77 | 12.66 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2836 | 2811.67 | 12.88 | 2842 | 2812.3 | 13.18 | 2839 | 2809.77 | 17.31 | 2835 | 2810.37 | 13.57 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.2 | 2.94 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2836 | 2812.2 | 9.99 | 2838 | 2807.57 | 14.5 | 2836 | 2814.77 | 10.4 | 2847 | 2811.97 | 15.89 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2804.4 | 1.52 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |

Table A.2488: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2815.53 | 13.98 | 2838 | 2812 | 13.62 | 2837 | 2811.47 | 13.81 | 2825 | 2805.8 | 13.12 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806 | 2.88 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2841 | 2815.8 | 13.13 | 2842 | 2815.8 | 14.09 | 2835 | 2805.03 | 15.11 | 2835 | 2814.8 | 11.06 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2805.2 | 2.44 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| 51 | 20 | rnd | 2835 | 2815.57 | 11.63 | 2838 | 2818.3 | 14.49 | 2835 | 2811.67 | 13.78 | 2842 | 2814.87 | 15.36 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.4 | 2.99 | 2804 | 2804 | 0 | 2804 | 2804 | 0 |
| | 50 | rnd | 2842 | 2817.5 | 13.96 | 2838 | 2819.07 | 12.27 | 2834 | 2814 | 12.69 | 2845 | 2811.83 | 16.74 |
| | | 2op | 2804 | 2804 | 0 | 2810 | 2806.6 | 3.02 | 2810 | 2804.2 | 1.1 | 2804 | 2804 | 0 |

Table A.2489: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2709 | 2682.07 | 13.94 | 2710 | 2683.53 | 14.76 | 2714 | 2686.57 | 14.43 | 2702 | 2680.13 | 14.46 |
| | | 2op | 2700 | 2690.13 | 4.28 | 2698 | 2689.9 | 3.98 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2700 | 2683.37 | 13.28 | 2710 | 2684.37 | 17.53 | 2716 | 2683.37 | 11.39 | 2708 | 2687.77 | 11.23 |
| | | 2op | 2706 | 2690.83 | 5.23 | 2702 | 2695.63 | 3.05 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2683.07 | 12.72 | 2711 | 2685.7 | 15.65 | 2715 | 2687.43 | 14.11 | 2706 | 2684.3 | 10.92 |
| | | 2op | 2697 | 2691.2 | 4.05 | 2700 | 2694.7 | 3.71 | 2699 | 2689.97 | 4.41 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2678.43 | 14.62 | 2713 | 2683.13 | 18.89 | 2710 | 2684.67 | 12.44 | 2710 | 2682.93 | 13.94 |
| | | 2op | 2698 | 2692.1 | 4 | 2702 | 2695.67 | 1.75 | 2698 | 2693.67 | 2.96 | 2687 | 2687 | 0 |

Table A.2490: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2682.97 | 12.42 | 2718 | 2691.53 | 13.91 | 2705 | 2686.83 | 11.3 | 2709 | 2684.5 | 13.12 |
| | | 2op | 2700 | 2690.13 | 4.28 | 2698 | 2689.9 | 3.98 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2685.5 | 12.61 | 2708 | 2688.77 | 10.34 | 2704 | 2681.97 | 13.66 | 2710 | 2683.67 | 13.6 |
| | | 2op | 2706 | 2690.83 | 5.23 | 2702 | 2695.63 | 3.05 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2712 | 2684.37 | 13.37 | 2701 | 2689 | 8.37 | 2705 | 2687.1 | 12.98 | 2709 | 2683.37 | 10.8 |
| | | 2op | 2697 | 2691.2 | 4.05 | 2700 | 2694.7 | 3.71 | 2699 | 2689.97 | 4.41 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2691.03 | 14.01 | 2716 | 2690.67 | 11.79 | 2707 | 2686.33 | 14.16 | 2699 | 2680.3 | 15.67 |
| | | 2op | 2698 | 2692.1 | 4 | 2702 | 2695.67 | 1.75 | 2698 | 2693.67 | 2.96 | 2687 | 2687 | 0 |

Table A.2491: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2700 | 2678.9 | 11.61 | 2713 | 2685.23 | 15.38 | 2710 | 2684.07 | 12.28 | 2706 | 2684.17 | 14.9 |
| | | 2op | 2699 | 2690.37 | 4.11 | 2699 | 2690.17 | 4.41 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2684.07 | 11.43 | 2703 | 2683.47 | 10.51 | 2718 | 2683.87 | 12.34 | 2709 | 2682.33 | 14.12 |
| | | 2op | 2698 | 2690.8 | 4.22 | 2706 | 2694.67 | 4.2 | 2698 | 2687.37 | 2.01 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2704 | 2679.5 | 12.68 | 2708 | 2685.97 | 13.7 | 2704 | 2682.23 | 13.35 | 2698 | 2678.97 | 14.18 |
| | | 2op | 2700 | 2691 | 4.5 | 2700 | 2694.47 | 3.23 | 2704 | 2690.27 | 5.03 | 2687 | 2687 | 0 |
| | 50 | rnd | 2703 | 2679.27 | 13.84 | 2708 | 2685.97 | 14.42 | 2707 | 2687.6 | 12.16 | 2707 | 2687.33 | 12.29 |
| | | 2op | 2698 | 2691.83 | 4.07 | 2700 | 2695.93 | 1.51 | 2700 | 2693.23 | 4.45 | 2687 | 2687 | 0 |

Table A.2492: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2713 | 2686.97 | 13.79 | 2706 | 2690.63 | 10.92 | 2707 | 2688.2 | 9.3 | 2703 | 2685.03 | 13.53 |
| | | 2op | 2699 | 2690.37 | 4.11 | 2699 | 2690.17 | 4.41 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2685.6 | 11.51 | 2712 | 2693.97 | 11.24 | 2703 | 2686.97 | 12.54 | 2709 | 2682.37 | 13.88 |
| | | 2op | 2698 | 2690.8 | 4.22 | 2706 | 2694.67 | 4.2 | 2698 | 2687.37 | 2.01 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2709 | 2688 | 11.42 | 2708 | 2685.97 | 11.7 | 2709 | 2684.17 | 14.51 | 2717 | 2685.5 | 16.35 |
| | | 2op | 2700 | 2691 | 4.5 | 2700 | 2694.47 | 3.23 | 2704 | 2690.27 | 5.03 | 2687 | 2687 | 0 |
| | 50 | rnd | 2708 | 2683.97 | 11.42 | 2712 | 2691.1 | 12.73 | 2705 | 2684.2 | 12.68 | 2703 | 2684.17 | 16.39 |
| | | 2op | 2698 | 2691.83 | 4.07 | 2700 | 2695.93 | 1.51 | 2700 | 2693.23 | 4.45 | 2687 | 2687 | 0 |

Table A.2493: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2705 | 2678.3 | 11.29 | 2708 | 2684.3 | 13.05 | 2707 | 2687.03 | 11.52 | 2711 | 2689.1 | 16.7 |
| | | 2op | 2700 | 2691.97 | 4.33 | 2700 | 2690.83 | 4.8 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2702 | 2682.13 | 10.54 | 2706 | 2684.3 | 13.31 | 2706 | 2686.33 | 13.65 | 2711 | 2686.7 | 13 |
| | | 2op | 2698 | 2694.3 | 2.53 | 2698 | 2691.5 | 4.39 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2700 | 2680.23 | 12.65 | 2704 | 2681.8 | 14.06 | 2705 | 2688.47 | 8.96 | 2713 | 2684.53 | 12.4 |
| | | 2op | 2701 | 2694.63 | 3.47 | 2701 | 2695.8 | 2.48 | 2697 | 2687.8 | 2.5 | 2687 | 2687 | 0 |
| | 50 | rnd | 2698 | 2684 | 11.47 | 2708 | 2685.73 | 13.76 | 2715 | 2687.6 | 12.83 | 2716 | 2685.53 | 14.8 |
| | | 2op | 2696 | 2695.07 | 0.25 | 2699 | 2693.37 | 3.45 | 2695 | 2688 | 2.61 | 2687 | 2687 | 0 |

Table A.2494: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2707 | 2689.6 | 10.57 | 2714 | 2691.2 | 10.81 | 2710 | 2684.97 | 14.67 | 2701 | 2682.2 | 15.84 |
| | | 2op | 2700 | 2691.97 | 4.33 | 2700 | 2690.83 | 4.8 | 2687 | 2687 | 0 | 2687 | 2687 | 0 |
| | 50 | rnd | 2711 | 2688.77 | 13.87 | 2708 | 2686.67 | 15.7 | 2703 | 2684.63 | 13.24 | 2711 | 2685.67 | 11.35 |
| | | 2op | 2698 | 2694.3 | 2.53 | 2698 | 2691.5 | 4.39 | 2695 | 2687.27 | 1.46 | 2687 | 2687 | 0 |
| 51 | 20 | rnd | 2706 | 2686.1 | 12.67 | 2711 | 2689.9 | 10.6 | 2711 | 2686.83 | 15.97 | 2709 | 2683.83 | 12.16 |
| | | 2op | 2700 | 2694.97 | 3.08 | 2708 | 2696.93 | 3.38 | 2697 | 2687.8 | 2.5 | 2687 | 2687 | 0 |
| | 50 | rnd | 2709 | 2685.2 | 15.11 | 2703 | 2682.27 | 13.93 | 2710 | 2686.9 | 11.34 | 2713 | 2686.7 | 14.63 |
| | | 2op | 2696 | 2695.13 | 0.35 | 2700 | 2694 | 3.7 | 2695 | 2688 | 2.61 | 2687 | 2687 | 0 |

Table A.2495: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17870 | 17791.77 | 36.7 | 17886 | 17803 | 34.56 | 17887 | 17788.53 | 47.04 | 17845 | 17779.9 | 44.85 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17906 | 17800.47 | 45 | 17856 | 17799.73 | 35.11 | 17899 | 17799.47 | 35.64 | 17878 | 17785.33 | 46.37 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17899 | 17802.9 | 38.21 | 17871 | 17798.8 | 34.96 | 17866 | 17793.8 | 42.53 | 17860 | 17796.47 | 36.81 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17859 | 17792.17 | 35.18 | 17847 | 17781.93 | 38.19 | 17921 | 17808.7 | 37.78 | 17876 | 17791 | 48.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2496: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17882 | 17786.2 | 42.05 | 17841 | 17796.1 | 32.29 | 17871 | 17789.2 | 39.13 | 17863 | 17792.4 | 41.13 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17871 | 17807.37 | 32.64 | 17878 | 17798.63 | 36.52 | 17877 | 17803.53 | 41.03 | 17855 | 17782.07 | 37.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17857 | 17791.1 | 41.11 | 17876 | 17812.03 | 35.42 | 17834 | 17786.23 | 41.81 | 17848 | 17785.43 | 39.5 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17866 | 17801.43 | 38.79 | 17869 | 17792.57 | 39.73 | 17878 | 17799.2 | 47.72 | 17889 | 17802.93 | 49.79 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2497: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17880 | 17792.03 | 40.22 | 17880 | 17804.97 | 33.95 | 17886 | 17787.7 | 45.68 | 17882 | 17796.63 | 40.29 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17861 | 17798.4 | 33.86 | 17850 | 17798.53 | 31.82 | 17884 | 17790.37 | 44.28 | 17877 | 17796.9 | 45.64 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17897 | 17797.2 | 39.64 | 17861 | 17796.23 | 35.58 | 17866 | 17793.8 | 41.1 | 17863 | 17800.83 | 36.76 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17921 | 17803.57 | 41.35 | 17876 | 17793.77 | 44.69 | 17866 | 17783 | 44.78 | 17893 | 17808.33 | 41.73 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2498: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17844 | 17790.5 | 29.01 | 17910 | 17801.73 | 44 | 17880 | 17794.73 | 46.31 | 17887 | 17806.9 | 31.33 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17886 | 17803.37 | 36.65 | 17879 | 17804.57 | 36.42 | 17882 | 17815.67 | 30.07 | 17843 | 17789.63 | 32.32 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17925 | 17798.57 | 40.59 | 17868 | 17797 | 43.42 | 17887 | 17792.33 | 47.55 | 17868 | 17796.07 | 36.27 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17853 | 17796.63 | 33.31 | 17861 | 17801.5 | 33.06 | 17898 | 17808.4 | 30.79 | 17833 | 17792.77 | 34.09 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2499: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17853 | 17797.6 | 40.81 | 17877 | 17789.93 | 35.25 | 17843 | 17788.17 | 32.32 | 17862 | 17793.07 | 43.34 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17868 | 17797.23 | 44.88 | 17883 | 17806.77 | 36.28 | 17866 | 17800.07 | 29.95 | 17881 | 17793.03 | 46.05 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17841 | 17789.63 | 38.56 | 17834 | 17782.23 | 31.52 | 17904 | 17785.93 | 43.57 | 17883 | 17795.3 | 43.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17899 | 17797.63 | 44.4 | 17851 | 17800.33 | 31.84 | 17861 | 17803.53 | 32.55 | 17872 | 17798.73 | 37.59 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2500: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17879 | 17798.03 | 37.31 | 17899 | 17790.47 | 53.04 | 17880 | 17790.57 | 40.15 | 17866 | 17795.7 | 37.21 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17865 | 17800.37 | 27.98 | 17859 | 17809.8 | 30.08 | 17901 | 17814.67 | 40.25 | 17888 | 17806.53 | 43.87 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| 51 | 20 | rnd | 17865 | 17804.77 | 32.95 | 17862 | 17802.3 | 27.88 | 17849 | 17797 | 36.03 | 17906 | 17810.43 | 39.77 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |
| | 50 | rnd | 17836 | 17782.27 | 32.19 | 17874 | 17789.47 | 36.63 | 17853 | 17790.17 | 31.19 | 17867 | 17801.9 | 37.22 |
| | | 2op | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 | 17797 | 17797 | 0 |

Table A.2501: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22166 | 22068.7 | 38.72 | 22124 | 22045.63 | 51.44 | 22139 | 22066.67 | 39.99 | 22154 | 22049.23 | 46.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22063.8 | 53.57 | 22180 | 22076.07 | 47.99 | 22141 | 22059.43 | 50.97 | 22129 | 22064.27 | 35.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22138 | 22068.4 | 38.27 | 22178 | 22072.13 | 52.6 | 22133 | 22064.53 | 40.4 | 22123 | 22064.33 | 41.55 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22175 | 22065.27 | 54.99 | 22162 | 22065.77 | 38.94 | 22146 | 22061.5 | 42.27 | 22171 | 22066.8 | 48.14 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2502: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22138 | 22071.3 | 45.43 | 22170 | 22064.8 | 43.43 | 22183 | 22056.63 | 48.21 | 22133 | 22060.53 | 36.71 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22167 | 22082.97 | 39.81 | 22143 | 22070.47 | 43.39 | 22161 | 22075.33 | 47.57 | 22170 | 22080.4 | 39.39 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22164 | 22082 | 51.82 | 22146 | 22066.33 | 34.85 | 22170 | 22065.7 | 44.12 | 22193 | 22066.6 | 54.18 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22137 | 22069.23 | 43.42 | 22143 | 22057.6 | 48.01 | 22139 | 22065.53 | 46.61 | 22202 | 22084.37 | 46.51 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2503: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22163 | 22078.77 | 47.16 | 22160 | 22080.27 | 45.12 | 22130 | 22050 | 42.62 | 22133 | 22053.47 | 42.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22162 | 22057 | 46.54 | 22134 | 22058.33 | 42.67 | 22148 | 22055.83 | 45.7 | 22135 | 22063.97 | 41.79 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22192 | 22068.07 | 47.16 | 22155 | 22073.33 | 51.26 | 22146 | 22065.43 | 42.14 | 22154 | 22061.8 | 50.3 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22148 | 22064.6 | 43.2 | 22160 | 22058.07 | 45.14 | 22168 | 22067.17 | 35.91 | 22168 | 22071.2 | 43.66 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2504: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22140 | 22059.03 | 36.75 | 22184 | 22082.97 | 46.58 | 22146 | 22057.5 | 46.54 | 22145 | 22065.43 | 42.4 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22141 | 22068.53 | 46.9 | 22145 | 22060.7 | 37.7 | 22155 | 22067.73 | 51.82 | 22161 | 22070.83 | 43.84 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22144 | 22071.83 | 43.05 | 22157 | 22073.23 | 43.72 | 22183 | 22055.93 | 44.98 | 22144 | 22067.37 | 43.53 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22120 | 22066.67 | 35.27 | 22136 | 22065.27 | 45.87 | 22143 | 22047 | 58.62 | 22155 | 22060.2 | 46.45 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2505: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22164 | 22058.03 | 51.71 | 22155 | 22063.5 | 43.82 | 22137 | 22065.53 | 38.39 | 22220 | 22069 | 53.22 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22136 | 22061.77 | 35.82 | 22128 | 22063.03 | 44.63 | 22176 | 22077.53 | 40.82 | 22157 | 22060.33 | 47.29 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22142 | 22076.33 | 44.3 | 22158 | 22068.6 | 49.43 | 22182 | 22087.17 | 43.58 | 22146 | 22066.73 | 47.13 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22128 | 22042.77 | 54.62 | 22169 | 22065.13 | 39.38 | 22176 | 22065.6 | 46.62 | 22148 | 22060.73 | 48.87 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2506: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22178 | 22084.53 | 48.81 | 22150 | 22075.37 | 52.84 | 22203 | 22078.03 | 50.14 | 22133 | 22049.13 | 43.7 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22163 | 22065.93 | 48.08 | 22153 | 22060.87 | 52.35 | 22130 | 22048.6 | 45.97 | 22128 | 22056.87 | 47.98 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| 51 | 20 | rnd | 22199 | 22068.6 | 47.82 | 22199 | 22068.6 | 47.82 | 22143 | 22067.33 | 44.74 | 22200 | 22068.97 | 60.78 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |
| | 50 | rnd | 22155 | 22076.93 | 44.65 | 22155 | 22078.97 | 42.31 | 22154 | 22072.8 | 43.81 | 22166 | 22062.43 | 45.63 |
| | | 2op | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 | 22084 | 22084 | 0 |

Table A.2507: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24735 | 24674.03 | 43.38 | 24731 | 24659.37 | 49.11 | 24762 | 24667.8 | 51.36 | 24741 | 24671.9 | 43.3 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24651.7 | 60.03 | 24775 | 24656.33 | 39.57 | 24732 | 24663.2 | 40.92 | 24764 | 24683.3 | 43.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24808 | 24662.53 | 65.95 | 24731 | 24665.37 | 34.7 | 24790 | 24681.97 | 49.91 | 24747 | 24658.4 | 48.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24742 | 24655.17 | 49.91 | 24767 | 24664.9 | 48.45 | 24754 | 24658.63 | 51.39 | 24746 | 24671.27 | 47.59 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2508: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24737 | 24662.73 | 44.97 | 24747 | 24639.5 | 56.87 | 24752 | 24672.57 | 49.29 | 24776 | 24660.43 | 50.57 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24759 | 24667.47 | 51.05 | 24771 | 24656.47 | 51.22 | 24728 | 24664.8 | 39.58 | 24747 | 24655.83 | 41.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24673.73 | 50.69 | 24791 | 24669.97 | 50.42 | 24744 | 24664.77 | 52.91 | 24746 | 24655.37 | 44.26 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24777 | 24664.43 | 53.11 | 24746 | 24674.87 | 36.95 | 24795 | 24653.17 | 57.01 | 24746 | 24653.8 | 46.42 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2509: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24753 | 24667.9 | 54.58 | 24771 | 24682.13 | 50.59 | 24762 | 24668.57 | 53.11 | 24784 | 24665.27 | 51.19 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24729 | 24661.23 | 40.52 | 24744 | 24670.93 | 41.89 | 24788 | 24661.23 | 48.81 | 24754 | 24669.67 | 41.53 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24747 | 24667.6 | 49.15 | 24788 | 24678.7 | 46.57 | 24781 | 24663.57 | 53.57 | 24734 | 24666.8 | 46.16 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24745 | 24664.7 | 49.48 | 24811 | 24683.17 | 62.38 | 24812 | 24659 | 53.61 | 24736 | 24649.9 | 41.68 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2510: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24770 | 24680.73 | 38.89 | 24744 | 24665.7 | 55.27 | 24752 | 24660.63 | 59.78 | 24772 | 24673.63 | 46.01 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24752 | 24663.53 | 50.09 | 24727 | 24665.1 | 38.52 | 24771 | 24647.43 | 62.5 | 24778 | 24664.53 | 54.67 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24763 | 24674.6 | 47.46 | 24770 | 24665.4 | 53.88 | 24800 | 24659.97 | 49.22 | 24746 | 24662 | 54.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24775 | 24683.23 | 49.99 | 24730 | 24671.83 | 38.58 | 24767 | 24679.8 | 42.61 | 24760 | 24675.63 | 53.21 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2511: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24809 | 24674.27 | 43.08 | 24787 | 24666.63 | 43.53 | 24750 | 24659.13 | 57.33 | 24796 | 24681.93 | 53.35 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24727 | 24646.43 | 41.62 | 24742 | 24662.17 | 45.47 | 24771 | 24656.37 | 59.25 | 24750 | 24666.93 | 45.65 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24778 | 24664.87 | 53.45 | 24755 | 24674.7 | 51.6 | 24775 | 24657.97 | 49.92 | 24729 | 24642.2 | 48.06 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24749 | 24661.1 | 46 | 24778 | 24668.43 | 44.53 | 24791 | 24672.3 | 52.43 | 24757 | 24665.63 | 49.5 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2512: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24757 | 24675.83 | 47.13 | 24732 | 24657.53 | 41.06 | 24720 | 24640.67 | 46.92 | 24754 | 24657.37 | 43.04 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24739 | 24651.23 | 53.09 | 24732 | 24652.4 | 45.58 | 24759 | 24657.27 | 56.2 | 24751 | 24675.67 | 32.95 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| 51 | 20 | rnd | 24782 | 24672.13 | 54.39 | 24782 | 24672.13 | 54.39 | 24766 | 24673.33 | 52.29 | 24797 | 24667.97 | 61.86 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |
| | 50 | rnd | 24754 | 24674.3 | 41.95 | 24754 | 24674.3 | 41.95 | 24757 | 24650.8 | 53.14 | 24734 | 24661.07 | 34.91 |
| | | 2op | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 | 24670 | 24670 | 0 |

Table A.2513: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48003 | 47857.47 | 99.4 | 47998 | 47840.37 | 91 | 47965 | 47832.73 | 69.6 | 47964 | 47815.27 | 76.6 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47997 | 47846.03 | 83.05 | 47970 | 47854.77 | 63.47 | 47983 | 47837.47 | 66.1 | 47994 | 47866.53 | 59.53 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 47959 | 47815.17 | 67.55 | 47973 | 47863.53 | 67.3 | 48090 | 47831.73 | 108.29 | 47999 | 47810 | 102.62 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48012 | 47852.37 | 88.23 | 48002 | 47834.47 | 75.25 | 47957 | 47856.5 | 71.38 | 47979 | 47846.3 | 79.58 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2514: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47970 | 47857.6 | 61.56 | 47974 | 47860.57 | 83.4 | 47985 | 47841.37 | 83.33 | 48016 | 47857.93 | 80.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48057 | 47894.67 | 84.9 | 47986 | 47856.03 | 77.18 | 48017 | 47836 | 76.2 | 48025 | 47848.67 | 70.98 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48067 | 47877.27 | 70.49 | 48067 | 47868.37 | 89.96 | 47960 | 47867.07 | 67.08 | 48024 | 47849.87 | 72.61 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47865.43 | 71.56 | 48096 | 47840.37 | 97.09 | 48030 | 47855.27 | 79.85 | 48029 | 47847.23 | 90.2 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2515: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47993 | 47850.57 | 75.47 | 48010 | 47877.1 | 74.91 | 48003 | 47828.13 | 114.68 | 48041 | 47867.13 | 74.19 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47982 | 47856.47 | 81.14 | 48081 | 47850.5 | 73.37 | 48033 | 47860.53 | 87.26 | 47993 | 47858.43 | 86.78 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48059 | 47876 | 88.89 | 47978 | 47843.5 | 76.05 | 47970 | 47867 | 63.03 | 47996 | 47857.13 | 84.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48016 | 47851.97 | 74.44 | 47948 | 47848.83 | 67.03 | 48029 | 47825.8 | 63.68 | 48027 | 47845.27 | 96.44 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2516: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48033 | 47858.03 | 76.76 | 48077 | 47848.13 | 100.18 | 47967 | 47832.2 | 79.98 | 47971 | 47849.3 | 83.01 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48000 | 47861.3 | 84.69 | 48025 | 47861.37 | 72.3 | 48032 | 47823.83 | 101.51 | 48043 | 47863.1 | 87.03 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48051 | 47907.73 | 77.27 | 47993 | 47864.2 | 76.6 | 47960 | 47831.37 | 75.98 | 48098 | 47871.6 | 92.92 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48021 | 47851.93 | 80.68 | 47990 | 47861.6 | 68.72 | 47940 | 47824.3 | 60.56 | 47979 | 47849.33 | 73.33 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2517: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48067 | 47865.93 | 79.66 | 47977 | 47860.63 | 76.74 | 47978 | 47866.5 | 67.57 | 47976 | 47854.8 | 59.08 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47965 | 47854.07 | 64.58 | 47957 | 47855.57 | 70.13 | 48090 | 47887.67 | 82.34 | 47966 | 47838.6 | 63.15 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48092 | 47864.67 | 79.98 | 48092 | 47864.67 | 79.98 | 48112 | 47844.97 | 110.85 | 47945 | 47840.17 | 60.56 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47995 | 47860.03 | 93.25 | 47990 | 47844.83 | 80.31 | 48015 | 47871.93 | 64.9 | 48039 | 47866.63 | 91.73 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2518: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48002 | 47844.03 | 68.81 | 48002 | 47844.03 | 68.81 | 47998 | 47865.57 | 70.59 | 48008 | 47838.6 | 81.28 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 47964 | 47864.73 | 63.01 | 47964 | 47864.73 | 63.01 | 47983 | 47848.3 | 68.07 | 47998 | 47858.77 | 61.59 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| 51 | 20 | rnd | 48035 | 47861 | 70.01 | 48035 | 47861 | 70.01 | 47962 | 47856.27 | 61.44 | 47942 | 47832.03 | 60.48 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |
| | 50 | rnd | 48042 | 47841.27 | 77.04 | 48042 | 47841.27 | 77.04 | 47976 | 47809.13 | 85.75 | 47991 | 47810.1 | 89.97 |
| | | 2op | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 | 47838 | 47838 | 0 |

Table A.2519: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56093 | 55893.87 | 103.21 | 56148 | 55945 | 80.61 | 56182 | 55942.17 | 98.7 | 56047 | 55916.13 | 85 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56152 | 55916 | 105.66 | 56131 | 55959.53 | 72.93 | 56110 | 55936.77 | 76.84 | 56051 | 55898.37 | 77.95 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56065 | 55928.83 | 83.98 | 56104 | 55955.53 | 72.05 | 56120 | 55945.33 | 80.11 | 56077 | 55903.77 | 83.29 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56030 | 55909.7 | 59.99 | 56057 | 55941.67 | 87.74 | 56083 | 55909.87 | 72.49 | 56168 | 55943.4 | 116.23 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2520: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56133 | 55944.5 | 86.47 | 56108 | 55940.9 | 94.81 | 56055 | 55922.33 | 79.46 | 56131 | 55911.13 | 113.25 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56124 | 55930.8 | 81.75 | 56130 | 55927.27 | 102.67 | 56098 | 55902.5 | 89.02 | 56205 | 55937.6 | 104.6 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56100 | 55935.07 | 82.69 | 56086 | 55939.1 | 83.46 | 56147 | 55900.13 | 85.57 | 56088 | 55925.9 | 71.94 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56151 | 55970.2 | 79.4 | 56144 | 55959.33 | 88.91 | 56105 | 55913.97 | 85.75 | 56045 | 55929.27 | 67.48 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2521: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56139 | 55909.33 | 104.41 | 56107 | 55949.2 | 80.46 | 56020 | 55898.47 | 69.87 | 56155 | 55955.43 | 91.27 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56114 | 55947.03 | 86.19 | 56147 | 55923.97 | 84.33 | 56086 | 55908.3 | 84.58 | 55996 | 55914.43 | 64.7 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56108 | 55933.53 | 89.43 | 56092 | 55926.57 | 82.01 | 56091 | 55914.23 | 75.41 | 56109 | 55929.4 | 102.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56120 | 55946.63 | 82.67 | 56170 | 55908.63 | 89.4 | 56083 | 55945.7 | 60.2 | 56137 | 55959.2 | 78.54 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2522: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56168 | 55962.37 | 104.1 | 56088 | 55941.73 | 88.05 | 56080 | 55927.8 | 74.91 | 56125 | 55936.5 | 96.18 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56172 | 55960.07 | 92.73 | 56066 | 55931.37 | 76.16 | 56083 | 55955.5 | 81.91 | 56029 | 55916 | 87.14 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56099 | 55953.03 | 78.58 | 56098 | 55965 | 83.41 | 56168 | 55952.97 | 96.98 | 56068 | 55935.03 | 84.74 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56099 | 55933.73 | 76.18 | 56177 | 55936 | 89.32 | 56073 | 55933.33 | 80.87 | 56092 | 55925.3 | 73.22 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2523: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56143 | 55942.57 | 98.83 | 56139 | 55931.73 | 78.41 | 56100 | 55948.57 | 85.87 | 56075 | 55925.97 | 87.59 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56069 | 55937.1 | 100.55 | 56076 | 55938.93 | 75.2 | 56077 | 55947.6 | 69.34 | 56159 | 55938.77 | 86.67 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56059 | 55947.2 | 70.21 | 56059 | 55947.2 | 70.21 | 56060 | 55940.7 | 70.49 | 56136 | 55945.4 | 84.8 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56146 | 55944 | 88.23 | 56146 | 55942.13 | 75.78 | 56175 | 55940 | 97.49 | 56091 | 55929.03 | 98.32 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2524: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56123 | 55919.67 | 87.96 | 56123 | 55919.67 | 87.96 | 56129 | 55913.2 | 84.72 | 56070 | 55951.27 | 71.9 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56195 | 55923.87 | 111.28 | 56195 | 55923.87 | 111.28 | 56103 | 55914.03 | 84.23 | 56053 | 55928.33 | 69.87 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| 51 | 20 | rnd | 56193 | 55940.7 | 96.72 | 56193 | 55940.7 | 96.72 | 56091 | 55940.33 | 90.3 | 56061 | 55941.63 | 69.33 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |
| | 50 | rnd | 56062 | 55915.77 | 74.41 | 56062 | 55915.77 | 74.41 | 56074 | 55928.83 | 69.66 | 56115 | 55956.57 | 79.61 |
| | | 2op | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 | 55861 | 55861 | 0 |

Table A.2525: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

**Results With No Post Optimization and Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46952 | 46627.5 | 174.15 | 46722 | 45979.97 | 428.48 | 42766 | 41850.17 | 481.3 | 41896 | 41303.23 | 319.16 |
| | | 2op | 46963 | 46691.4 | 172.17 | 46524 | 46022.03 | 321.84 | 43079 | 42034.97 | 541.16 | 42469 | 41483.7 | 378.66 |
| | 50 | rnd | 47094 | 46609.6 | 182.34 | 46838 | 46368.8 | 274.31 | 44312 | 43381.2 | 657.28 | 41889 | 41110.13 | 405.2 |
| | | 2op | 46955 | 46661.43 | 179.15 | 47057 | 46406.5 | 302.8 | 44411 | 43284.67 | 593.82 | 42314 | 41391.07 | 400.61 |
| 51 | 20 | rnd | 47029 | 46826.8 | 137.8 | 46987 | 46746.1 | 190.46 | 46020 | 45316.4 | 399.62 | 43803 | 43015.43 | 332.68 |
| | | 2op | 47182 | 46892.8 | 175.59 | 47013 | 46823.2 | 118.59 | 46207 | 45401.33 | 408.52 | 43750 | 43236.47 | 302.7 |
| | 50 | rnd | 47107 | 46845.83 | 159.37 | 47124 | 46821.7 | 191.16 | 46500 | 46112.43 | 279.86 | 43674 | 42792.5 | 306.73 |
| | | 2op | 47043 | 46836.2 | 136.72 | 46985 | 46826.67 | 112.73 | 46772 | 46075.77 | 320.64 | 43660 | 42827.8 | 335.22 |

Table A.2526: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47307 | 47098.3 | 127.98 | 47218 | 47020.8 | 127.42 | 47240 | 46820.07 | 180.5 | 46343 | 45576.93 | 380.12 |
| | | 2op | 47457 | 47215.13 | 110.13 | 47381 | 47106.07 | 122.83 | 47134 | 46873.07 | 151.45 | 46387 | 45786.33 | 307.69 |
| | 50 | rnd | 47279 | 47091.7 | 120.24 | 47385 | 47145.2 | 121.78 | 47364 | 46967.2 | 145.73 | 46864 | 46394.43 | 261.08 |
| | | 2op | 47395 | 47180.77 | 95.61 | 47330 | 47211.3 | 63.39 | 47258 | 47032.23 | 118.61 | 46793 | 46317.33 | 303.53 |
| 51 | 20 | rnd | 47350 | 47176.23 | 110.44 | 47363 | 47258.83 | 63.49 | 47337 | 47062.7 | 131.13 | 47103 | 46710.43 | 184.98 |
| | | 2op | 47433 | 47233.4 | 78.71 | 47433 | 47294.1 | 64.63 | 47269 | 47094.57 | 113.26 | 47066 | 46767.13 | 162.79 |
| | 50 | rnd | 47291 | 47166.03 | 86.71 | 47422 | 47273.13 | 89.54 | 47323 | 47083.37 | 129.13 | 47303 | 46887.2 | 160.72 |
| | | 2op | 47313 | 47194.67 | 72.85 | 47430 | 47308.77 | 81.05 | 47299 | 47131.13 | 93.75 | 47196 | 46929.07 | 146.72 |

Table A.2527: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 46935 | 46646.1 | 181.39 | 46314 | 45704.13 | 357.55 | 42882 | 41860.7 | 550.98 | 42035 | 41253.33 | 376.43 |
| | | 2op | 47014 | 46706.03 | 186.29 | 46548 | 45961.53 | 341.81 | 42739 | 41936.1 | 445.02 | 42347 | 41397.57 | 464.78 |
| | 50 | rnd | 47135 | 46692.1 | 176.12 | 46534 | 46225.8 | 233.87 | 44360 | 43053.73 | 678.56 | 41901 | 41135.87 | 367.21 |
| | | 2op | 47071 | 46718.53 | 186.93 | 46908 | 46410.73 | 281.02 | 44688 | 43268.57 | 683.16 | 42232 | 41245.43 | 414.53 |
| 51 | 20 | rnd | 47012 | 46864.5 | 108.95 | 47064 | 46746.07 | 139.39 | 46096 | 45305.3 | 359.08 | 43837 | 43059.93 | 311.01 |
| | | 2op | 47125 | 46851.77 | 167.73 | 47069 | 46794.33 | 198.54 | 46129 | 45384.47 | 526.56 | 43676 | 43146.87 | 324.69 |
| | 50 | rnd | 47177 | 46787.23 | 178.69 | 47036 | 46798.87 | 133.44 | 46472 | 46025.73 | 266.71 | 43719 | 42686.97 | 413.31 |
| | | 2op | 47126 | 46825.23 | 133.41 | 47113 | 46835.83 | 159.98 | 46577 | 46027.5 | 342.33 | 43591 | 42795.83 | 296.51 |

Table A.2528: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47282 | 47129.73 | 98.16 | 47265 | 47035 | 135.07 | 47136 | 46840.73 | 131.3 | 46265 | 45509.93 | 441.36 |
| | | 2op | 47396 | 47224.5 | 105.31 | 47377 | 47150.1 | 99.38 | 47204 | 46881.9 | 159.98 | 46442 | 45540.6 | 442.21 |
| | 50 | rnd | 47337 | 47110.23 | 120.05 | 47307 | 47118.97 | 115.04 | 47105 | 46880.17 | 152.15 | 46833 | 46259.43 | 309.73 |
| | | 2op | 47361 | 47182.37 | 113.99 | 47390 | 47231.4 | 93.97 | 47236 | 47048.63 | 149.1 | 46743 | 46189 | 319.21 |
| 51 | 20 | rnd | 47300 | 47157.5 | 84.53 | 47391 | 47237 | 88.61 | 47237 | 47065.57 | 107.92 | 47086 | 46720.1 | 185.84 |
| | | 2op | 47399 | 47216.97 | 101.78 | 47389 | 47292.73 | 70.93 | 47355 | 47099.17 | 111.43 | 46927 | 46711.53 | 164.33 |
| | 50 | rnd | 47301 | 47141.57 | 108.94 | 47440 | 47291.37 | 82.01 | 47279 | 47073.9 | 120.73 | 47200 | 46878.1 | 195.8 |
| | | 2op | 47386 | 47231.47 | 85.76 | 47413 | 47314.83 | 64.61 | 47330 | 47164.9 | 102 | 47114 | 46933.6 | 140.85 |

Table A.2529: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47296 | 47037.5 | 91.48 | 47196 | 46961.33 | 105.35 | 43843 | 42740.37 | 751.28 | 42143 | 41233.5 | 437.71 |
| | | 2op | 47174 | 47071.87 | 74.76 | 47185 | 47056.53 | 100.02 | 44276 | 42797.93 | 746.08 | 42084 | 41286.17 | 333.59 |
| | 50 | rnd | 47215 | 47011.07 | 97.82 | 47222 | 46984.17 | 106.78 | 44506 | 43282.97 | 778.53 | 41864 | 41119.1 | 364.8 |
| | | 2op | 47202 | 47034.6 | 98.93 | 47170 | 47045.33 | 103.86 | 44754 | 43491.8 | 802.34 | 41962 | 41277.67 | 310.29 |
| 51 | 20 | rnd | 47340 | 47200.07 | 65.54 | 47372 | 47228.2 | 72.18 | 46868 | 46139.07 | 451.39 | 43615 | 42885.5 | 373.94 |
| | | 2op | 47350 | 47285 | 41.78 | 47383 | 47283.87 | 54.29 | 46961 | 46192.7 | 591.79 | 43416 | 43028.83 | 203.1 |
| | 50 | rnd | 47365 | 47269.1 | 55.55 | 47398 | 47252.77 | 77.27 | 47003 | 46405.73 | 490.44 | 43339 | 42527.3 | 365.03 |
| | | 2op | 47381 | 47300.27 | 55.79 | 47384 | 47296.23 | 47.65 | 47042 | 46562.83 | 316.88 | 43372 | 42696.13 | 355.75 |

Table A.2530: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47346 | 47170.67 | 94.37 | 47323 | 47120.43 | 97.43 | 47123 | 46834.43 | 142.25 | 46019 | 45194 | 365.89 |
| | | 2op | 47377 | 47271.47 | 59.49 | 47381 | 47243.33 | 74.37 | 47210 | 46891.83 | 159.61 | 45998 | 45291.47 | 375.21 |
| | 50 | rnd | 47406 | 47215.73 | 98.66 | 47385 | 47188.93 | 101.26 | 47204 | 47013.37 | 102.01 | 46514 | 46053.3 | 309.87 |
| | | 2op | 47435 | 47308.2 | 72.73 | 47433 | 47286.37 | 73.75 | 47294 | 47015.6 | 136.15 | 46512 | 46035 | 270.18 |
| 51 | 20 | rnd | 47359 | 47262.8 | 50.86 | 47340 | 47243 | 54.32 | 47348 | 47163.2 | 102.76 | 46890 | 46537.7 | 185.75 |
| | | 2op | 47390 | 47334.1 | 34.17 | 47389 | 47323.9 | 34.09 | 47358 | 47212.9 | 60.64 | 46876 | 46572.5 | 194.71 |
| | 50 | rnd | 47412 | 47300.03 | 52.84 | 47395 | 47274 | 56.17 | 47279 | 47121.67 | 75.5 | 47067 | 46806.37 | 144.58 |
| | | 2op | 47443 | 47360.1 | 28.27 | 47402 | 47335.77 | 32.2 | 47298 | 47223.27 | 44.02 | 47019 | 46797.33 | 132.21 |

Table A.2531: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147967 | 145196.33 | 1360.72 | 144290 | 141459.33 | 1912.03 | 127239 | 116057.23 | 6793.87 | 82728 | 76201.1 | 3674.7 |
| | | 2op | 146629 | 144560.8 | 1052.37 | 145370 | 141612.5 | 2072.94 | 123835 | 116552.2 | 5665.39 | 82009 | 75566.37 | 3384.98 |
| | 50 | rnd | 147250 | 144745.93 | 1141.46 | 145505 | 143306.2 | 1480.46 | 136774 | 129567.6 | 4220.4 | 98544 | 84971.87 | 5793.57 |
| | | 2op | 146400 | 144120.5 | 1161.12 | 145445 | 143281.5 | 1239.41 | 137197 | 130619.13 | 3142.92 | 94891 | 84878.93 | 5323.63 |
| 51 | 20 | rnd | 149268 | 146563.63 | 998.43 | 148553 | 146163.1 | 967.58 | 144281 | 139263.03 | 2596.24 | 115571 | 105885.37 | 5275.15 |
| | | 2op | 147351 | 146097.3 | 931.74 | 147475 | 145545.07 | 1163.1 | 143008 | 138233.9 | 3231.96 | 117165 | 105334.67 | 4141.83 |
| | 50 | rnd | 147918 | 146127.13 | 1049.75 | 147505 | 145733.2 | 960.97 | 146567 | 142937.37 | 1920.72 | 127817 | 121278 | 5719.73 |
| | | 2op | 147920 | 146343.53 | 1070.77 | 148065 | 146018.2 | 1009.63 | 145540 | 143075.5 | 1505.98 | 129610 | 120280.97 | 5103.31 |

Table A.2532: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151127 | 150305.17 | 501.22 | 150770 | 149176 | 961.31 | 149182 | 146805 | 1654.43 | 139148 | 132271.97 | 3403.33 |
| | | 2op | 151082 | 150515.03 | 558.56 | 150591 | 149177.4 | 887.77 | 149554 | 146531.67 | 2083.93 | 138714 | 131199.83 | 5012.1 |
| | 50 | rnd | 151114 | 150637 | 344.65 | 150837 | 149637.37 | 745.41 | 150442 | 148410.23 | 1251.98 | 145203 | 141821.83 | 2228.23 |
| | | 2op | 151120 | 150570.37 | 493.55 | 150967 | 150028.47 | 702.19 | 149730 | 148516.23 | 784.58 | 145364 | 140592.63 | 2925.84 |
| 51 | 20 | rnd | 151063 | 150573.13 | 430.25 | 150810 | 149955.4 | 538.47 | 150720 | 149133.67 | 877.6 | 148645 | 145442.07 | 1691.92 |
| | | 2op | 151074 | 150560.5 | 458.31 | 150940 | 150146.53 | 645.22 | 150429 | 149315.43 | 649.67 | 148761 | 145442.33 | 1928.27 |
| | 50 | rnd | 151224 | 150762.8 | 417.09 | 151108 | 150441.03 | 453.88 | 150692 | 149917.27 | 539.19 | 150085 | 148062.6 | 1442.07 |
| | | 2op | 151136 | 150858.37 | 252.23 | 151108 | 150458.23 | 415.24 | 150940 | 150104.47 | 773.08 | 149684 | 147151.87 | 2001.98 |

Table A.2533: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 147251 | 144494.5 | 1526.45 | 144799 | 141286.57 | 1558.81 | 127830 | 118542.13 | 5042.8 | 83046 | 75198.83 | 4097.2 |
| | | 2op | 146356 | 144549.57 | 1056.65 | 144686 | 141723.1 | 1380.01 | 126065 | 115686.27 | 6051.54 | 79368 | 74391.2 | 2636.79 |
| | 50 | rnd | 146977 | 144439.67 | 990.48 | 145303 | 142909.87 | 1359.3 | 136038 | 131132.07 | 3168.28 | 94807 | 83488.37 | 6227.38 |
| | | 2op | 147160 | 144538 | 1540.89 | 146100 | 142961.7 | 1610.66 | 134654 | 129653.37 | 2903.82 | 94402 | 83877.2 | 5780.21 |
| 51 | 20 | rnd | 147974 | 145952.87 | 872.9 | 148900 | 146022.6 | 1139.11 | 143304 | 139131.57 | 3131.29 | 114418 | 106565.9 | 4678.4 |
| | | 2op | 148338 | 146166.2 | 921.81 | 147041 | 145592.33 | 1000 | 143513 | 139092.17 | 2334.18 | 112697 | 104733.37 | 4591.94 |
| | 50 | rnd | 148124 | 145739.47 | 1067.26 | 148653 | 145931.13 | 1326.22 | 145912 | 143308.37 | 1877.42 | 130430 | 120809.23 | 6335.16 |
| | | 2op | 147814 | 146043.5 | 696.92 | 148311 | 146032.43 | 1144.58 | 145225 | 142954.77 | 1359.32 | 126946 | 119653.23 | 4627.32 |

Table A.2534: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151161 | 150553.77 | 437.85 | 150665 | 149648.97 | 820.4 | 149138 | 146677.23 | 1858.96 | 138734 | 132197.97 | 4173.57 |
| | | 2op | 151104 | 150509.7 | 332.85 | 150609 | 149418.4 | 750.41 | 149697 | 147012.37 | 1663.46 | 138381 | 132180.37 | 3431.06 |
| | 50 | rnd | 151071 | 150517.93 | 389.82 | 150628 | 149671.7 | 754.7 | 150400 | 148652.97 | 1056.69 | 145496 | 140253 | 3849.29 |
| | | 2op | 151142 | 150660.37 | 496.67 | 150902 | 149476.77 | 889.71 | 150147 | 148053.57 | 1052.59 | 145093 | 140037.4 | 2852.79 |
| 51 | 20 | rnd | 151174 | 150635.4 | 450.96 | 150745 | 150057.97 | 522.49 | 150615 | 148963.47 | 1094.58 | 147426 | 145606 | 1177.37 |
| | | 2op | 151207 | 150580.4 | 415.12 | 151084 | 150053.77 | 570.63 | 150876 | 149282.5 | 888.86 | 149141 | 144655.33 | 1815.24 |
| | 50 | rnd | 151154 | 150754.3 | 322.81 | 151097 | 150470.17 | 464.72 | 150770 | 149363.43 | 796.3 | 149527 | 147277.97 | 1440.9 |
| | | 2op | 151162 | 150735.33 | 326.38 | 150962 | 150319.4 | 390.66 | 150734 | 149675.47 | 803.61 | 149123 | 147745.17 | 1158.61 |

Table A.2535: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 148653 | 146757.83 | 1027.89 | 148243 | 146525.23 | 814.72 | 141353 | 131754.17 | 5071.56 | 80809 | 74811.4 | 3995.24 |
| | | 2op | 148688 | 146536.1 | 1005.06 | 148215 | 146061.33 | 1077.38 | 140912 | 132570.83 | 4921.01 | 84052 | 75130.6 | 3924.01 |
| | 50 | rnd | 147793 | 145806.23 | 1187.42 | 147322 | 145707.1 | 878.92 | 141529 | 133170.27 | 5844.16 | 86022 | 78562.03 | 4414.55 |
| | | 2op | 147607 | 145786.67 | 1104.62 | 147819 | 145399.2 | 1204.84 | 140380 | 131428.3 | 7009.87 | 91207 | 78903.97 | 5312.26 |
| 51 | 20 | rnd | 149856 | 148808.57 | 596.66 | 149864 | 148706.17 | 638.44 | 148570 | 146926.83 | 1079.24 | 115216 | 104700.6 | 5807.71 |
| | | 2op | 149483 | 148654.63 | 574.39 | 149290 | 148567 | 367.1 | 148727 | 147255.9 | 915.53 | 113137 | 102976.47 | 4683.76 |
| | 50 | rnd | 149433 | 148082 | 1028.88 | 149229 | 147976.87 | 879.08 | 148279 | 146562.87 | 1287.55 | 126537 | 119707.57 | 4612.97 |
| | | 2op | 149120 | 147907.1 | 592.33 | 149517 | 148167.8 | 885.46 | 148543 | 146358.3 | 1201.4 | 129027 | 117526.1 | 4862.03 |

Table A.2536: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151152 | 150757.9 | 326.4 | 150939 | 150320.7 | 495.95 | 149861 | 147772.33 | 1067.06 | 135093 | 127103.43 | 5078.12 |
| | | 2op | 151055 | 150716.33 | 283.37 | 151071 | 150226.13 | 498.69 | 149244 | 147410.03 | 1724.51 | 134308 | 128641.63 | 3945.14 |
| | 50 | rnd | 151266 | 150874.83 | 348.06 | 150969 | 150443.17 | 389.71 | 150070 | 148698.63 | 1123.8 | 143973 | 137264.6 | 3542.43 |
| | | 2op | 151208 | 150955.8 | 193.71 | 151038 | 150671.6 | 278.61 | 150162 | 148825.33 | 879.72 | 142491 | 136912.13 | 3270.27 |
| 51 | 20 | rnd | 151214 | 150900.73 | 237.2 | 151138 | 150740.3 | 263.01 | 150854 | 150095.9 | 530.56 | 144451 | 140864.1 | 1840.83 |
| | | 2op | 151173 | 150873 | 248.88 | 151173 | 150781.1 | 271.72 | 150699 | 150104.13 | 404.3 | 146427 | 141556.6 | 1681.21 |
| | 50 | rnd | 151150 | 150923.2 | 227.66 | 151041 | 150754.03 | 256.03 | 150761 | 150079.33 | 537.39 | 148441 | 145900.7 | 1761.47 |
| | | 2op | 151205 | 151011.17 | 144.37 | 151065 | 150832.03 | 184.72 | 150946 | 149937.57 | 586.25 | 148681 | 145452.8 | 1909.94 |

Table A.2537: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162682 | 161057.4 | 874.11 | 159772 | 157115.23 | 1401.07 | 144007 | 129668.23 | 8140.43 | 85206 | 79099.87 | 3151.94 |
| | | 2op | 162569 | 160779.6 | 1036.02 | 160136 | 157192.03 | 1986.65 | 138801 | 129347.97 | 5197.52 | 88403 | 79886.6 | 3811.76 |
| | 50 | rnd | 163339 | 160649.07 | 1187.4 | 161208 | 159503.47 | 1078.09 | 151050 | 146091.77 | 2557.6 | 106525 | 93932.2 | 6793.29 |
| | | 2op | 162019 | 160187.53 | 977.27 | 161306 | 158911.87 | 1339.31 | 153536 | 147068.83 | 3245.83 | 109084 | 93357.5 | 8013.13 |
| 51 | 20 | rnd | 163169 | 161759.93 | 904.61 | 163354 | 161537.7 | 960.51 | 158830 | 154809.2 | 2378.72 | 126963 | 114341.07 | 5888.6 |
| | | 2op | 163578 | 162197.83 | 691.97 | 162745 | 161353.93 | 831.83 | 157927 | 153315.47 | 2557.9 | 128805 | 116375.7 | 5934.11 |
| | 50 | rnd | 164067 | 162104.9 | 1023.49 | 163550 | 161651.37 | 974.29 | 160280 | 158215.57 | 1685.78 | 144209 | 135281.2 | 4889.53 |
| | | 2op | 163708 | 162016.9 | 820.84 | 163379 | 161562.43 | 1265.18 | 160665 | 158541.7 | 1524.58 | 146474 | 134983.43 | 6845.7 |

Table A.2538: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166501 | 165994.43 | 431.11 | 165892 | 164874.97 | 788.56 | 164381 | 162074.27 | 1458.4 | 151579 | 147045.97 | 3939.91 |
| | | 2op | 166636 | 166022.4 | 396.28 | 165774 | 164712.7 | 844.27 | 165547 | 162137.53 | 1602.85 | 154386 | 147809.57 | 3858.09 |
| | 50 | rnd | 166867 | 166018.17 | 399.66 | 166231 | 165321.3 | 671.85 | 165904 | 164252.1 | 951.1 | 160644 | 157415.7 | 1680.56 |
| | | 2op | 166747 | 166213.37 | 277.73 | 166459 | 165207.8 | 592.3 | 165477 | 163660.3 | 1027.28 | 162002 | 156546.4 | 3071.05 |
| 51 | 20 | rnd | 166591 | 166011.2 | 471.06 | 166269 | 165491.17 | 478.67 | 165818 | 164351.83 | 896.73 | 164055 | 160579.13 | 1898.5 |
| | | 2op | 166571 | 166021.73 | 293.52 | 166185 | 165399.9 | 597.88 | 166157 | 164650.17 | 1124.75 | 163513 | 160883.27 | 1956.09 |
| | 50 | rnd | 166773 | 166240.53 | 379.24 | 166492 | 165847.83 | 372.79 | 166118 | 165157.93 | 747.26 | 164833 | 162913.4 | 1208.7 |
| | | 2op | 166786 | 166253.8 | 320.46 | 166271 | 165734.1 | 418.99 | 166366 | 165200.83 | 723.89 | 164596 | 162841.07 | 1184.15 |

Table A.2539: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 161949 | 160205.8 | 918.6 | 160156 | 157413.13 | 1702.09 | 142174 | 130919.9 | 6075.08 | 90240 | 78452.63 | 4194.54 |
| | | 2op | 161898 | 160375.63 | 1109.26 | 159144 | 157132.77 | 1583.77 | 141935 | 130684.1 | 6141.8 | 86469 | 79188.47 | 3231.53 |
| | 50 | rnd | 162746 | 160471.1 | 1132.76 | 160589 | 158876.43 | 911.65 | 150935 | 145925.53 | 3291.4 | 104132 | 91803.3 | 8223.17 |
| | | 2op | 162249 | 160520.5 | 1085.35 | 160730 | 158892.73 | 1169.68 | 151433 | 145939.8 | 2608.27 | 112398 | 92416.3 | 8193 |
| 51 | 20 | rnd | 164000 | 161794.83 | 1136.45 | 162934 | 161398.3 | 875.86 | 157731 | 153888.8 | 3036.33 | 124177 | 115063 | 5922.68 |
| | | 2op | 163397 | 161841.53 | 873.27 | 163287 | 161262.33 | 892.93 | 158413 | 154041.47 | 3511.07 | 123419 | 114568.57 | 5124.49 |
| | 50 | rnd | 163507 | 162012 | 933.71 | 163659 | 161891.1 | 1026.9 | 160937 | 158261.8 | 1970.57 | 143968 | 135407.2 | 4585.84 |
| | | 2op | 164463 | 162224.7 | 863.98 | 162962 | 161635.9 | 1037.5 | 161405 | 158372.67 | 1341.44 | 141815 | 134105.57 | 5685.11 |

Table A.2540: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166521 | 165978.6 | 639.44 | 165944 | 164844.23 | 569.81 | 165464 | 162432.93 | 1609.54 | 152058 | 146735.3 | 3886.64 |
| | | 2op | 166340 | 165698.1 | 473.12 | 166057 | 164713.9 | 1052.89 | 164889 | 162280.4 | 1672.64 | 154846 | 147641.1 | 4789.01 |
| | 50 | rnd | 166721 | 166056.63 | 427.41 | 166128 | 165227.47 | 591.39 | 165563 | 163761.67 | 1314.04 | 160994 | 155828.77 | 3177.95 |
| | | 2op | 166766 | 166038.07 | 405.11 | 166108 | 165079.6 | 530.49 | 165321 | 163772.43 | 1004.63 | 161126 | 155878.7 | 2681.69 |
| 51 | 20 | rnd | 166804 | 166071.5 | 383.03 | 166224 | 165458.2 | 522.42 | 165952 | 164864.87 | 679.84 | 162721 | 160450 | 1623.43 |
| | | 2op | 166653 | 166064.7 | 468.7 | 166109 | 165195.2 | 606.23 | 166222 | 164690.33 | 898.57 | 163577 | 161271.83 | 1549.89 |
| | 50 | rnd | 166845 | 166240.07 | 438.93 | 166669 | 165782.27 | 511.05 | 166111 | 165329.67 | 631.75 | 164615 | 162920.9 | 1024.03 |
| | | 2op | 166713 | 166219.87 | 401.29 | 166495 | 165792.07 | 655.66 | 166041 | 165118.1 | 729.36 | 165265 | 162624.97 | 1168.46 |

Table A.2541: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163660 | 162131.57 | 896.68 | 163645 | 162129.27 | 790.93 | 156955 | 150867.83 | 4610.8 | 85301 | 77541.8 | 4320.09 |
| | | 2op | 163269 | 161938.07 | 665.41 | 163174 | 161702.3 | 735.9 | 156994 | 150490.5 | 4515.95 | 85335 | 77821.23 | 3728.91 |
| | 50 | rnd | 162940 | 161437.77 | 897.42 | 162874 | 161510.63 | 740.12 | 156768 | 147210.27 | 10277.05 | 94211 | 84483.33 | 5491.29 |
| | | 2op | 162993 | 161070.6 | 927.95 | 163228 | 161183.73 | 926.94 | 157308 | 149063.57 | 6401.2 | 94168 | 84620.43 | 6843.71 |
| 51 | 20 | rnd | 164863 | 163923.27 | 576.18 | 164833 | 163716.07 | 641.19 | 163220 | 161845.67 | 659.09 | 123708 | 115451.7 | 5110.25 |
| | | 2op | 164668 | 163629.67 | 726.1 | 164485 | 163468.9 | 605.39 | 162915 | 161472.73 | 991.95 | 123988 | 112891.63 | 6857.66 |
| | 50 | rnd | 164490 | 162865.77 | 754.08 | 164458 | 163256.33 | 670.63 | 163303 | 161665.17 | 743.35 | 146163 | 134524.37 | 4662.83 |
| | | 2op | 163968 | 162911.2 | 594.88 | 164415 | 163204.3 | 678.02 | 162656 | 161327.57 | 1025.82 | 146463 | 133655.33 | 6069.37 |

Table A.2542: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166681 | 166102.23 | 423.87 | 166465 | 165691.37 | 540.49 | 165025 | 163294.5 | 845.92 | 151417 | 143052.67 | 3797.21 |
| | | 2op | 166526 | 166032.2 | 421.98 | 166323 | 165644.3 | 456.74 | 164528 | 163367.83 | 774.55 | 148243 | 142641.73 | 4127.59 |
| | 50 | rnd | 166864 | 166270.43 | 365.5 | 166392 | 165903.53 | 345.71 | 165090 | 163647.43 | 1563.84 | 158194 | 153389.83 | 3435.43 |
| | | 2op | 166816 | 166298.03 | 353.08 | 166696 | 165964.3 | 455.01 | 165422 | 163881 | 1120.84 | 160055 | 154260.07 | 2891.48 |
| 51 | 20 | rnd | 166847 | 166379.87 | 271.48 | 166776 | 166219.47 | 326.63 | 166250 | 165556.03 | 367.39 | 160467 | 155008.5 | 2085.79 |
| | | 2op | 166617 | 166280.53 | 233.08 | 166564 | 166128.37 | 268.71 | 165967 | 165252.63 | 531.16 | 160760 | 154959.57 | 2196.74 |
| | 50 | rnd | 166934 | 166514.83 | 223.05 | 166862 | 166309.97 | 264.41 | 166298 | 165655.37 | 409.94 | 163616 | 160114.47 | 2603.04 |
| | | 2op | 166862 | 166363.83 | 293.51 | 166699 | 166134.47 | 333.44 | 166254 | 165446.6 | 349.07 | 163491 | 159554.43 | 2527.75 |

Table A.2543: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 159174 | 158101.8 | 497.79 | 157103 | 155423.6 | 896 | 142253 | 133083.77 | 5292.84 | 86153 | 79090.33 | 3301.03 |
| | | 2op | 159353 | 158342.9 | 540.36 | 156830 | 155332 | 1131.58 | 142253 | 130116.53 | 7507.29 | 91959 | 80409.47 | 4609.99 |
| | 50 | rnd | 158929 | 158090.57 | 488.78 | 157916 | 156495.93 | 902.9 | 151874 | 147523.7 | 3202.83 | 100811 | 89982.47 | 5860.87 |
| | | 2op | 159013 | 158376.63 | 400.62 | 157863 | 156843.47 | 693.99 | 151669 | 146608.57 | 3433.19 | 107738 | 92506.27 | 8338.04 |
| 51 | 20 | rnd | 159578 | 158855.43 | 404.95 | 158969 | 158267.83 | 465.48 | 155249 | 152861.3 | 1579.23 | 126017 | 114315.13 | 5198.18 |
| | | 2op | 160018 | 158963.73 | 428.28 | 159284 | 158399.87 | 496.24 | 156777 | 152596.07 | 2892.21 | 127996 | 115755.77 | 6608.37 |
| | 50 | rnd | 159459 | 158845.87 | 441.43 | 159376 | 158479.67 | 413.76 | 157898 | 155983.7 | 1058.08 | 144348 | 137168.17 | 4652.5 |
| | | 2op | 159531 | 158934.67 | 385.04 | 159474 | 158481.3 | 507.13 | 157434 | 155716 | 1075.18 | 146425 | 137313.87 | 5132.64 |

Table A.2544: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162902 | 162437.53 | 279.63 | 162161 | 161276.5 | 620.48 | 160933 | 159170.57 | 1098.12 | 153288 | 147353.93 | 3694.63 |
| | | 2op | 162886 | 162353.47 | 380.97 | 162460 | 161533.93 | 500.41 | 161186 | 159830.57 | 779.96 | 155694 | 148139.2 | 3983.08 |
| | 50 | rnd | 162920 | 162625.57 | 264.22 | 162385 | 161783.43 | 538.5 | 161647 | 160638.27 | 822.38 | 159187 | 155274.93 | 1867.78 |
| | | 2op | 163004 | 162571.13 | 284.08 | 162585 | 161890.13 | 527.62 | 162060 | 160665.13 | 832.72 | 158318 | 155442.83 | 2320.22 |
| 51 | 20 | rnd | 162933 | 162444.17 | 353.4 | 162489 | 161912.63 | 405.9 | 162098 | 161199.23 | 652.72 | 159245 | 157281.83 | 1459.7 |
| | | 2op | 162874 | 162524.67 | 157.59 | 162751 | 161963.33 | 449.87 | 162085 | 161265.7 | 475.81 | 160337 | 157864.53 | 1435.44 |
| | 50 | rnd | 163077 | 162623.6 | 271.16 | 162527 | 162261.77 | 240.14 | 162425 | 161798.37 | 283.1 | 161215 | 159535.77 | 1038.82 |
| | | 2op | 162942 | 162642.17 | 167.44 | 162686 | 162304.63 | 213.18 | 162606 | 161760.8 | 455.95 | 160798 | 159811.67 | 741.17 |

Table A.2545: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 158939 | 157997.7 | 557.85 | 157749 | 155397.07 | 931.88 | 141040 | 131513.9 | 6777.26 | 89979 | 77933.17 | 4654.11 |
| | | 2op | 159227 | 158142.53 | 591.65 | 156899 | 155377.3 | 1114.97 | 143941 | 133296.97 | 5766.93 | 85074 | 77535.1 | 4195.27 |
| | 50 | rnd | 158877 | 157980.63 | 546.38 | 157594 | 156664.23 | 593.57 | 151945 | 145597.33 | 2772.57 | 101491 | 90245.63 | 7872.14 |
| | | 2op | 159129 | 158100.23 | 464.17 | 157870 | 156652.53 | 601.68 | 153493 | 147418.53 | 3116.64 | 106073 | 90543.63 | 7721.83 |
| 51 | 20 | rnd | 159580 | 158748.53 | 458.28 | 159455 | 158486.4 | 517.41 | 155874 | 152364.77 | 1863.13 | 125118 | 113960.13 | 6292.61 |
| | | 2op | 160041 | 158939.13 | 484.86 | 159051 | 158238.43 | 417.86 | 156045 | 152972.87 | 2109.74 | 125928 | 115855.57 | 6247.61 |
| | 50 | rnd | 159650 | 159026.93 | 420.78 | 159350 | 158532.4 | 545.55 | 157196 | 155874.5 | 845.9 | 145978 | 134328.03 | 5570.32 |
| | | 2op | 159625 | 158684.3 | 523.42 | 159550 | 158444.53 | 465.93 | 157589 | 155752.93 | 970.58 | 143122 | 135629.17 | 4555.76 |

Table A.2546: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162771 | 162440.3 | 195.79 | 162379 | 161528.93 | 538.8 | 160676 | 159264.37 | 887.96 | 152876 | 146190.47 | 4035.68 |
| | | 2op | 162883 | 162371.13 | 380.13 | 162318 | 161638.93 | 406.54 | 161130 | 159332.47 | 1202.7 | 153726 | 147972.93 | 4415.12 |
| | 50 | rnd | 162959 | 162608.8 | 205.11 | 162450 | 161794.8 | 436.24 | 161538 | 160490.13 | 951.74 | 157334 | 154059.1 | 2511.09 |
| | | 2op | 162800 | 162566.7 | 149.08 | 162489 | 161809.47 | 381.66 | 161695 | 160474.43 | 843.77 | 158032 | 155073.3 | 2222.05 |
| 51 | 20 | rnd | 162877 | 162506.8 | 172.25 | 162488 | 161910.5 | 405.51 | 162168 | 161004.2 | 872.9 | 160264 | 157831.43 | 1419.46 |
| | | 2op | 162829 | 162494.2 | 191.76 | 162536 | 162032.53 | 271.12 | 162088 | 161231.37 | 645.52 | 160555 | 157897.53 | 1361.19 |
| | 50 | rnd | 162953 | 162654.57 | 207.68 | 162627 | 162282.6 | 237.61 | 162429 | 161740.3 | 426.01 | 160630 | 159278.03 | 1113.08 |
| | | 2op | 162904 | 162658.13 | 153.78 | 162825 | 162298.53 | 262.26 | 162430 | 161855.13 | 385.33 | 161149 | 159809.73 | 972.17 |

Table A.2547: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 159401 | 158523.6 | 488.57 | 159193 | 158361.1 | 449.47 | 153935 | 150694.93 | 2035.74 | 88367 | 76443.47 | 4608.23 |
| | | 2op | 159426 | 158639.8 | 362.42 | 159096 | 158378.53 | 431.01 | 154228 | 151204.7 | 2481.12 | 88681 | 76934.33 | 4781.56 |
| | 50 | rnd | 159280 | 158431.97 | 440.79 | 159635 | 158372.37 | 439.72 | 154778 | 149547.3 | 5984.71 | 99180 | 87525.2 | 5594.44 |
| | | 2op | 159313 | 158491.07 | 475.94 | 159169 | 158406.73 | 394.79 | 155456 | 150640.7 | 5098.73 | 103833 | 86165.7 | 5983.71 |
| 51 | 20 | rnd | 159929 | 159242.87 | 420.35 | 159759 | 159196.5 | 383.21 | 157726 | 157052.53 | 503.81 | 137609 | 120235.23 | 8874.03 |
| | | 2op | 159837 | 159306.4 | 295.41 | 160042 | 159396.77 | 330.12 | 158448 | 157251.77 | 574.54 | 140113 | 122029.67 | 8644.47 |
| | 50 | rnd | 159801 | 159054.37 | 398.47 | 159679 | 158961.77 | 417.11 | 158144 | 157287.57 | 568.48 | 145218 | 138237 | 4592.14 |
| | | 2op | 159563 | 158975 | 276.88 | 159569 | 159034.67 | 266.62 | 158185 | 157155.17 | 568.32 | 146575 | 139284.93 | 4064.41 |

Table A.2548: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 162829 | 162469.5 | 200.65 | 162501 | 162121.43 | 302.26 | 160793 | 159995.97 | 582.97 | 150579 | 143782.63 | 3766.75 |
| | | 2op | 162845 | 162477.93 | 222.38 | 162531 | 162201.43 | 185.35 | 161187 | 159902.53 | 596.59 | 151565 | 145692.67 | 3983.18 |
| | 50 | rnd | 162916 | 162704.63 | 119.26 | 162778 | 162311 | 217.39 | 161753 | 160572.37 | 780.8 | 158526 | 153840.1 | 2322.8 |
| | | 2op | 162909 | 162680.5 | 165.69 | 162689 | 162368.7 | 200.61 | 161502 | 160819.7 | 473.55 | 156517 | 153312.1 | 2259.54 |
| 51 | 20 | rnd | 162767 | 162469.23 | 185.8 | 162664 | 162356.6 | 182.24 | 162051 | 161642.17 | 247.9 | 158084 | 152803.07 | 2435.61 |
| | | 2op | 162959 | 162573.47 | 185.37 | 162809 | 162440.27 | 215.99 | 162079 | 161585.07 | 580.02 | 158096 | 153110.53 | 2283.13 |
| | 50 | rnd | 162976 | 162705.93 | 143.76 | 162787 | 162494.07 | 181.24 | 162309 | 161786.47 | 261.16 | 160185 | 156699.77 | 2187.53 |
| | | 2op | 162990 | 162683.63 | 124.86 | 162779 | 162494.43 | 140.94 | 162150 | 161800.63 | 207.52 | 160269 | 156603.57 | 2390.17 |

Table A.2549: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 175412 | 175026.27 | 259.3 | 173780 | 172155.6 | 1368.76 | 156400 | 145260.43 | 6214.49 | 94997 | 85151.17 | 4288.56 |
| | | 2op | 175420 | 174817.83 | 517.93 | 173855 | 172287.93 | 954.95 | 152900 | 140511 | 7437.94 | 92573 | 85444.33 | 3643.9 |
| | 50 | rnd | 175586 | 174945.57 | 459.96 | 174342 | 173416.87 | 565.41 | 170958 | 162208.13 | 4359.9 | 115008 | 98573.17 | 9014.67 |
| | | 2op | 175593 | 174942.43 | 439.93 | 174204 | 173504.93 | 702.74 | 167592 | 161855 | 3588.44 | 112115 | 99871.63 | 6681.86 |
| 51 | 20 | rnd | 175977 | 175401.23 | 255.96 | 175245 | 174644.43 | 535.3 | 172277 | 168736.13 | 1944.64 | 139415 | 126804.53 | 5851.7 |
| | | 2op | 175842 | 175388.9 | 312.69 | 175399 | 174824.73 | 314.89 | 172128 | 169046.17 | 2012.86 | 140366 | 125559.53 | 7049.82 |
| | 50 | rnd | 175832 | 175425.87 | 344.34 | 175692 | 175073.43 | 386.17 | 173764 | 172297.7 | 1118.99 | 154506 | 147037.93 | 6106.69 |
| | | 2op | 175897 | 175487.63 | 310.84 | 175528 | 174941.63 | 337.86 | 173849 | 172438.97 | 1145.36 | 159034 | 148680.77 | 5914.62 |

Table A.2550: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179528 | 179112.9 | 173.1 | 178711 | 178096.87 | 545.86 | 177739 | 175901.57 | 1115.16 | 170540 | 163318.73 | 3338.25 |
| | | 2op | 179484 | 179100.03 | 356.24 | 179201 | 178226.87 | 504.73 | 178186 | 175896.53 | 1147.39 | 171127 | 164615.3 | 2791.8 |
| | 50 | rnd | 179740 | 179343.33 | 268.42 | 179186 | 178444.3 | 617.4 | 178187 | 177072.07 | 755.41 | 175288 | 171804.97 | 2248.27 |
| | | 2op | 179707 | 179336.7 | 180.72 | 179058 | 178494.1 | 488.37 | 178777 | 176943.53 | 894.97 | 175820 | 171480.7 | 2446.8 |
| 51 | 20 | rnd | 179542 | 179255.5 | 166.23 | 179180 | 178783.6 | 213.91 | 178635 | 177929.57 | 568.58 | 176636 | 174660.5 | 1498.93 |
| | | 2op | 179671 | 179227.93 | 306.93 | 179299 | 178630.97 | 455.74 | 178546 | 178030.83 | 451.09 | 176497 | 174712.13 | 1382.57 |
| | 50 | rnd | 179701 | 179349.77 | 158.34 | 179504 | 178987.4 | 305.13 | 178877 | 178377.8 | 322.64 | 177633 | 175750.83 | 1136.73 |
| | | 2op | 179741 | 179410.53 | 218.88 | 179410 | 179043.03 | 172.2 | 179215 | 178454.67 | 624.59 | 177161 | 175857.23 | 917.16 |

Table A.2551: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 175244 | 174887.53 | 284.82 | 173706 | 172052.3 | 1182.07 | 156432 | 144384.63 | 6319.21 | 97318 | 84323.43 | 4382.72 |
| | | 2op | 175334 | 174945.8 | 281.97 | 173430 | 171970.03 | 1254.93 | 160417 | 144978.07 | 6199.3 | 92713 | 85221.67 | 3691.21 |
| | 50 | rnd | 175370 | 175049.6 | 227.59 | 174129 | 173315.67 | 541.52 | 168039 | 162461.87 | 3047.27 | 110633 | 100334.6 | 6020.12 |
| | | 2op | 175301 | 174985.6 | 253.72 | 174162 | 173569.9 | 324.28 | 170344 | 161650.93 | 4752.78 | 112828 | 98314.03 | 7507.18 |
| 51 | 20 | rnd | 175846 | 175447.63 | 277.8 | 175347 | 174779.37 | 419.15 | 172418 | 168598.5 | 2240.03 | 140550 | 126212.83 | 6069.02 |
| | | 2op | 176017 | 175300.77 | 430.78 | 175153 | 174558.93 | 421.9 | 171721 | 169111.7 | 2059.66 | 141837 | 125991.43 | 7436.77 |
| | 50 | rnd | 175742 | 175425.13 | 295.06 | 175521 | 174966.3 | 370.66 | 173292 | 172496.9 | 600.81 | 159413 | 149132.47 | 5670.25 |
| | | 2op | 175806 | 175293.07 | 382.79 | 175547 | 175096.03 | 293.08 | 173859 | 172635.8 | 788.83 | 162345 | 148250.57 | 6934.54 |

Table A.2552: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179413 | 179155.03 | 148.44 | 178844 | 178127.97 | 564.41 | 177669 | 176286.77 | 789.35 | 168665 | 163962.07 | 3611.73 |
| | | 2op | 179449 | 179033.07 | 424.73 | 179067 | 178023.67 | 695.87 | 177260 | 175878.2 | 1272.05 | 167101 | 161766 | 3705.64 |
| | 50 | rnd | 179586 | 179311.67 | 192.78 | 179140 | 178620.73 | 347.65 | 178239 | 177199.67 | 725.05 | 175309 | 170577.63 | 3031.17 |
| | | 2op | 179668 | 179289.23 | 237.72 | 179091 | 178543.33 | 438.73 | 178302 | 177225.57 | 784.13 | 174683 | 171443 | 1816.25 |
| 51 | 20 | rnd | 179566 | 179141.73 | 279.34 | 179243 | 178662.73 | 320.32 | 178786 | 177884.1 | 722.48 | 176848 | 174379.8 | 1413.75 |
| | | 2op | 179482 | 179171.07 | 244.45 | 179432 | 178618.27 | 543.18 | 178746 | 178009.7 | 486.8 | 177063 | 174320.9 | 1686.27 |
| | 50 | rnd | 179573 | 179359.13 | 151.53 | 179298 | 179014.97 | 239.49 | 179345 | 178444.67 | 486.58 | 177189 | 176039.9 | 861.08 |
| | | 2op | 179686 | 179434.17 | 125.68 | 179455 | 178920.23 | 419.75 | 179052 | 178379.2 | 443.17 | 177227 | 175575.7 | 915.8 |

Table A.2553: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 175663 | 174986.77 | 309.8 | 175233 | 174790.27 | 378.08 | 170211 | 167395.67 | 2130.76 | 93809 | 82763.87 | 5045.22 |
| | | 2op | 175405 | 174934.27 | 355.46 | 175492 | 174796.43 | 430.79 | 170474 | 167631.63 | 1722.36 | 91352 | 84524.7 | 3686.62 |
| | 50 | rnd | 175165 | 174791.93 | 307.31 | 175274 | 174781.47 | 254.82 | 171205 | 166496.73 | 6417.28 | 112134 | 95018.07 | 7481.45 |
| | | 2op | 175212 | 174836.23 | 284.77 | 175166 | 174803.7 | 287.14 | 171407 | 168107.47 | 4084.37 | 109584 | 93879.27 | 7716.94 |
| 51 | 20 | rnd | 175671 | 175286.9 | 203.14 | 175650 | 175220.8 | 239.19 | 173493 | 172866.87 | 367.96 | 152368 | 136885.63 | 10010.6 |
| | | 2op | 175741 | 175339.97 | 189.82 | 175632 | 175285.83 | 212.91 | 173831 | 173045.83 | 395.99 | 149611 | 136709.2 | 7928.59 |
| | 50 | rnd | 175204 | 174813.23 | 288.02 | 175278 | 174983.37 | 201.17 | 173680 | 172961.9 | 377.63 | 166188 | 155467.7 | 5846.69 |
| | | 2op | 175268 | 174954.73 | 224.63 | 175313 | 174866.1 | 280.98 | 173630 | 173114.07 | 305.45 | 164162 | 156758.8 | 4954.3 |

Table A.2554: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179380 | 179146.57 | 179.34 | 179227 | 178832.67 | 295.85 | 177138 | 176151.2 | 687.89 | 168990 | 160346.6 | 3811.83 |
| | | 2op | 179592 | 179197.43 | 203.27 | 179237 | 178851.9 | 273.87 | 177182 | 176255.83 | 655.13 | 166615 | 160628.07 | 3845.71 |
| | 50 | rnd | 179639 | 179389.1 | 158.29 | 179398 | 179060.13 | 177.6 | 177988 | 176875.77 | 1148.25 | 174046 | 170309.3 | 2270.35 |
| | | 2op | 179592 | 179383.2 | 137.16 | 179198 | 178992.33 | 177.57 | 177873 | 177219.3 | 823.37 | 174103 | 170893.8 | 1825.55 |
| 51 | 20 | rnd | 179547 | 179244.4 | 166.48 | 179359 | 179138.07 | 158.82 | 178932 | 178214.43 | 314.96 | 173175 | 168417.7 | 2656.9 |
| | | 2op | 179753 | 179285.87 | 173.63 | 179663 | 179179.93 | 221.86 | 178758 | 178155.13 | 466.98 | 174145 | 168659.27 | 2613.8 |
| | 50 | rnd | 179748 | 179417.83 | 140.54 | 179541 | 179224.37 | 154.72 | 178903 | 178539.3 | 213.11 | 176193 | 172204.37 | 2880.42 |
| | | 2op | 179692 | 179426.7 | 122.61 | 179638 | 179241.7 | 158.09 | 179030 | 178487.5 | 304.83 | 175787 | 172618.23 | 2012.28 |

Table A.2555: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 329775 | 326397.93 | 1789.86 | 317939 | 310510.17 | 4764.33 | 246132 | 222205.27 | 14337.03 | 165099 | 153315.27 | 5733.81 |
| | | 2op | 330805 | 327166.73 | 1493.19 | 319501 | 309117.8 | 6054.02 | 243316 | 222362.67 | 14189.57 | 169731 | 153749.57 | 5683.23 |
| | 50 | rnd | 329597 | 327124.17 | 1509.49 | 324277 | 319445.03 | 2893.8 | 281748 | 272617.77 | 6476.3 | 179128 | 163876.13 | 6925.18 |
| | | 2op | 331793 | 327206.2 | 1689.76 | 323250 | 319680.27 | 2737.25 | 286629 | 270651.6 | 11095.17 | 177802 | 160770.9 | 7808.47 |
| 51 | 20 | rnd | 332868 | 329317.77 | 1618.73 | 329886 | 326796.6 | 1724.43 | 303443 | 293675.03 | 6236.1 | 218410 | 202270.7 | 7708.67 |
| | | 2op | 331067 | 328809.37 | 1129.85 | 330752 | 327009.6 | 1834.07 | 305802 | 293934.43 | 9318.12 | 210908 | 200342.93 | 6422.67 |
| | 50 | rnd | 332339 | 329462.3 | 1576.7 | 331589 | 328253.43 | 1351.99 | 319072 | 310715.1 | 4599.16 | 246479 | 235497.6 | 7896.33 |
| | | 2op | 332834 | 330113.13 | 1745.57 | 332310 | 328862.33 | 1457.81 | 320762 | 311277.87 | 4847.04 | 249150 | 229842.43 | 13249.25 |

Table A.2556: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342156 | 340442.9 | 918.06 | 340719 | 338558.2 | 1186.12 | 334345 | 332042.27 | 1745.83 | 310645 | 296501.2 | 7625.45 |
| | | 2op | 342267 | 340709 | 895.07 | 339928 | 338238 | 1083.04 | 337362 | 332623.8 | 2871.63 | 309660 | 296060.8 | 7261.01 |
| | 50 | rnd | 342618 | 341365 | 801.11 | 341484 | 339082.4 | 1056.68 | 339344 | 335960.77 | 2064.84 | 325140 | 317026.43 | 4443.34 |
| | | 2op | 342410 | 341402.23 | 567.32 | 341361 | 339013.77 | 1161.82 | 340014 | 336601.3 | 1591.88 | 327581 | 316494.67 | 5621.96 |
| 51 | 20 | rnd | 342044 | 340728.87 | 955.17 | 341555 | 339181.27 | 1573.6 | 340136 | 338087.27 | 1195.84 | 333689 | 327286.23 | 4406.71 |
| | | 2op | 342013 | 340595.23 | 878.11 | 341524 | 340032.6 | 894.42 | 340103 | 337428.23 | 1449.19 | 333076 | 326737.77 | 4247.41 |
| | 50 | rnd | 342643 | 341506.3 | 700.34 | 341850 | 339976.47 | 813.4 | 341592 | 339211.37 | 1152.13 | 337780 | 332625.43 | 2309.23 |
| | | 2op | 342698 | 341534.7 | 640.43 | 342119 | 340287.67 | 870.65 | 341653 | 339149.9 | 1329.2 | 337874 | 332352.93 | 2611.68 |

Table A.2557: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 327943 | 325324.2 | 1910.85 | 315738 | 307302.07 | 5482.21 | 242609 | 224263.43 | 11757.8 | 163814 | 152892.97 | 4616.2 |
| | | 2op | 328882 | 325634.77 | 1824.97 | 317556 | 309951.2 | 5304.38 | 241052 | 219956.07 | 13375.68 | 161612 | 151742.77 | 5030.46 |
| | 50 | rnd | 329606 | 326499.4 | 1982.54 | 323946 | 318162.23 | 3328.95 | 277342 | 263744.7 | 10057.06 | 175870 | 162180.57 | 7090.25 |
| | | 2op | 329820 | 326609.9 | 1916.67 | 325099 | 319109.93 | 2655.46 | 282870 | 265367.47 | 10257.59 | 178001 | 160997.2 | 7177.86 |
| 51 | 20 | rnd | 331031 | 328234.8 | 1795.92 | 330651 | 326572.23 | 1927.87 | 303427 | 291155.8 | 7945.54 | 214544 | 199326.7 | 8420.46 |
| | | 2op | 333104 | 329081 | 1828.82 | 332606 | 327077.7 | 2501.89 | 302381 | 289699.73 | 9691.95 | 220468 | 201661.17 | 7853.7 |
| | 50 | rnd | 332459 | 329805.9 | 1569.37 | 331899 | 328669.73 | 1732.82 | 320478 | 310577.97 | 4349.58 | 247334 | 231678.7 | 8122.26 |
| | | 2op | 332173 | 329054.37 | 1730.15 | 333063 | 328614.47 | 1933.29 | 321288 | 311783.8 | 4848.07 | 257917 | 232771.37 | 11564.22 |

Table A.2558: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342209 | 340433.2 | 744.23 | 340351 | 337914.77 | 1439.68 | 336586 | 331340.77 | 2877.79 | 308904 | 293301.77 | 9153.69 |
| | | 2op | 342566 | 340259.37 | 1099.11 | 340595 | 338314.07 | 1422.76 | 337009 | 331995.13 | 2693.04 | 309069 | 291880 | 8812.16 |
| | 50 | rnd | 342281 | 341104.93 | 678.95 | 340854 | 339513.4 | 806.37 | 338868 | 335316.67 | 1999.37 | 323419 | 312526.1 | 5726.88 |
| | | 2op | 342301 | 340926.67 | 853.98 | 341173 | 338474.37 | 1248.89 | 338828 | 335568.47 | 1767.94 | 326122 | 312271.2 | 6590.41 |
| 51 | 20 | rnd | 341875 | 340701.67 | 645.09 | 341233 | 339256.23 | 1261.35 | 340609 | 337293.1 | 1605.94 | 335389 | 328538.83 | 3269.08 |
| | | 2op | 342147 | 340851.2 | 758.45 | 340644 | 339001.03 | 982.61 | 340406 | 337373.17 | 1590.48 | 333596 | 327661.3 | 3268.9 |
| | 50 | rnd | 342482 | 341671.43 | 514.46 | 341661 | 340459.87 | 784.29 | 341715 | 339253.33 | 1339.19 | 337142 | 332924.67 | 2787.3 |
| | | 2op | 342522 | 341355.87 | 603.13 | 341817 | 340001.77 | 947 | 340959 | 339080.43 | 1284.57 | 337326 | 333098.07 | 2383.24 |

Table A.2559: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 330810 | 328686.7 | 1367.72 | 331066 | 328417.23 | 1366.59 | 294919 | 280334.3 | 10322.29 | 166278 | 154876.67 | 4920.03 |
| | | 2op | 331729 | 329067.67 | 1417 | 331513 | 328347.7 | 1541.05 | 296253 | 282916.13 | 7999 | 170516 | 156307.3 | 5609.88 |
| | 50 | rnd | 331858 | 328118.57 | 1836.94 | 330725 | 327443.93 | 1842.98 | 306561 | 272875.6 | 24158.68 | 165067 | 156537.7 | 4354.54 |
| | | 2op | 332545 | 327885.9 | 2057.98 | 330582 | 328231.2 | 1312.04 | 302197 | 277481.23 | 24605.35 | 168162 | 156947.4 | 6416.18 |
| 51 | 20 | rnd | 334235 | 332054.27 | 1151.65 | 335082 | 332087.83 | 1314.12 | 328157 | 324340.23 | 2490.07 | 232743 | 204770.57 | 11901.72 |
| | | 2op | 334285 | 331519.77 | 1107.37 | 335306 | 332097.3 | 1299.43 | 327580 | 323605.83 | 3001.01 | 228970 | 207730.23 | 11380.84 |
| | 50 | rnd | 333566 | 330661.9 | 1285 | 332650 | 330239.43 | 1346.11 | 330834 | 327040.4 | 2067.09 | 254877 | 241223.07 | 11237.85 |
| | | 2op | 333617 | 330501.47 | 1491.22 | 333904 | 330805.8 | 1368.04 | 330322 | 327040.1 | 2058.76 | 267699 | 239520.9 | 15344.17 |

Table A.2560: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 342380 | 340911.33 | 894.32 | 341633 | 340012.13 | 986.83 | 336150 | 333342.37 | 1813.71 | 298535 | 283735.33 | 8629.3 |
| | | 2op | 342041 | 340934.67 | 685.95 | 341481 | 340245.67 | 704.68 | 336735 | 332916.8 | 2461.67 | 297980 | 283401.6 | 7890.21 |
| | 50 | rnd | 342468 | 341456.03 | 642.35 | 342155 | 340675.43 | 791.6 | 337955 | 335040.1 | 2419.28 | 320894 | 309304.93 | 7326.12 |
| | | 2op | 342633 | 341560.37 | 585.96 | 341720 | 340591.6 | 748.88 | 339561 | 335560.57 | 2073.86 | 317916 | 309242.9 | 6486.84 |
| 51 | 20 | rnd | 342233 | 341186.63 | 728.27 | 342111 | 340953.07 | 746.14 | 341399 | 339001.5 | 1593.22 | 324656 | 302073.7 | 9874.24 |
| | | 2op | 342572 | 341197.03 | 756.86 | 342452 | 341058.9 | 798.27 | 340786 | 338951.6 | 942.13 | 325328 | 302498.8 | 8552.94 |
| | 50 | rnd | 342641 | 341771.07 | 505.39 | 342079 | 341461.13 | 558.86 | 341317 | 339784.2 | 773.5 | 333405 | 316434.53 | 12154.5 |
| | | 2op | 342616 | 341655.3 | 543.19 | 342473 | 341303.07 | 593.99 | 341709 | 339864.07 | 828.72 | 332548 | 316553.03 | 11897 |

Table A.2561: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 215292 | 210875.07 | 1777.22 | 206442 | 200263.3 | 2811.55 | 162994 | 153423.37 | 5253.89 | 154044 | 147559.23 | 3170.42 |
| | | 2op | 216553 | 211875.07 | 2507.72 | 206573 | 198667.83 | 4128.82 | 169192 | 155185.83 | 4822.18 | 158643 | 149441.13 | 3875.91 |
| | 50 | rnd | 214376 | 210505.53 | 2385.02 | 211337 | 206263.77 | 2882.34 | 178160 | 168000.17 | 7092.84 | 153813 | 147141.63 | 3584.06 |
| | | 2op | 216685 | 210718.57 | 2396.73 | 211820 | 204971.8 | 3524.19 | 181063 | 169999.9 | 7377.51 | 151490 | 146388.83 | 3145.94 |
| 51 | 20 | rnd | 219666 | 215998.6 | 2188.04 | 221580 | 215133.23 | 2584.06 | 200533 | 193252.93 | 4230.78 | 171512 | 166344.33 | 3461.28 |
| | | 2op | 221948 | 216868.4 | 2119.18 | 219502 | 215943.83 | 2222.3 | 206264 | 193316.73 | 5471.85 | 173798 | 165860.03 | 3786.08 |
| | 50 | rnd | 218667 | 215103.47 | 2591.87 | 218338 | 214998.43 | 2104.02 | 210072 | 203731.23 | 3729.38 | 175565 | 163627.73 | 4782.16 |
| | | 2op | 219352 | 215645.43 | 2400.44 | 219442 | 215223.6 | 2385.18 | 211567 | 203677.07 | 3870.81 | 174131 | 165545.07 | 3294.39 |

Table A.2562: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226918 | 225290.5 | 912.54 | 225944 | 224649.87 | 775.93 | 225490 | 222084.67 | 1790.03 | 218664 | 204891.93 | 4632.2 |
| | | 2op | 227041 | 225886.53 | 595.51 | 226210 | 224799.8 | 996.5 | 225233 | 222482.27 | 1854.61 | 215009 | 205655.63 | 3998.09 |
| | 50 | rnd | 227306 | 225474.83 | 722.28 | 226568 | 224954.17 | 841.63 | 226336 | 223657.87 | 1275.59 | 221604 | 216256.7 | 2963.73 |
| | | 2op | 226837 | 225902.23 | 669.89 | 226491 | 225494.1 | 600.46 | 226037 | 224210.7 | 1212.54 | 219536 | 215104.07 | 2635.19 |
| 51 | 20 | rnd | 226731 | 225621.3 | 641.73 | 226801 | 225554.97 | 674.08 | 226447 | 224408.77 | 968.81 | 224555 | 219825.5 | 2222.18 |
| | | 2op | 227190 | 225910.23 | 841.42 | 226839 | 225788.03 | 774.59 | 226616 | 225021.43 | 879.79 | 224821 | 220510.73 | 1999.16 |
| | 50 | rnd | 226929 | 225584.43 | 663.36 | 227072 | 225650.8 | 685.89 | 226664 | 224748.13 | 834.64 | 224389 | 222143.27 | 1275.68 |
| | | 2op | 226909 | 225753.07 | 540.59 | 226985 | 226000.67 | 531.73 | 226867 | 225515.6 | 715.28 | 225778 | 222824.23 | 1612.61 |

Table A.2563: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 216661 | 210794.83 | 2856.45 | 208797 | 199693.93 | 3555.44 | 161804 | 153065.2 | 4454.38 | 152120 | 146003.73 | 3209.29 |
| | | 2op | 215703 | 211637.97 | 1877.37 | 205965 | 199997 | 3239.9 | 162155 | 154331.97 | 3729.54 | 156604 | 147845.93 | 3558.02 |
| | 50 | rnd | 215491 | 210800.53 | 2448.8 | 210877 | 204505.73 | 3500.23 | 175243 | 168002.87 | 4813.05 | 153604 | 145826.37 | 3428.69 |
| | | 2op | 214618 | 210394.07 | 2028.31 | 209476 | 204597.5 | 2564.23 | 182363 | 168191.07 | 6166.06 | 152921 | 145483.87 | 2837.25 |
| 51 | 20 | rnd | 222500 | 216166.1 | 2662.97 | 219677 | 214623.53 | 1911.89 | 203699 | 192005.9 | 7500.4 | 175498 | 166834.77 | 3797.4 |
| | | 2op | 220740 | 216357.9 | 2173.05 | 219978 | 215271.87 | 2250.94 | 204489 | 193581.57 | 3861.12 | 174256 | 166041.27 | 4248.17 |
| | 50 | rnd | 218077 | 214646.43 | 2270.47 | 219183 | 214394.87 | 2656.53 | 211875 | 204096.8 | 3362.59 | 170891 | 162709.43 | 3586.92 |
| | | 2op | 220846 | 216296.93 | 2281.52 | 219710 | 214701.63 | 2427.29 | 209060 | 201676.07 | 4111 | 173376 | 164143.27 | 3527.14 |

Table A.2564: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226479 | 225603.2 | 711.48 | 226862 | 224890.43 | 1052.2 | 224556 | 222107.53 | 1658.48 | 211538 | 204409.93 | 4738.66 |
| | | 2op | 226520 | 225655 | 599.06 | 226803 | 225131.6 | 1182.8 | 224880 | 221953.63 | 1737.53 | 209283 | 204759.8 | 3082.18 |
| | 50 | rnd | 226594 | 225287.6 | 780.55 | 226586 | 224972.53 | 1023.64 | 225507 | 223518.63 | 1448.1 | 218695 | 213643.7 | 3067.15 |
| | | 2op | 227137 | 225834.23 | 663.99 | 226851 | 225686.43 | 734.63 | 225927 | 224048.37 | 982.05 | 220027 | 212705.13 | 3560.28 |
| 51 | 20 | rnd | 226995 | 225616.23 | 708.18 | 226908 | 225507.87 | 777.25 | 226092 | 224377.9 | 872.75 | 222605 | 219620.93 | 2253.93 |
| | | 2op | 227120 | 225966.47 | 588.21 | 226928 | 225845.7 | 654.42 | 226171 | 224892.7 | 871.74 | 224561 | 220403.1 | 2104.3 |
| | 50 | rnd | 226850 | 225574 | 729.49 | 227052 | 225772.83 | 567.09 | 226840 | 224941.27 | 954.47 | 224714 | 222547.3 | 1385.59 |
| | | 2op | 226866 | 225752.63 | 677.31 | 227161 | 225815.53 | 799.01 | 226418 | 225253.87 | 814.92 | 225491 | 222839.3 | 1300.3 |

Table A.2565: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 224161 | 220947.07 | 1816.5 | 223292 | 219936.27 | 2006.34 | 175509 | 164047.73 | 7074.38 | 154336 | 146476.53 | 3191.9 |
| | | 2op | 223181 | 221025.83 | 1537.06 | 223463 | 220955.17 | 1879.81 | 173772 | 162199.47 | 6792.27 | 157142 | 147649.23 | 3200.2 |
| | 50 | rnd | 221883 | 218644.17 | 1953.97 | 222063 | 217874.27 | 2170.89 | 183365 | 170613.33 | 6955.8 | 157056 | 145906.27 | 3179.59 |
| | | 2op | 222534 | 219548.17 | 2069.6 | 222116 | 218720.4 | 2109.65 | 181401 | 171640.6 | 7042.44 | 155673 | 147029.67 | 3544.94 |
| 51 | 20 | rnd | 226835 | 224550 | 1264.42 | 226026 | 224833.23 | 707.08 | 216178 | 202099.47 | 8759.92 | 170540 | 165059 | 3531.07 |
| | | 2op | 226697 | 225429.17 | 682.77 | 226697 | 225453.27 | 784.47 | 214145 | 205528.13 | 7781.38 | 171774 | 165466.27 | 3986.46 |
| | 50 | rnd | 226387 | 224506.3 | 930.49 | 226017 | 224072.3 | 1209.42 | 217553 | 213281.77 | 3141.38 | 172228 | 162746.63 | 4024.09 |
| | | 2op | 225796 | 224608.53 | 803.29 | 226285 | 224718.47 | 749.43 | 219934 | 213941 | 4579.02 | 168898 | 162648.43 | 3018.31 |

Table A.2566: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226625 | 225591.97 | 644.79 | 226603 | 225134.57 | 932.89 | 223929 | 221937.83 | 1316.66 | 205699 | 199480.7 | 3322 |
| | | 2op | 227265 | 225988.1 | 573.59 | 227263 | 225924.27 | 580.49 | 225097 | 222888.4 | 1186.23 | 207111 | 200188.93 | 4278.93 |
| | 50 | rnd | 226986 | 225554.97 | 713.97 | 226106 | 225181.63 | 584.14 | 225769 | 223782.37 | 875.05 | 216243 | 211130.4 | 3109.46 |
| | | 2op | 227054 | 226261.87 | 443.85 | 226997 | 226192.97 | 578.25 | 225890 | 224293.4 | 851.45 | 216222 | 211873.67 | 2497.1 |
| 51 | 20 | rnd | 227242 | 225663.23 | 771.34 | 226728 | 225561.03 | 716.3 | 226712 | 225047.83 | 749.4 | 219029 | 215463.13 | 2068.52 |
| | | 2op | 226690 | 226136.77 | 337.09 | 226690 | 226104.03 | 351.28 | 226646 | 225655.8 | 516.99 | 222225 | 216328.57 | 2473.69 |
| | 50 | rnd | 227216 | 225787.63 | 645.19 | 226692 | 225637.13 | 638.71 | 226228 | 224849.3 | 867.77 | 222999 | 219501 | 2038.31 |
| | | 2op | 227178 | 226303.3 | 429.83 | 226910 | 226254.93 | 410.47 | 226655 | 225713.23 | 532.54 | 223157 | 220334.37 | 1767.71 |

Table A.2567: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 430051 | 426448.3 | 2539.87 | 408667 | 390233.73 | 8697.43 | 340200 | 333208.77 | 4153.91 | 337258 | 331726.27 | 3549.83 |
| | | 2op | 434195 | 427142.1 | 2600.7 | 405433 | 389908.5 | 8510.12 | 339074 | 332000.3 | 3595.17 | 340139 | 332666.1 | 2853.28 |
| | 50 | rnd | 430741 | 426365.8 | 2700.12 | 417041 | 408775.13 | 5682.16 | 347741 | 337050.53 | 5495.06 | 338730 | 330123.6 | 4285.22 |
| | | 2op | 430879 | 426140.97 | 2466.32 | 417743 | 409149.33 | 5309.99 | 347093 | 334790.83 | 5298.27 | 339925 | 329822.63 | 4151.56 |
| 51 | 20 | rnd | 435345 | 431327.5 | 2149.5 | 432730 | 424904.07 | 3627.14 | 391437 | 373012.17 | 8562.25 | 361023 | 352532.9 | 5220.54 |
| | | 2op | 434356 | 430378.97 | 1960.12 | 431111 | 424127.47 | 3407.09 | 386755 | 371048.6 | 9503.27 | 359098 | 351655.07 | 3624.68 |
| | 50 | rnd | 434757 | 430318.8 | 2840.08 | 434101 | 428506.9 | 3312.04 | 413335 | 395243.57 | 7519.91 | 354703 | 347440 | 4174.17 |
| | | 2op | 433428 | 429561.13 | 2263.78 | 431103 | 427550.13 | 2055.6 | 406486 | 393376.97 | 8220.13 | 357081 | 347149.1 | 4400.04 |

Table A.2568: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441176 | 439036.5 | 1249.5 | 440021 | 438328.03 | 1241.47 | 439328 | 435050.23 | 2088.86 | 422188 | 413303.33 | 5680.09 |
| | | 2op | 441458 | 439457.73 | 1074.76 | 442024 | 439295.27 | 1256.7 | 440643 | 436658.13 | 1889.56 | 421429 | 414395.93 | 4577.13 |
| | 50 | rnd | 442534 | 439558.3 | 1372.33 | 440277 | 438455.03 | 1016.92 | 439191 | 436714.77 | 1792.22 | 432345 | 426887.43 | 3665.45 |
| | | 2op | 440960 | 439604.87 | 858.97 | 441772 | 439517.03 | 1062.87 | 439968 | 438326.83 | 777.06 | 435014 | 428308.17 | 3211.65 |
| 51 | 20 | rnd | 441150 | 438464.03 | 1332.96 | 440626 | 438849.87 | 1005.25 | 440608 | 437688.87 | 1208.64 | 436365 | 432641.43 | 1888.6 |
| | | 2op | 441166 | 439266.03 | 1147.74 | 441467 | 439475.53 | 1177.91 | 441273 | 439339.53 | 1007.92 | 437380 | 433862.27 | 1914.91 |
| | 50 | rnd | 440943 | 438861.93 | 1128.36 | 442189 | 439370.6 | 1273.13 | 440140 | 438237.53 | 1383.63 | 436654 | 434598.8 | 1363.55 |
| | | 2op | 441019 | 439224.47 | 855.51 | 440546 | 439258 | 843.16 | 441001 | 439104.43 | 1251.39 | 438482 | 435788.1 | 1419.42 |

Table A.2569: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 432269 | 426441.2 | 3051.65 | 406476 | 388355.03 | 9920 | 343303 | 331770.1 | 4857.31 | 336220 | 329084.77 | 4113.66 |
| | | 2op | 431533 | 425963 | 2760.54 | 400994 | 390242.87 | 6763.75 | 338266 | 331305.43 | 3893.64 | 340109 | 332043.33 | 4179.89 |
| | 50 | rnd | 431786 | 426180.37 | 2999.26 | 416578 | 406899.97 | 5607.45 | 349189 | 333858.3 | 5292.17 | 334688 | 326475.57 | 4358.34 |
| | | 2op | 430875 | 425617.4 | 2776.65 | 415712 | 408028.33 | 5073.14 | 347923 | 334910.7 | 5967.46 | 338253 | 329965.6 | 4198.28 |
| 51 | 20 | rnd | 435364 | 431093 | 2335.46 | 431517 | 425566.73 | 3382.6 | 389574 | 374127.33 | 7607.13 | 359772 | 351797.4 | 3970.03 |
| | | 2op | 434303 | 430490.2 | 1726.01 | 432554 | 424228 | 2944.98 | 385109 | 370182.8 | 7421.9 | 359935 | 352695.2 | 4109.6 |
| | 50 | rnd | 435905 | 430686.9 | 2409.23 | 432726 | 428578.27 | 2871.41 | 406178 | 394894.23 | 6312.25 | 353400 | 346022.53 | 4195.98 |
| | | 2op | 432873 | 429465.33 | 1842.35 | 431744 | 427338.5 | 2201.61 | 404921 | 394230.67 | 6400.6 | 352936 | 347550.87 | 4047.89 |

Table A.2570: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441181 | 439025.03 | 1094.8 | 440735 | 438118.57 | 1539.96 | 438285 | 435364.3 | 1918.08 | 420272 | 412523.7 | 5540.82 |
| | | 2op | 442840 | 439554.43 | 1074.05 | 442349 | 439221.77 | 1078.79 | 439032 | 436505.8 | 1565.33 | 422266 | 413992.3 | 4486.97 |
| | 50 | rnd | 441189 | 438819.37 | 1218.15 | 441725 | 438464.9 | 1189.75 | 439830 | 437007 | 1449.21 | 432508 | 425214.5 | 2937.76 |
| | | 2op | 440775 | 439289.13 | 931.04 | 441445 | 439441.93 | 1123 | 439817 | 437852.5 | 1171.99 | 433380 | 426595.27 | 4095.61 |
| 51 | 20 | rnd | 440894 | 439144.93 | 1118.12 | 440842 | 438626.3 | 1260.79 | 440391 | 438260.9 | 1294.05 | 438681 | 432221.73 | 2384.63 |
| | | 2op | 440535 | 439219.53 | 719.74 | 441320 | 439268.93 | 1189.06 | 441037 | 439148.63 | 1187.04 | 437406 | 434548.5 | 2075.16 |
| | 50 | rnd | 442159 | 439178.27 | 1071.22 | 441521 | 439318.23 | 1101.05 | 440391 | 438273.93 | 1253.11 | 437608 | 434313.1 | 2092.64 |
| | | 2op | 441453 | 439530.23 | 896.49 | 441406 | 439507.33 | 858.18 | 442008 | 439350.27 | 1000.06 | 439902 | 436629.33 | 1735.46 |

Table A.2571: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 437759 | 434155.2 | 1957.74 | 436940 | 432373.93 | 2459.91 | 349701 | 339153.67 | 4662.85 | 339468 | 329051.73 | 4614.1 |
| | | 2op | 436701 | 433859.07 | 1467.59 | 435174 | 432334.27 | 1678.19 | 354763 | 339302.13 | 5062.73 | 339781 | 334082.23 | 3235.75 |
| | 50 | rnd | 437916 | 434794.37 | 1672.59 | 438583 | 434182.9 | 2149.58 | 355744 | 343623.5 | 6754.79 | 335818 | 328532.77 | 3837.34 |
| | | 2op | 436917 | 433678.07 | 1935.99 | 437559 | 433371.77 | 1442.63 | 362852 | 340302.87 | 8019.2 | 339867 | 331016.87 | 3685.67 |
| 51 | 20 | rnd | 440539 | 438129.43 | 1294.66 | 440539 | 438186.67 | 1365.55 | 412067 | 391446.93 | 14262.77 | 358296 | 350022.9 | 4495.71 |
| | | 2op | 438654 | 436962.13 | 785.7 | 438101 | 436828.53 | 691.61 | 414041 | 390799.07 | 13710.02 | 358597 | 351162.03 | 3664.94 |
| | 50 | rnd | 440188 | 437712.33 | 1458.75 | 440784 | 437628.03 | 1577.36 | 419945 | 407774.87 | 6779.25 | 356417 | 345386.9 | 4866.26 |
| | | 2op | 438762 | 436907.07 | 788.83 | 438175 | 437013.33 | 632.57 | 421355 | 408363.6 | 7316.09 | 354947 | 347272.07 | 4843.22 |

Table A.2572: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441543 | 439113.67 | 1220.99 | 441406 | 439182.37 | 1244.01 | 439012 | 434648 | 1927.48 | 418740 | 409885.33 | 4815.27 |
| | | 2op | 441186 | 439195.13 | 840.4 | 441051 | 439341.93 | 817.72 | 439096 | 436294.8 | 1339.67 | 417801 | 410756.07 | 3550.19 |
| | 50 | rnd | 441295 | 438957.47 | 1134.19 | 441165 | 438894.13 | 1152.36 | 439280 | 436284.37 | 1466.22 | 428459 | 422837.17 | 2900.58 |
| | | 2op | 440485 | 439236.83 | 693.92 | 440557 | 439220.7 | 791.07 | 440109 | 437767.77 | 1400.13 | 429947 | 424794.67 | 3032.05 |
| 51 | 20 | rnd | 441037 | 439420.7 | 932.38 | 441021 | 439361.37 | 968.2 | 440816 | 437864.3 | 1598.2 | 433960 | 422161 | 4797.47 |
| | | 2op | 439771 | 438614.33 | 668.48 | 439771 | 438605.23 | 678.37 | 441352 | 439156.6 | 1099.01 | 433070 | 423225.97 | 4200.8 |
| | 50 | rnd | 441676 | 439195.27 | 1246.57 | 441627 | 439107.83 | 1234.43 | 441514 | 438807.17 | 1080.16 | 437287 | 430088.37 | 4608.36 |
| | | 2op | 440338 | 439077.37 | 640.89 | 440330 | 438971.4 | 646.68 | 440608 | 439065.9 | 808.56 | 437597 | 431773.87 | 4487.14 |

Table A.2573: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 113575 | 112556.07 | 813.57 | 111336 | 108653.17 | 1737.9 | 95619 | 90866.4 | 2231.06 | 93178 | 89122.4 | 1732.68 |
| | | 2op | 115261 | 113283.27 | 713.56 | 112788 | 109673.13 | 1687.72 | 97395 | 91803.67 | 2581.7 | 92453 | 89847.53 | 1511.05 |
| | 50 | rnd | 114871 | 112575.4 | 911.77 | 113036 | 110726.63 | 1120.7 | 102564 | 97639.9 | 2877.87 | 91549 | 88571.87 | 1253.65 |
| | | 2op | 114990 | 113021.03 | 863.36 | 113295 | 111173.43 | 1196.6 | 104248 | 97353.23 | 2946.05 | 91647 | 89325.27 | 1182.83 |
| 51 | 20 | rnd | 114950 | 113708.93 | 733.05 | 115182 | 113452.43 | 919.31 | 109618 | 105826.87 | 2503.71 | 100184 | 96635.27 | 1864.06 |
| | | 2op | 115437 | 114236.1 | 842.82 | 115610 | 113948.5 | 894.68 | 110601 | 107267.5 | 2210.12 | 102220 | 97415.17 | 2310.44 |
| | 50 | rnd | 115523 | 113475.8 | 819.19 | 114810 | 113248.13 | 933.71 | 112530 | 110192.07 | 1770.82 | 99415 | 95650.53 | 1874.48 |
| | | 2op | 115382 | 113978.53 | 734.8 | 115581 | 113865.3 | 1017.38 | 113561 | 110852.57 | 1913.65 | 99296 | 95798.4 | 1705.21 |

Table A.2574: *j02459_7*: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115759 | 114879.77 | 445.3 | 115982 | 114780.87 | 498.98 | 115438 | 114126.53 | 837.63 | 111946 | 109483.87 | 1343.16 |
| | | 2op | 116265 | 115610.6 | 382.12 | 116153 | 115469.17 | 395.99 | 115350 | 114543.9 | 527.56 | 112409 | 110195.47 | 1849 |
| | 50 | rnd | 116082 | 115104.43 | 504.79 | 115883 | 115296.63 | 446.4 | 115992 | 114640.6 | 606.62 | 113829 | 111982.63 | 1150.65 |
| | | 2op | 116052 | 115376.2 | 318.41 | 116296 | 115425.4 | 442.99 | 115916 | 115080.53 | 441.44 | 114474 | 112950.23 | 740.52 |
| 51 | 20 | rnd | 115893 | 114997.67 | 540.76 | 116152 | 115108.33 | 410.46 | 115825 | 114845.23 | 587.54 | 114954 | 113647.73 | 800.94 |
| | | 2op | 116156 | 115577.03 | 323.7 | 116235 | 115638.63 | 312.54 | 115936 | 115341.3 | 377.79 | 115680 | 114397.5 | 574.08 |
| | 50 | rnd | 115997 | 115014 | 549.28 | 116178 | 115241.3 | 493.11 | 115657 | 114828 | 468.51 | 115102 | 114112.53 | 531.18 |
| | | 2op | 116191 | 115643.33 | 310.77 | 116327 | 115732.63 | 330.53 | 115970 | 115445.17 | 397.86 | 115683 | 114644.23 | 461.68 |

Table A.2575: *j02459_7*: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115192 | 112465.73 | 1227.51 | 112058 | 108998.07 | 1463.75 | 97341 | 91519.83 | 2561.54 | 93597 | 88577.2 | 2072.65 |
| | | 2op | 114719 | 112841.87 | 947.86 | 112929 | 109618.8 | 1622.76 | 96731 | 91476.4 | 2376.59 | 92873 | 89938.73 | 1438.2 |
| | 50 | rnd | 114707 | 112001 | 940.75 | 114002 | 110708.77 | 1451.07 | 101983 | 95761.43 | 2560.53 | 90503 | 87952.7 | 1411.58 |
| | | 2op | 114704 | 112775.5 | 1019.67 | 113684 | 111107.43 | 1136.51 | 102162 | 96862.67 | 2493.7 | 92046 | 89161.7 | 1554.94 |
| 51 | 20 | rnd | 115504 | 113785.87 | 1000.94 | 115439 | 113358.03 | 911.35 | 109313 | 106093.37 | 2345.28 | 99945 | 96467.1 | 1839.3 |
| | | 2op | 115536 | 114142.47 | 818.13 | 115648 | 114314.13 | 675.37 | 109552 | 106693 | 1797.81 | 100308 | 97262.27 | 1472.25 |
| | 50 | rnd | 114817 | 113473.13 | 824.68 | 114780 | 113335.63 | 695.14 | 112107 | 109565.97 | 1762.24 | 98770 | 95770.53 | 1683.86 |
| | | 2op | 115206 | 113897.7 | 807.88 | 115299 | 113912.97 | 763.29 | 113803 | 110656.9 | 1633.28 | 98658 | 95572.37 | 1605.01 |

Table A.2576: *j02459_7*: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115876 | 115148.5 | 473.54 | 115658 | 114760.37 | 555.24 | 115711 | 114172.5 | 628.15 | 112175 | 109278.07 | 1626.29 |
| | | 2op | 116279 | 115490.63 | 396.01 | 116125 | 115329.73 | 458.05 | 115870 | 114733.27 | 480.4 | 112231 | 109886.1 | 1177.69 |
| | 50 | rnd | 115930 | 115234 | 439.72 | 115578 | 114964.17 | 403.23 | 115878 | 114384.2 | 632.24 | 113439 | 111943.43 | 912.59 |
| | | 2op | 116160 | 115445.57 | 358.65 | 115955 | 115326.27 | 397.62 | 116105 | 115000.63 | 487.86 | 114330 | 112789.13 | 941.05 |
| 51 | 20 | rnd | 116034 | 115082.8 | 465.58 | 115898 | 115145.13 | 556.69 | 115860 | 114963.63 | 603.96 | 114826 | 113584.3 | 756.21 |
| | | 2op | 116226 | 115534.63 | 371.52 | 116328 | 115575.2 | 383.42 | 116085 | 115226.67 | 418.33 | 115297 | 114350.2 | 664.3 |
| | 50 | rnd | 116178 | 115064.37 | 529.27 | 116544 | 115356.37 | 546.16 | 115974 | 115032.03 | 433.06 | 115024 | 114091.73 | 530.31 |
| | | 2op | 116036 | 115550.27 | 323.67 | 116188 | 115708.43 | 308.76 | 115859 | 115453.67 | 272.68 | 115735 | 114892.4 | 435.19 |

Table A.2577: *j*02459_7: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115583 | 114526.87 | 494.24 | 116122 | 114484.8 | 830.37 | 103111 | 96117.1 | 3300 | 91082 | 88317.93 | 1319.45 |
| | | 2op | 115772 | 115072.73 | 330.31 | 115770 | 115047.5 | 414.1 | 102327 | 96273.1 | 2896.37 | 92469 | 89491.1 | 1437.08 |
| | 50 | rnd | 115567 | 114376.77 | 572.42 | 115594 | 113892.43 | 757.4 | 101996 | 97668.1 | 2264.8 | 91944 | 88223.63 | 1869.41 |
| | | 2op | 115698 | 114944.2 | 495.16 | 115662 | 114796.47 | 472.63 | 105808 | 99870.27 | 3628.44 | 92069 | 89035.23 | 1236.05 |
| 51 | 20 | rnd | 116113 | 114956.6 | 504.81 | 115860 | 114976.27 | 509.88 | 113269 | 110580.97 | 1853.81 | 98967 | 96431.93 | 1361.46 |
| | | 2op | 115855 | 115493.4 | 216.71 | 116011 | 115472.47 | 259.83 | 114308 | 111893.6 | 2053.56 | 99690 | 97173.3 | 1358.07 |
| | 50 | rnd | 116050 | 114909.6 | 597.95 | 116036 | 115023.33 | 538.38 | 114251 | 112839 | 1073.35 | 97698 | 94941.8 | 1386.65 |
| | | 2op | 115882 | 115546.87 | 193.5 | 116128 | 115520.57 | 245.28 | 115187 | 113397.2 | 1337.05 | 98865 | 95124.4 | 1570.31 |

Table A.2578: *j*02459_7: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115984 | 115010.07 | 505.3 | 116164 | 115150.5 | 505.86 | 115081 | 113999.47 | 528.88 | 110056 | 108162.67 | 1361.79 |
| | | 2op | 116330 | 115628.57 | 273.82 | 116330 | 115605 | 274.07 | 115527 | 114920.3 | 416.82 | 111468 | 108879.8 | 1507.77 |
| | 50 | rnd | 115567 | 114902.6 | 385.63 | 115759 | 114983.8 | 492.96 | 115339 | 114568.03 | 417.01 | 113077 | 111269.5 | 1145.41 |
| | | 2op | 116216 | 115591.63 | 325.82 | 116241 | 115537.07 | 292.8 | 115994 | 115106.97 | 434.18 | 113958 | 112182.43 | 938.16 |
| 51 | 20 | rnd | 116024 | 115196.57 | 411.64 | 116020 | 115147 | 394.81 | 115855 | 114961.03 | 494.58 | 113992 | 112678.27 | 711.43 |
| | | 2op | 116182 | 115520.47 | 244.91 | 116182 | 115512.57 | 247.73 | 115911 | 115385 | 304.48 | 114975 | 113616.33 | 549.3 |
| | 50 | rnd | 116141 | 115168.03 | 397.77 | 116097 | 115209.2 | 524.64 | 116059 | 115073.13 | 579.77 | 115358 | 113767.07 | 772.15 |
| | | 2op | 116455 | 115843.43 | 311.17 | 116454 | 115820.83 | 319.93 | 116369 | 115586.1 | 305.69 | 115230 | 114285.57 | 455.09 |

Table A.2579: *j*02459_7: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38095 | 37360.77 | 377.64 | 37852 | 36875.03 | 528.6 | 35674 | 33883.23 | 966.35 | 31146 | 29376.77 | 886.45 |
| | | 2op | 38420 | 37585.27 | 626.17 | 38328 | 37143.93 | 635.17 | 36093 | 33671.57 | 1093.48 | 31403 | 29800.63 | 760.2 |
| | 50 | rnd | 38387 | 37423.2 | 613.47 | 38182 | 36880.87 | 574.24 | 36916 | 35227.43 | 893.93 | 31355 | 29636.3 | 816.84 |
| | | 2op | 38368 | 37691.77 | 458.38 | 38194 | 37190 | 629.82 | 37385 | 35562.8 | 880.29 | 31275 | 29770.67 | 779.84 |
| 51 | 20 | rnd | 38415 | 38047.37 | 284.66 | 38519 | 38095.07 | 276.06 | 38210 | 37438.47 | 491.33 | 36323 | 34694.6 | 596.61 |
| | | 2op | 38411 | 38103.93 | 253.86 | 38437 | 38137.13 | 160.34 | 38361 | 37622.53 | 419.58 | 35701 | 34720.57 | 425.88 |
| | 50 | rnd | 38504 | 38110.1 | 209.25 | 38610 | 38126.13 | 277.92 | 38328 | 37599.1 | 419.28 | 36295 | 34291.17 | 946.77 |
| | | 2op | 38434 | 38079.63 | 275.81 | 38432 | 38137.7 | 212.81 | 38280 | 37690.27 | 308.11 | 36484 | 34617.27 | 933.82 |

Table A.2580: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38553 | 38319.53 | 148.5 | 38680 | 38317.77 | 139.12 | 38478 | 38044.77 | 225.19 | 37655 | 36473.97 | 787.66 |
| | | 2op | 38555 | 38370.77 | 133.99 | 38545 | 38391.17 | 103.41 | 38426 | 38145.87 | 169.07 | 38118 | 36539.2 | 762.2 |
| | 50 | rnd | 38585 | 38326.2 | 156 | 38636 | 38381 | 168.55 | 38522 | 38246.03 | 164.16 | 38177 | 37418.17 | 519.83 |
| | | 2op | 38462 | 38312.67 | 105.13 | 38588 | 38411.9 | 101.58 | 38511 | 38270.33 | 165.6 | 38200 | 37686.23 | 336.71 |
| 51 | 20 | rnd | 38516 | 38231.47 | 186.72 | 38648 | 38354.53 | 148.31 | 38611 | 38329.1 | 179.88 | 38347 | 37939.87 | 284.87 |
| | | 2op | 38554 | 38372.83 | 121.32 | 38550 | 38423.43 | 40.79 | 38547 | 38390.87 | 113.48 | 38414 | 38027.17 | 295.37 |
| | 50 | rnd | 38576 | 38304.43 | 200.44 | 38634 | 38383.03 | 157.74 | 38660 | 38367.57 | 176.12 | 38431 | 38072.43 | 248.15 |
| | | 2op | 38554 | 38386.97 | 71.31 | 38592 | 38429.3 | 66.3 | 38520 | 38385.13 | 91 | 38494 | 38243.9 | 133.38 |

Table A.2581: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38230 | 37441.13 | 452.38 | 38206 | 36928.67 | 643.79 | 35236 | 33351.07 | 1384.24 | 30899 | 29246.97 | 931.22 |
| | | 2op | 38197 | 37466.23 | 382.6 | 38096 | 37237.73 | 461.55 | 35216 | 33672 | 1077.01 | 30610 | 29388.33 | 727.36 |
| | 50 | rnd | 38124 | 37294.83 | 496.88 | 37990 | 37056.7 | 525.18 | 36557 | 35076.53 | 913.78 | 30237 | 29212.47 | 569.19 |
| | | 2op | 38379 | 37566.77 | 465.28 | 38195 | 37017.47 | 664.6 | 37113 | 35406.33 | 917.81 | 31139 | 29543.4 | 828.65 |
| 51 | 20 | rnd | 38527 | 37928.9 | 315.98 | 38412 | 38068.9 | 305.31 | 38226 | 37343.2 | 494.89 | 35357 | 34442.63 | 520.85 |
| | | 2op | 38412 | 38077.33 | 300.44 | 38403 | 38123.17 | 238.51 | 38162 | 37533.8 | 483.18 | 35739 | 34621.77 | 474.6 |
| | 50 | rnd | 38587 | 38056.23 | 310.14 | 38413 | 38037 | 257.84 | 38193 | 37530.33 | 447.11 | 36414 | 34596.8 | 1068.41 |
| | | 2op | 38375 | 38049.33 | 246.73 | 38395 | 38097.1 | 240.67 | 38316 | 37775.73 | 334.35 | 36496 | 34590.17 | 1029.81 |

Table A.2582: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38659 | 38278.67 | 188.08 | 38575 | 38360.23 | 166.07 | 38496 | 37973.8 | 280.32 | 37724 | 36371.6 | 770.34 |
| | | 2op | 38577 | 38310.33 | 171.44 | 38569 | 38379.43 | 139.79 | 38535 | 38103.63 | 203.92 | 37543 | 36453.73 | 739.86 |
| | 50 | rnd | 38537 | 38213.67 | 173.63 | 38610 | 38381.47 | 164.44 | 38553 | 38232.73 | 174.91 | 37980 | 37287.1 | 474.55 |
| | | 2op | 38538 | 38349 | 130.86 | 38564 | 38415.87 | 97.34 | 38513 | 38223.33 | 151.33 | 38105 | 37466.57 | 423.97 |
| 51 | 20 | rnd | 38612 | 38282.63 | 175.59 | 38585 | 38361.43 | 142.67 | 38566 | 38260.23 | 199.29 | 38422 | 37795.9 | 338.19 |
| | | 2op | 38499 | 38390.9 | 74.03 | 38536 | 38440.27 | 35.47 | 38556 | 38390.93 | 82.58 | 38475 | 37946.83 | 341.26 |
| | 50 | rnd | 38572 | 38289.37 | 153.39 | 38570 | 38344.1 | 183.25 | 38596 | 38303.37 | 174.45 | 38483 | 38041.57 | 248.73 |
| | | 2op | 38557 | 38395.13 | 86.3 | 38569 | 38444.97 | 41.96 | 38544 | 38391.07 | 90.15 | 38459 | 38174.57 | 198.62 |

Table A.2583: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38632 | 38206.17 | 237.09 | 38514 | 38133.4 | 270.42 | 36983 | 35487.27 | 1201.89 | 30713 | 28827.87 | 763.89 |
| | | 2op | 38422 | 38295.07 | 114.41 | 38422 | 38267.77 | 137.29 | 36646 | 34747.03 | 1082.73 | 30246 | 28900.7 | 757.19 |
| | 50 | rnd | 38664 | 38296.13 | 163.61 | 38550 | 38154.93 | 236.95 | 37589 | 35978.07 | 854.72 | 30438 | 28685.8 | 927.85 |
| | | 2op | 38430 | 38269.27 | 167.3 | 38423 | 38240.77 | 183.91 | 37491 | 36314.53 | 755.02 | 32006 | 28962.87 | 1040.87 |
| 51 | 20 | rnd | 38555 | 38318.63 | 187.28 | 38557 | 38296.6 | 171.12 | 38618 | 38022.73 | 421.55 | 34848 | 33501.37 | 802.02 |
| | | 2op | 38439 | 38415.97 | 14.79 | 38439 | 38413.67 | 15.84 | 38398 | 38182.57 | 208.63 | 34907 | 33538.6 | 709.73 |
| | 50 | rnd | 38528 | 38340.8 | 160.43 | 38651 | 38408.47 | 128.83 | 38472 | 37956.13 | 319.12 | 35180 | 33303.17 | 1065.4 |
| | | 2op | 38442 | 38425.7 | 13.06 | 38442 | 38420.6 | 15.28 | 38409 | 38189.87 | 191.25 | 35446 | 33472.07 | 861.71 |

Table A.2584: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38685 | 38347.53 | 186.97 | 38566 | 38336.47 | 161.44 | 38483 | 37940.93 | 294.78 | 37091 | 35562.27 | 621.87 |
| | | 2op | 38531 | 38416.67 | 33.79 | 38531 | 38411.1 | 36.53 | 38457 | 38223.7 | 173.44 | 37280 | 35691.5 | 890.09 |
| | 50 | rnd | 38629 | 38344.27 | 156.75 | 38616 | 38363.4 | 158.81 | 38486 | 38111.7 | 221.39 | 37693 | 36885.73 | 530.43 |
| | | 2op | 38442 | 38401.63 | 42.91 | 38442 | 38392.8 | 45.78 | 38482 | 38247.27 | 123.54 | 38250 | 37058.7 | 582.54 |
| 51 | 20 | rnd | 38586 | 38295.87 | 180.62 | 38581 | 38281.97 | 169.85 | 38633 | 38238.17 | 191.55 | 38259 | 37714.37 | 338.27 |
| | | 2op | 38442 | 38421.37 | 14.45 | 38442 | 38435.5 | 7.5 | 38529 | 38362 | 54.57 | 38297 | 37917.83 | 276.25 |
| | 50 | rnd | 38566 | 38316.37 | 181.34 | 38639 | 38291.23 | 196.48 | 38515 | 38191.07 | 219.12 | 38219 | 37807.9 | 280.84 |
| | | 2op | 38442 | 38429.83 | 12.35 | 38442 | 38425.53 | 13.59 | 38511 | 38335.27 | 96.28 | 38330 | 37961.13 | 218.21 |

Table A.2585: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47891 | 46586.57 | 737.18 | 47235 | 45774.73 | 783.31 | 43270 | 39898.07 | 1617.4 | 37955 | 36557.1 | 827.9 |
| | | 2op | 47330 | 46341.03 | 657.17 | 46937 | 46069 | 545.85 | 42267 | 39889.97 | 1457.66 | 38199 | 36544.53 | 940.71 |
| | 50 | rnd | 47712 | 46512.03 | 798.5 | 47236 | 45874.2 | 778.18 | 44611 | 42798.53 | 1361.01 | 38531 | 36201.77 | 825.79 |
| | | 2op | 47254 | 46305.13 | 568.88 | 46763 | 46015.37 | 617.96 | 44263 | 42676.23 | 1132.16 | 37923 | 36024.63 | 1021.06 |
| 51 | 20 | rnd | 47878 | 47224.37 | 436.47 | 47957 | 47254.17 | 404.03 | 47434 | 45897.73 | 887.66 | 42901 | 41505.2 | 578.54 |
| | | 2op | 47755 | 47215.23 | 409.04 | 47758 | 47360.63 | 329.33 | 47211 | 45999.9 | 751.63 | 42955 | 41356.47 | 557.93 |
| | 50 | rnd | 47843 | 47017.27 | 519.31 | 47899 | 47153.97 | 417.04 | 47593 | 46660.47 | 568.25 | 43533 | 41241.33 | 1024.53 |
| | | 2op | 47582 | 47046.67 | 403.27 | 47742 | 47373.13 | 298.31 | 47667 | 46815.17 | 709.12 | 43528 | 41276.5 | 970.85 |

Table A.2586: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47944 | 47584.5 | 251.14 | 47956 | 47591.1 | 208.1 | 47768 | 47281.53 | 419.75 | 47175 | 45411.8 | 825.99 |
| | | 2op | 47805 | 47579.8 | 205.09 | 47830 | 47638.13 | 130.71 | 47703 | 47300.73 | 251.76 | 46896 | 45419.77 | 877.91 |
| | 50 | rnd | 48034 | 47643.4 | 264.44 | 48048 | 47605.6 | 237.38 | 47871 | 47410.67 | 321.14 | 47415 | 46550.43 | 506.92 |
| | | 2op | 47862 | 47617.77 | 163.87 | 47829 | 47638.93 | 149.17 | 47784 | 47540.87 | 210.57 | 47461 | 46511.5 | 628.37 |
| 51 | 20 | rnd | 47969 | 47578.03 | 229.08 | 47918 | 47609.73 | 280.98 | 47930 | 47589.57 | 195.93 | 47828 | 47117.5 | 492.45 |
| | | 2op | 47829 | 47638.17 | 178.04 | 47830 | 47685.7 | 150.67 | 47823 | 47631.1 | 180.42 | 47502 | 47122.27 | 307.08 |
| | 50 | rnd | 47978 | 47620.1 | 180.92 | 47978 | 47667.93 | 191.94 | 48044 | 47579 | 233.09 | 47723 | 47317.57 | 285.6 |
| | | 2op | 47829 | 47615.9 | 190.04 | 47830 | 47693.67 | 149.15 | 47819 | 47644.1 | 157.83 | 47756 | 47373.13 | 249.6 |

Table A.2587: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47680 | 46450.8 | 685.1 | 47304 | 45914.67 | 766.82 | 42175 | 39539.47 | 1362.1 | 38394 | 36222.33 | 972.51 |
| | | 2op | 47376 | 46398.07 | 507.09 | 47393 | 45780.37 | 851.65 | 41409 | 39508.9 | 1145.02 | 37579 | 36149.2 | 812.82 |
| | 50 | rnd | 47750 | 46363.43 | 754.59 | 47318 | 46003.93 | 682.77 | 44197 | 42260.73 | 908.35 | 37790 | 36269.6 | 930.45 |
| | | 2op | 47413 | 46303.2 | 609.78 | 47166 | 46162.3 | 640.62 | 44265 | 42085.3 | 1113.15 | 37547 | 35858.97 | 779.32 |
| 51 | 20 | rnd | 48012 | 47277 | 452.79 | 47857 | 47273.87 | 358.05 | 47364 | 46092.63 | 897.41 | 42600 | 41442.9 | 708.51 |
| | | 2op | 47580 | 47109.23 | 355.6 | 47758 | 47382.63 | 400.63 | 47015 | 45825.73 | 671.42 | 42770 | 41263.7 | 599.29 |
| | 50 | rnd | 47812 | 47069.7 | 482.11 | 47773 | 47070.93 | 470.03 | 47639 | 46685.77 | 484.03 | 43568 | 41111.83 | 1252.57 |
| | | 2op | 47749 | 47034.43 | 527.01 | 47739 | 47457.7 | 245.86 | 47697 | 46776.3 | 488.17 | 44642 | 41190.13 | 1354.17 |

Table A.2588: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48034 | 47668.8 | 186.24 | 48051 | 47683.53 | 230.2 | 47825 | 47283.33 | 332.36 | 46730 | 45178.67 | 861.57 |
| | | 2op | 47814 | 47656.3 | 147.41 | 47798 | 47642.9 | 129.65 | 47738 | 47376.23 | 231.6 | 46487 | 45305.43 | 868.37 |
| | 50 | rnd | 47896 | 47569.73 | 257.15 | 48045 | 47704.47 | 191.39 | 47951 | 47455.13 | 306.26 | 47361 | 46504.77 | 534.87 |
| | | 2op | 47829 | 47596.8 | 204.52 | 47829 | 47612.73 | 204.1 | 47783 | 47526.1 | 184.48 | 47608 | 46569.43 | 724.96 |
| 51 | 20 | rnd | 47933 | 47547.13 | 267.75 | 48049 | 47644.53 | 199.72 | 47901 | 47623.93 | 246.01 | 47671 | 47062.1 | 326.36 |
| | | 2op | 47830 | 47642.87 | 176.98 | 47830 | 47705.6 | 121.91 | 47785 | 47632.2 | 117.72 | 47667 | 47138.47 | 412.03 |
| | 50 | rnd | 48043 | 47668.67 | 229.3 | 47897 | 47589.47 | 248.37 | 47948 | 47593.47 | 233.3 | 47984 | 47322.53 | 331.29 |
| | | 2op | 47804 | 47634.57 | 129.39 | 47829 | 47689 | 96.58 | 47814 | 47685.73 | 106.36 | 47718 | 47359.9 | 273.58 |

Table A.2589: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48036 | 47445.2 | 361.5 | 47950 | 47469.37 | 289.41 | 44812 | 41750.83 | 1938.44 | 37676 | 36113.1 | 835.05 |
| | | 2op | 47755 | 47497.57 | 224.3 | 47758 | 47491.4 | 225.02 | 45796 | 41335.6 | 1951.53 | 37706 | 36232.53 | 863.18 |
| | 50 | rnd | 47964 | 47523.63 | 339.31 | 47942 | 47487.03 | 400.38 | 45741 | 42991.4 | 1632.58 | 37463 | 35839.03 | 952.86 |
| | | 2op | 47758 | 47453.13 | 286.64 | 47758 | 47420.53 | 295.89 | 45603 | 42552.93 | 1924.49 | 36885 | 35619.13 | 658.79 |
| 51 | 20 | rnd | 47936 | 47651.6 | 215.03 | 47897 | 47555.83 | 254.71 | 47786 | 47237.57 | 342.38 | 41870 | 40420.77 | 773.03 |
| | | 2op | 47758 | 47708.9 | 74.36 | 47758 | 47739.83 | 33.87 | 47651 | 46990.4 | 542.17 | 42012 | 40402.77 | 722.38 |
| | 50 | rnd | 48036 | 47647.37 | 186.86 | 47886 | 47573.3 | 240.31 | 47898 | 47259.03 | 407.35 | 40909 | 39491.83 | 792.39 |
| | | 2op | 47758 | 47692.7 | 86.89 | 47830 | 47745.5 | 38.28 | 47605 | 47246.97 | 287.08 | 40830 | 39463.03 | 896.22 |

Table A.2590: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47640.3 | 195.63 | 47961 | 47613.07 | 213.65 | 47781 | 47349.4 | 257.79 | 45812 | 43998.07 | 934.33 |
| | | 2op | 47830 | 47683.8 | 121.74 | 47827 | 47681.87 | 122 | 47635 | 47375.93 | 175.85 | 45204 | 44367.33 | 566.92 |
| | 50 | rnd | 48033 | 47672.6 | 218.71 | 48031 | 47609.77 | 227.02 | 47869 | 47448.07 | 241.16 | 47297 | 46099.2 | 556.6 |
| | | 2op | 47830 | 47721.03 | 84.92 | 47830 | 47719.53 | 85.82 | 47793 | 47521.03 | 144 | 47117 | 46102.93 | 533.1 |
| 51 | 20 | rnd | 47917 | 47522.37 | 279.28 | 48052 | 47654.13 | 217.57 | 47925 | 47515.2 | 356.09 | 47651 | 46782.53 | 520.45 |
| | | 2op | 47758 | 47728.4 | 71.47 | 47758 | 47754.13 | 6 | 47785 | 47602.57 | 159.87 | 47675 | 46981.77 | 379.12 |
| | 50 | rnd | 47875 | 47535.4 | 315.92 | 47978 | 47557.07 | 236.76 | 47946 | 47597 | 237.66 | 47551 | 47141.23 | 267.71 |
| | | 2op | 47758 | 47742.77 | 61.71 | 47758 | 47726.4 | 96.5 | 47755 | 47598.37 | 207.58 | 47586 | 47213.23 | 293.91 |

Table A.2591: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54180 | 53220.8 | 513.48 | 54067 | 52585.4 | 750.52 | 49480 | 46643.8 | 1557.4 | 43877 | 42734.77 | 668.47 |
| | | 2op | 54590 | 53610.77 | 495.39 | 54141 | 52996.1 | 644.24 | 48518 | 46458.27 | 1258.8 | 45323 | 43414.83 | 769.17 |
| | 50 | rnd | 54576 | 53287.57 | 581.43 | 54226 | 53026.47 | 771.31 | 51981 | 49473.4 | 1519.32 | 43968 | 42668.8 | 708.35 |
| | | 2op | 54565 | 53836.7 | 559.47 | 54465 | 53521.97 | 634.67 | 51362 | 49284.3 | 1359.96 | 44709 | 43326.33 | 841.2 |
| 51 | 20 | rnd | 54907 | 54056.57 | 412.47 | 54686 | 54061.03 | 390.87 | 53753 | 52565.17 | 740.41 | 49578 | 47873.23 | 627.02 |
| | | 2op | 54665 | 54156.83 | 339.25 | 54708 | 54192.1 | 288.89 | 54286 | 52977.9 | 716.23 | 49307 | 48617.37 | 522.19 |
| | 50 | rnd | 54763 | 54047.47 | 452.54 | 54462 | 53985.67 | 316.19 | 54162 | 53401.6 | 698.2 | 50597 | 48140.33 | 1099.19 |
| | | 2op | 54677 | 54214.87 | 383.61 | 54714 | 54198.43 | 323.38 | 54520 | 53671 | 515.28 | 51174 | 48051.33 | 1106.88 |

Table A.2592: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54921 | 54459.4 | 307.49 | 55101 | 54423.1 | 309.29 | 54678 | 53997.27 | 449.98 | 53672 | 51849.5 | 1116.35 |
| | | 2op | 54948 | 54656.27 | 154.4 | 54867 | 54677.5 | 122.61 | 54783 | 54299.67 | 292.69 | 53767 | 52266.5 | 947.41 |
| | 50 | rnd | 54939 | 54401.3 | 306.73 | 55137 | 54616.4 | 276.43 | 54852 | 54274.27 | 285.12 | 54479 | 53368.67 | 547.51 |
| | | 2op | 54945 | 54616.6 | 241.26 | 55021 | 54698.3 | 222.55 | 54815 | 54535.2 | 217.85 | 54241 | 53463.87 | 603.59 |
| 51 | 20 | rnd | 55025 | 54349.87 | 428.08 | 55169 | 54531.7 | 311.81 | 54752 | 54338.53 | 329.49 | 54549 | 53864.43 | 322.87 |
| | | 2op | 54935 | 54650 | 128.29 | 55016 | 54734.47 | 90.48 | 54935 | 54643.7 | 147.36 | 54543 | 54203.67 | 316.35 |
| | 50 | rnd | 55022 | 54397.67 | 309.97 | 55131 | 54663 | 249.63 | 54966 | 54466.9 | 352.49 | 54740 | 54102.77 | 397.31 |
| | | 2op | 54935 | 54648.97 | 113.22 | 54953 | 54751.1 | 73.76 | 54921 | 54652.47 | 109.53 | 54853 | 54385.87 | 287.86 |

Table A.2593: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54414 | 52995.97 | 788.15 | 53872 | 52830.93 | 809.52 | 48956 | 46174.73 | 1579.49 | 44776 | 42637.3 | 1043.67 |
| | | 2op | 54376 | 53510.8 | 517.89 | 54148 | 52959.77 | 571.72 | 48941 | 46263.07 | 1451.2 | 44926 | 43222.93 | 772.97 |
| | 50 | rnd | 54268 | 53162.93 | 760.85 | 54155 | 52715.63 | 831.7 | 50597 | 48492.97 | 1308.57 | 44473 | 42257.9 | 899.37 |
| | | 2op | 54587 | 53603.83 | 515.2 | 54340 | 53311.9 | 705.38 | 51309 | 48934.87 | 1472.56 | 44351 | 43031.77 | 678.93 |
| 51 | 20 | rnd | 54690 | 53978.1 | 463.5 | 54693 | 53883.07 | 496.18 | 53839 | 52254.7 | 986.73 | 49459 | 47881.97 | 710.26 |
| | | 2op | 54696 | 54344.23 | 277.22 | 54666 | 54252.6 | 367.8 | 54092 | 53087.4 | 682.34 | 49691 | 48465.07 | 517.6 |
| | 50 | rnd | 54791 | 53892.77 | 555.15 | 54783 | 54082.07 | 473.07 | 54202 | 53180.67 | 621.72 | 49893 | 47907.03 | 1080.27 |
| | | 2op | 54745 | 54329.8 | 200.35 | 54613 | 54318.7 | 217.19 | 54521 | 53695.7 | 471.88 | 50438 | 48231.57 | 911.25 |

Table A.2594: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55146 | 54499.23 | 313.5 | 55081 | 54462.27 | 375.02 | 54863 | 54109.07 | 414.26 | 53950 | 51959.73 | 1176.2 |
| | | 2op | 54894 | 54576.83 | 196.74 | 54889 | 54612.33 | 156.09 | 54708 | 54157.93 | 324.23 | 53470 | 52087.77 | 767.66 |
| | 50 | rnd | 54846 | 54364.9 | 377.83 | 54933 | 54470 | 306.27 | 54873 | 54271.7 | 345.8 | 54481 | 53199.23 | 522.45 |
| | | 2op | 54966 | 54612.87 | 234.91 | 54965 | 54677.17 | 160.39 | 54868 | 54526.27 | 255.88 | 54076 | 53339.8 | 413.55 |
| 51 | 20 | rnd | 55168 | 54524.37 | 292.21 | 54879 | 54498.83 | 263.37 | 54911 | 54349.3 | 321.11 | 54652 | 53774.53 | 477.84 |
| | | 2op | 54950 | 54657.4 | 133.02 | 54950 | 54740.17 | 118.67 | 54890 | 54641.53 | 110.12 | 54636 | 54120.57 | 258.41 |
| | 50 | rnd | 54951 | 54480.93 | 296.24 | 55035 | 54653.8 | 305.29 | 55032 | 54485.03 | 270.06 | 54980 | 54123.17 | 442.82 |
| | | 2op | 54951 | 54667.7 | 145.04 | 55033 | 54757.9 | 130.51 | 54935 | 54654.03 | 136.7 | 54801 | 54404.4 | 239.36 |

Table A.2595: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54959 | 54218.6 | 434.58 | 54795 | 54335.3 | 357.68 | 51287 | 47761.83 | 1880.09 | 44203 | 42496.27 | 806.28 |
| | | 2op | 54745 | 54573.17 | 161.33 | 54942 | 54546.77 | 199.97 | 52151 | 48824.93 | 1904.98 | 44102 | 42973.3 | 662.34 |
| | 50 | rnd | 54903 | 54310.13 | 291.13 | 55130 | 54398.63 | 391.54 | 51990 | 49694.8 | 1330.25 | 44414 | 42264.27 | 853.71 |
| | | 2op | 54754 | 54529.8 | 204.72 | 54754 | 54550.2 | 175.37 | 51992 | 49744 | 1578.72 | 45438 | 43208.9 | 928.91 |
| 51 | 20 | rnd | 54791 | 54440.57 | 279.96 | 54901 | 54362.3 | 308.51 | 54676 | 53982.9 | 481.02 | 49347 | 47299.57 | 814.35 |
| | | 2op | 54754 | 54729.93 | 23.05 | 54754 | 54725.87 | 25.98 | 54645 | 54051.8 | 521.48 | 49468 | 47638.87 | 897.05 |
| | 50 | rnd | 54938 | 54508.9 | 259.68 | 54970 | 54521.3 | 312.36 | 54859 | 53926.03 | 751.49 | 47864 | 46385.67 | 981.74 |
| | | 2op | 54769 | 54741.9 | 16.3 | 54754 | 54739.33 | 11.49 | 54620 | 54337.57 | 287.34 | 48503 | 46982.2 | 815.85 |

Table A.2596: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55048 | 54504 | 344.53 | 54828 | 54440.97 | 260 | 54636 | 54077 | 292.11 | 52855 | 51132.83 | 1007.99 |
| | | 2op | 54947 | 54725.63 | 79.73 | 54935 | 54699.73 | 94.26 | 54662 | 54371.83 | 179.18 | 52802 | 51463.2 | 797.57 |
| | 50 | rnd | 55135 | 54515.13 | 326.56 | 54909 | 54376.77 | 324.12 | 54831 | 54139.57 | 431.88 | 53827 | 52617.8 | 572.58 |
| | | 2op | 54868 | 54705.23 | 60.17 | 54809 | 54699.77 | 60.8 | 54763 | 54516.3 | 153.19 | 54024 | 52930.33 | 606.42 |
| 51 | 20 | rnd | 54978 | 54493.3 | 367 | 54978 | 54419.27 | 318.6 | 54937 | 54448.63 | 331.81 | 54240 | 53339.87 | 628.6 |
| | | 2op | 54754 | 54745.03 | 11.22 | 54754 | 54744.6 | 13.2 | 54900 | 54673.5 | 87.83 | 54509 | 53801.5 | 301.74 |
| | 50 | rnd | 55005 | 54604.03 | 282.73 | 54957 | 54411.43 | 404.55 | 54805 | 54339.53 | 328.32 | 54703 | 53879.63 | 507.69 |
| | | 2op | 54754 | 54748.33 | 4.87 | 54754 | 54741.37 | 9.87 | 54721 | 54602.83 | 83.73 | 54582 | 54193 | 294.48 |

Table A.2597: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11321 | 11096.27 | 183.27 | 11478 | 11266.87 | 118.33 | 11433 | 11027.87 | 227.95 | 10707 | 10089.57 | 312.58 |
| | | 2op | 11109 | 10940.03 | 141.67 | 11305 | 11217.2 | 73.4 | 11109 | 10885.67 | 180.49 | 10421 | 10037.6 | 201.11 |
| | 50 | rnd | 11366 | 11040.43 | 196.4 | 11478 | 11249.8 | 119.75 | 11411 | 11177 | 161.94 | 11089 | 10208.63 | 359.81 |
| | | 2op | 11109 | 10924.77 | 164.88 | 11410 | 11247.73 | 78.5 | 11305 | 11111.43 | 89.26 | 10674 | 10175.47 | 223.44 |
| 51 | 20 | rnd | 11411 | 11170.27 | 165.29 | 11478 | 11291.77 | 126.35 | 11478 | 11268.73 | 143.47 | 11411 | 11223.7 | 120.65 |
| | | 2op | 11109 | 10994.97 | 90.51 | 11256 | 11119.5 | 38.11 | 11305 | 11182.37 | 88.88 | 11109 | 11063.83 | 77.01 |
| | 50 | rnd | 11394 | 11122.6 | 131.51 | 11478 | 11306.4 | 107.74 | 11478 | 11230.17 | 132.84 | 11478 | 11142.07 | 209.47 |
| | | 2op | 11109 | 11050.17 | 110.18 | 11373 | 11182.27 | 97.48 | 11305 | 11243.43 | 65.92 | 11109 | 11005.87 | 106.82 |

Table A.2598: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11394 | 11228.13 | 126.42 | 11478 | 11247.83 | 127.15 | 11413 | 11208.93 | 126.3 | 11365 | 11179.9 | 131.6 |
| | | 2op | 11285 | 11081.87 | 95.08 | 11394 | 11265.23 | 70.88 | 11346 | 11174.5 | 94.4 | 11325 | 11127 | 129.01 |
| | 50 | rnd | 11478 | 11223.4 | 199.37 | 11478 | 11275.77 | 105.34 | 11478 | 11287.63 | 135.73 | 11478 | 11211.83 | 148.65 |
| | | 2op | 11346 | 11121.47 | 115.89 | 11373 | 11278.67 | 66 | 11346 | 11197.63 | 99.32 | 11305 | 11160.67 | 132.12 |
| 51 | 20 | rnd | 11478 | 11170.13 | 163.41 | 11478 | 11242.97 | 151.91 | 11478 | 11234.03 | 125.44 | 11478 | 11195.53 | 173.57 |
| | | 2op | 11346 | 11068.57 | 88.78 | 11305 | 11126.3 | 53.18 | 11373 | 11205.63 | 89.18 | 11285 | 11114.37 | 36.15 |
| | 50 | rnd | 11478 | 11191.1 | 146.61 | 11478 | 11305.87 | 115.65 | 11478 | 11283.77 | 144.83 | 11478 | 11231.37 | 163.36 |
| | | 2op | 11153 | 11082.8 | 44.47 | 11411 | 11201.57 | 94.54 | 11394 | 11277.87 | 60.17 | 11153 | 11105.93 | 22.46 |

Table A.2599: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11125.67 | 222.38 | 11478 | 11214.43 | 153.81 | 11352 | 10923.47 | 280.91 | 10546 | 9815.73 | 361.74 |
| | | 2op | 11127 | 10896.87 | 154.43 | 11394 | 11189.9 | 106.94 | 11166 | 10828.4 | 175.22 | 10705 | 9826.77 | 258.19 |
| | 50 | rnd | 11413 | 11044.83 | 298.86 | 11478 | 11274.07 | 130.21 | 11411 | 11116.43 | 205.94 | 10804 | 10208.37 | 271.5 |
| | | 2op | 11109 | 10873.43 | 225.1 | 11373 | 11233.83 | 99.08 | 11305 | 11051.7 | 145.34 | 10886 | 10115.1 | 337.6 |
| 51 | 20 | rnd | 11411 | 11163.67 | 185.39 | 11413 | 11251.9 | 107.88 | 11478 | 11328.23 | 108.08 | 11470 | 11234.3 | 135.72 |
| | | 2op | 11109 | 11038.9 | 45.8 | 11305 | 11111.77 | 38.44 | 11305 | 11182.33 | 87.71 | 11109 | 11086.97 | 40.4 |
| | 50 | rnd | 11413 | 11178.37 | 167.07 | 11478 | 11250.97 | 122.7 | 11478 | 11321.73 | 118.04 | 11478 | 11206.9 | 199.39 |
| | | 2op | 11109 | 11013.17 | 97.28 | 11373 | 11169.97 | 91.46 | 11410 | 11262.3 | 81.68 | 11109 | 10965.6 | 116.92 |

Table A.2600: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11220.4 | 178.01 | 11478 | 11298.23 | 125.15 | 11478 | 11254.07 | 145.9 | 11413 | 11146.43 | 160.74 |
| | | 2op | 11346 | 11136.87 | 124.15 | 11394 | 11286.47 | 51.14 | 11346 | 11150.07 | 90.26 | 11370 | 11108.53 | 147.98 |
| | 50 | rnd | 11478 | 11201.1 | 122.65 | 11478 | 11274.97 | 142.46 | 11413 | 11247.37 | 105.41 | 11476 | 11248.23 | 133.9 |
| | | 2op | 11348 | 11134.17 | 112.94 | 11373 | 11253.5 | 69.84 | 11305 | 11201.73 | 97.16 | 11346 | 11173.63 | 104.96 |
| 51 | 20 | rnd | 11478 | 11182.57 | 137.5 | 11478 | 11202.17 | 144.93 | 11411 | 11235.27 | 93.71 | 11478 | 11197.47 | 170.15 |
| | | 2op | 11109 | 11046.13 | 42.68 | 11305 | 11134.47 | 66.12 | 11373 | 11165.47 | 89.61 | 11285 | 11111.6 | 38.56 |
| | 50 | rnd | 11478 | 11186.97 | 178.68 | 11478 | 11298.9 | 142.15 | 11478 | 11298.63 | 116.22 | 11478 | 11288.1 | 150.56 |
| | | 2op | 11305 | 11091.13 | 73.21 | 11373 | 11217.37 | 97.57 | 11373 | 11281.3 | 61.29 | 11305 | 11120.07 | 47.23 |

Table A.2601: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11413 | 11215.53 | 160.43 | 11410 | 11229.4 | 131.74 | 11413 | 10961.03 | 363.44 | 9549 | 8912.2 | 286.79 |
| | | 2op | 11109 | 11073.17 | 52.76 | 11373 | 11144.67 | 81.5 | 11151 | 10793.83 | 234.89 | 9768 | 8870.7 | 357.82 |
| | 50 | rnd | 11394 | 11243.7 | 105.9 | 11478 | 11241.67 | 118.86 | 11478 | 10872.7 | 310.3 | 9926 | 9187.3 | 452.95 |
| | | 2op | 11256 | 11094.43 | 52.78 | 11305 | 11121.13 | 73.72 | 11193 | 10827.17 | 282.46 | 9748 | 9211.47 | 312.63 |
| 51 | 20 | rnd | 11413 | 11243 | 91.18 | 11478 | 11268.67 | 100.59 | 11476 | 11187.73 | 190.6 | 11191 | 10562.4 | 302.14 |
| | | 2op | 11109 | 11093.67 | 34.87 | 11305 | 11187.77 | 76.41 | 11305 | 11098.83 | 71.72 | 10946 | 10513.5 | 251.88 |
| | 50 | rnd | 11413 | 11228.17 | 120.1 | 11478 | 11303.47 | 100.23 | 11478 | 11219.33 | 106.97 | 11303 | 10658.07 | 355.45 |
| | | 2op | 11109 | 11099.8 | 28.07 | 11373 | 11186.47 | 88.91 | 11151 | 11053.83 | 111.54 | 10997 | 10521.9 | 326.16 |

Table A.2602: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11222.77 | 144.12 | 11478 | 11273.9 | 129.46 | 11478 | 11102.57 | 206.36 | 11245 | 10313.93 | 507.56 |
| | | 2op | 11109 | 11092.13 | 35.18 | 11394 | 11280.63 | 67.2 | 11245 | 10980.43 | 178.19 | 10909 | 10350.13 | 320.54 |
| | 50 | rnd | 11478 | 11182.6 | 169.6 | 11478 | 11281.33 | 109.48 | 11478 | 11198.2 | 136.62 | 11442 | 10783.73 | 314.25 |
| | | 2op | 11256 | 11095.37 | 46.59 | 11394 | 11238.67 | 89.57 | 11289 | 11066.63 | 114.92 | 11144 | 10861.53 | 205.31 |
| 51 | 20 | rnd | 11478 | 11214.3 | 139.37 | 11478 | 11273.37 | 145.16 | 11478 | 11247.23 | 121.13 | 11478 | 11033.6 | 202.31 |
| | | 2op | 11109 | 11092.07 | 35.24 | 11305 | 11153.1 | 81.74 | 11254 | 11098.43 | 52.39 | 11256 | 10962.77 | 194.51 |
| | 50 | rnd | 11411 | 11222.27 | 128.65 | 11478 | 11265.73 | 146.17 | 11478 | 11217.2 | 153.26 | 11411 | 11133.1 | 164.38 |
| | | 2op | 11257 | 11101.67 | 43.21 | 11305 | 11143.07 | 72.44 | 11305 | 11089.37 | 59.19 | 11305 | 11040.93 | 166.83 |

Table A.2603: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13817.8 | 182.59 | 14157 | 13979.27 | 122.89 | 14015 | 13438.03 | 273.84 | 13528 | 12662.5 | 358.97 |
| | | 2op | 13967 | 13714 | 151.17 | 14157 | 13990.73 | 84.84 | 13885 | 13641.07 | 148.91 | 13094 | 12767.83 | 210.76 |
| | 50 | rnd | 14161 | 13821.57 | 211 | 14137 | 13953.87 | 133.87 | 14059 | 13759.37 | 188.85 | 13340 | 12781.83 | 332.65 |
| | | 2op | 13932 | 13738.9 | 142.21 | 14157 | 14039.67 | 51.31 | 13968 | 13853.83 | 93.41 | 13301 | 12766.4 | 261.22 |
| 51 | 20 | rnd | 14161 | 13885.97 | 144.05 | 14161 | 13898.73 | 168.07 | 14161 | 13944.27 | 137.1 | 14153 | 13825.97 | 155.03 |
| | | 2op | 13938 | 13808.33 | 60.94 | 14062 | 14004.43 | 34.59 | 14038 | 13978.57 | 31.88 | 13879 | 13742.5 | 109 |
| | 50 | rnd | 14161 | 13891.77 | 160.94 | 14161 | 13940.93 | 123.96 | 14161 | 13994.47 | 131.85 | 14009 | 13670.07 | 160.45 |
| | | 2op | 13899 | 13811.67 | 54.67 | 14059 | 13999.23 | 47.84 | 14157 | 14019.83 | 46.95 | 13981 | 13686.8 | 138.83 |

Table A.2604: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14119 | 13843.9 | 147.44 | 14161 | 13955.77 | 115.05 | 14062 | 13902.27 | 112.32 | 14046 | 13787.97 | 141.74 |
| | | 2op | 14038 | 13895.13 | 102.04 | 14157 | 14012.43 | 58.34 | 14157 | 13895.2 | 140.66 | 14011 | 13738.27 | 157.85 |
| | 50 | rnd | 14157 | 13827.23 | 206.66 | 14137 | 13917.23 | 126.94 | 14161 | 13929.6 | 147.5 | 14127 | 13820.63 | 193.03 |
| | | 2op | 14133 | 13909 | 112.34 | 14157 | 14038.97 | 69.04 | 14133 | 13955.9 | 79.18 | 14078 | 13842 | 121.03 |
| 51 | 20 | rnd | 14155 | 13840.5 | 185.98 | 14137 | 13877.5 | 135 | 14139 | 13924.1 | 130.29 | 14128 | 13889.4 | 151.4 |
| | | 2op | 14038 | 13868.57 | 84.54 | 14157 | 14012.53 | 60.44 | 14038 | 13989.47 | 30.88 | 14038 | 13932.87 | 94.52 |
| | 50 | rnd | 14071 | 13810.2 | 193.72 | 14161 | 13942.97 | 133.13 | 14139 | 13949.23 | 130.09 | 14161 | 13849.4 | 157.31 |
| | | 2op | 13995 | 13903.53 | 76.31 | 14157 | 14035.53 | 65.66 | 14157 | 14013.97 | 51.44 | 14038 | 13889 | 95.51 |

Table A.2605: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13856.2 | 166.81 | 14161 | 13962.2 | 131.7 | 13938 | 13465.5 | 280.22 | 13192 | 12573.67 | 300.16 |
| | | 2op | 13892 | 13739.77 | 147.15 | 14157 | 13981 | 60.56 | 13915 | 13577.03 | 228.69 | 13036 | 12627.4 | 288.5 |
| | 50 | rnd | 14137 | 13767.83 | 167.85 | 14161 | 13974.07 | 113.05 | 14055 | 13697.33 | 249.77 | 13278 | 12695.83 | 315.25 |
| | | 2op | 13948 | 13749.37 | 104.52 | 14157 | 14024.8 | 53.43 | 13983 | 13775.7 | 122.43 | 13213 | 12723.9 | 213.65 |
| 51 | 20 | rnd | 14161 | 13884.9 | 164.34 | 14161 | 13928.73 | 172.86 | 14157 | 13931.33 | 138.95 | 14012 | 13753.9 | 164.36 |
| | | 2op | 13853 | 13784.33 | 57.76 | 14157 | 14017.77 | 52.53 | 14038 | 13985.17 | 45.04 | 13968 | 13754.23 | 95.27 |
| | 50 | rnd | 14161 | 13914.37 | 145.55 | 14161 | 13934.6 | 137.54 | 14161 | 13997.6 | 107.2 | 14157 | 13762.6 | 208.58 |
| | | 2op | 13873 | 13791.57 | 43.6 | 14064 | 14001.07 | 54.97 | 14157 | 14013.17 | 52.3 | 13936 | 13671.43 | 140.66 |

Table A.2606: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13826 | 182.08 | 14139 | 13956.2 | 142.84 | 14146 | 13920 | 146.65 | 13968 | 13656.57 | 183.51 |
| | | 2op | 14038 | 13901.97 | 101.27 | 14157 | 14022.5 | 67.93 | 14157 | 13890.23 | 122.28 | 13937 | 13737.03 | 128.26 |
| | 50 | rnd | 14128 | 13860.77 | 126.98 | 14157 | 13958.37 | 161.75 | 14157 | 13922.53 | 148.06 | 14113 | 13831.63 | 191.34 |
| | | 2op | 14038 | 13943.9 | 77.85 | 14157 | 14048.13 | 68.36 | 14157 | 13937.17 | 92.47 | 14088 | 13822.13 | 145.94 |
| 51 | 20 | rnd | 14135 | 13853.53 | 152.54 | 14137 | 13875.1 | 123.05 | 14161 | 13903.53 | 151.76 | 14161 | 13924.8 | 181.23 |
| | | 2op | 14038 | 13870.2 | 89.4 | 14157 | 13993.53 | 51.05 | 14133 | 13997.57 | 36.35 | 14031 | 13898.7 | 97.39 |
| | 50 | rnd | 14139 | 13865.6 | 174.76 | 14161 | 13962.33 | 130.7 | 14161 | 13980.03 | 134.44 | 14161 | 13800.97 | 191.17 |
| | | 2op | 14038 | 13898.97 | 103.43 | 14133 | 13992.63 | 40.84 | 14157 | 14027.1 | 67.48 | 14038 | 13885.9 | 107.11 |

Table A.2607: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14157 | 13932.2 | 141.58 | 14161 | 13948.9 | 113.54 | 14047 | 13672.13 | 281.55 | 12277 | 11498.43 | 422.1 |
| | | 2op | 13938 | 13842.5 | 53.55 | 14094 | 13947.2 | 73.6 | 13916 | 13590.57 | 233.35 | 12546 | 11598.13 | 449.58 |
| | 50 | rnd | 14139 | 13972.8 | 139.03 | 14161 | 13949.67 | 125.4 | 14002 | 13596.5 | 289.09 | 12595 | 11780.97 | 459.23 |
| | | 2op | 13877 | 13837.17 | 27.1 | 14038 | 13964.8 | 51.08 | 13987 | 13581.73 | 331.52 | 12470 | 11705.3 | 402.45 |
| 51 | 20 | rnd | 14161 | 13932.43 | 165.21 | 14161 | 13945.1 | 119.33 | 14133 | 13850.47 | 182.15 | 13876 | 13320.93 | 208.35 |
| | | 2op | 13938 | 13849.27 | 47.88 | 14089 | 13939.73 | 68.25 | 14038 | 13852.4 | 125.11 | 13709 | 13264.23 | 240.16 |
| | 50 | rnd | 14139 | 13966.73 | 140.28 | 14062 | 13948.3 | 99.7 | 14133 | 13858.73 | 166.78 | 13913 | 13298.97 | 327.3 |
| | | 2op | 13968 | 13858.27 | 40.81 | 14038 | 13942.33 | 74.54 | 13995 | 13847.57 | 109.16 | 13617 | 13252.23 | 283.87 |

Table A.2608: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14155 | 13852.83 | 179.52 | 14139 | 13958.87 | 96.36 | 14112 | 13735 | 193.39 | 13900 | 13220.27 | 409.99 |
| | | 2op | 14038 | 13928.43 | 70.9 | 14064 | 14011.5 | 33.81 | 13929 | 13735.13 | 156.32 | 13629 | 13198.1 | 302.87 |
| | 50 | rnd | 14161 | 13844.83 | 193.62 | 14139 | 13927.13 | 141.41 | 14036 | 13751.23 | 157.97 | 13836 | 13500.97 | 261.22 |
| | | 2op | 14038 | 13976.97 | 61.25 | 14064 | 13996.93 | 22.83 | 14038 | 13892.07 | 116.39 | 13827 | 13532.97 | 217.58 |
| 51 | 20 | rnd | 14135 | 13876.47 | 136.74 | 14161 | 13893.8 | 126.98 | 14139 | 13870.3 | 166.4 | 14075 | 13678.17 | 227.14 |
| | | 2op | 14038 | 13927.9 | 79.28 | 14064 | 13981.43 | 26.13 | 14038 | 13893.5 | 98.39 | 13941 | 13657.6 | 217.95 |
| | 50 | rnd | 14071 | 13863.83 | 120 | 14133 | 13916.9 | 137.89 | 14161 | 13901.9 | 151.22 | 14085 | 13793.37 | 162.89 |
| | | 2op | 14038 | 13971.27 | 42.96 | 14038 | 13982.7 | 35.96 | 14038 | 13908.2 | 78.68 | 13938 | 13678.47 | 120.79 |

Table A.2609: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18143 | 17853.83 | 179.91 | 18165 | 17855.73 | 226.77 | 17847 | 17067.6 | 340.59 | 16285 | 15538.33 | 371.7 |
| | | 2op | 18017 | 17860 | 215.63 | 18017 | 17939.13 | 114.75 | 17737 | 17125.33 | 353.63 | 16618 | 15670.8 | 367.85 |
| | 50 | rnd | 18156 | 17825.87 | 172.64 | 18301 | 18014.9 | 176.49 | 18301 | 17336.43 | 446.31 | 16506 | 15628.53 | 488.41 |
| | | 2op | 18017 | 17915.6 | 168.34 | 18017 | 17984.57 | 55.99 | 17993 | 17464.7 | 301.9 | 16306 | 15730.07 | 306.65 |
| 51 | 20 | rnd | 18184 | 17885.33 | 221.03 | 18301 | 17953.23 | 140.4 | 18291 | 17885.53 | 177.51 | 17982 | 17524.87 | 211.59 |
| | | 2op | 18017 | 17996.97 | 37.96 | 18017 | 18015.57 | 6.51 | 18017 | 17990.9 | 28.32 | 17779 | 17607.7 | 137.71 |
| | 50 | rnd | 18184 | 17963.8 | 183.41 | 18176 | 17924.37 | 158.66 | 18195 | 17937.23 | 169.98 | 17886 | 17345.5 | 278.1 |
| | | 2op | 18017 | 17997.93 | 34.59 | 18017 | 18017 | 0 | 18017 | 17997.67 | 23.84 | 17944 | 17502.4 | 282.56 |

Table A.2610: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18093 | 17867.93 | 161.37 | 18136 | 17986.6 | 127.15 | 18283 | 17950.5 | 181.99 | 17922 | 17622.5 | 200.88 |
| | | 2op | 18074 | 17979.47 | 97.95 | 18042 | 18014.63 | 11.57 | 18123 | 17927.67 | 111.5 | 18010 | 17679.97 | 151.29 |
| | 50 | rnd | 18175 | 17852.37 | 190.87 | 18181 | 17989.33 | 163.35 | 18172 | 17943.93 | 178.5 | 18254 | 17792.83 | 190.29 |
| | | 2op | 18017 | 17996.47 | 24.41 | 18142 | 18023.63 | 25.5 | 18142 | 18002.13 | 78.94 | 18008 | 17797.2 | 131.86 |
| 51 | 20 | rnd | 18184 | 17875.3 | 170.12 | 18171 | 17960.73 | 134.02 | 18301 | 17924.6 | 185.16 | 18167 | 17898.63 | 191.56 |
| | | 2op | 18017 | 18007.33 | 19.72 | 18017 | 18017 | 0 | 18142 | 18020.97 | 22.89 | 18012 | 17960.43 | 34.28 |
| | 50 | rnd | 18114 | 17821.67 | 185.36 | 18125 | 17912.17 | 180.96 | 18156 | 17947.7 | 129.62 | 18156 | 17867.67 | 178.21 |
| | | 2op | 18017 | 18004.13 | 20.52 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18007 | 17950.03 | 50.17 |

Table A.2611: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17820.63 | 206.43 | 18171 | 17814.83 | 211.91 | 17837 | 16981.37 | 399.29 | 16286 | 15342.53 | 399.76 |
| | | 2op | 18017 | 17840.13 | 169 | 18017 | 17856.6 | 168.89 | 17838 | 17097.4 | 421.08 | 16390 | 15505.17 | 394.39 |
| | 50 | rnd | 18172 | 17765.9 | 262.89 | 18275 | 17971.9 | 162.46 | 17848 | 17228.1 | 333.23 | 16330 | 15578.97 | 434.27 |
| | | 2op | 18017 | 17875.57 | 199 | 18017 | 17966.23 | 99.42 | 17896 | 17411.97 | 287.45 | 16190 | 15677.27 | 275.07 |
| 51 | 20 | rnd | 18175 | 17883.13 | 169.45 | 18186 | 17936.27 | 152.05 | 18275 | 17906.8 | 222.89 | 17881 | 17419.73 | 229.4 |
| | | 2op | 18017 | 17971.6 | 108.64 | 18017 | 18017 | 0 | 18017 | 17981.43 | 41.7 | 17814 | 17584.8 | 117.5 |
| | 50 | rnd | 18142 | 17911.6 | 132.51 | 18301 | 17973.13 | 161.94 | 18165 | 17941.3 | 156.61 | 18000 | 17346.03 | 347.32 |
| | | 2op | 18017 | 17977.47 | 87.68 | 18017 | 18017 | 0 | 18017 | 18002.67 | 20.38 | 17845 | 17413.53 | 241.5 |

Table A.2612: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18176 | 17864.87 | 191.94 | 18171 | 17927.53 | 151.28 | 18159 | 17942.5 | 143.38 | 17888 | 17568.57 | 228.6 |
| | | 2op | 18142 | 17988.33 | 88.79 | 18097 | 18009.97 | 35.86 | 18131 | 17971.63 | 85.11 | 18001 | 17581.87 | 187.71 |
| | 50 | rnd | 18109 | 17895.8 | 147.6 | 18301 | 17955.97 | 158.26 | 18172 | 17937.43 | 157.63 | 18128 | 17772.3 | 200.52 |
| | | 2op | 18142 | 17995.5 | 61.85 | 18064 | 18014.83 | 23.76 | 18142 | 17989.73 | 77.81 | 17995 | 17761.27 | 138.69 |
| 51 | 20 | rnd | 18275 | 17873.43 | 163.72 | 18131 | 17960.23 | 133.19 | 18275 | 17994.03 | 143.04 | 18072 | 17804.73 | 161.26 |
| | | 2op | 18142 | 18015.63 | 28.26 | 18017 | 18017 | 0 | 18142 | 18021.17 | 22.82 | 18017 | 17960.63 | 42.3 |
| | 50 | rnd | 18301 | 17944.2 | 162.28 | 18301 | 17959.37 | 149.98 | 18301 | 17949.87 | 154.26 | 18053 | 17899.7 | 114.33 |
| | | 2op | 18017 | 17994.2 | 50.77 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17922.97 | 67.35 |

Table A.2613: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18165 | 17924.7 | 171.93 | 18123 | 17918.67 | 157.41 | 18097 | 17326.6 | 503.51 | 15941 | 14897.17 | 549.15 |
| | | 2op | 18017 | 18016.4 | 3.29 | 18017 | 18013.07 | 8.07 | 17929 | 17405.8 | 361.2 | 16102 | 14905.77 | 502.55 |
| | 50 | rnd | 18184 | 17956.57 | 125.7 | 18172 | 17927.97 | 156.85 | 18109 | 17588.77 | 301.6 | 15782 | 14743.8 | 553.08 |
| | | 2op | 18017 | 18006.03 | 56.76 | 18017 | 18008.63 | 21.08 | 18017 | 17589.8 | 275.04 | 16196 | 14807.33 | 493.04 |
| 51 | 20 | rnd | 18175 | 17959.33 | 156.93 | 18175 | 17955.77 | 174.29 | 18290 | 17959.13 | 154.87 | 17299 | 16672.37 | 346.92 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17984.8 | 69.73 | 17396 | 16850.87 | 314.02 |
| | 50 | rnd | 18142 | 17939.47 | 149.86 | 18142 | 17957.83 | 150.99 | 18184 | 17842.7 | 210.59 | 17565 | 16787.83 | 402.06 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17965.37 | 86.35 | 17563 | 16838.43 | 430.48 |

Table A.2614: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17880.17 | 228.29 | 18181 | 17977.77 | 143.84 | 18135 | 17823.17 | 159.37 | 17599 | 16984.63 | 331.55 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18014 | 17910.93 | 99.01 | 17845 | 17118.7 | 353.5 |
| | 50 | rnd | 18084 | 17872.13 | 130.75 | 18301 | 18014.53 | 122.88 | 18155 | 17837.3 | 201.06 | 18007 | 17571.03 | 224.13 |
| | | 2op | 18017 | 18015.83 | 6.39 | 18017 | 18016.2 | 4.38 | 18017 | 17948.6 | 69.2 | 17907 | 17524.37 | 227.32 |
| 51 | 20 | rnd | 18181 | 17909.67 | 209.11 | 18165 | 17933.23 | 163.17 | 18056 | 17841.33 | 184.64 | 18271 | 17732.47 | 222.41 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 18001.33 | 29.5 | 18107 | 17839.53 | 113.85 |
| | 50 | rnd | 18176 | 18012.1 | 123.17 | 18152 | 17938.43 | 139.99 | 18175 | 17969.13 | 127.03 | 18146 | 17860.8 | 141.16 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17993.3 | 27.4 | 18048 | 17874.57 | 108.53 |

Table A.2615: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21136 | 20773.17 | 246.36 | 21064 | 20771.4 | 228.23 | 20776 | 19956.37 | 418.93 | 19195 | 18357.4 | 369.61 |
| | | 2op | 20829 | 20630.37 | 191.46 | 20987 | 20738.47 | 108.94 | 20771 | 19865.2 | 462.35 | 19077 | 18330.4 | 369 |
| | 50 | rnd | 21173 | 20762.1 | 278.32 | 21192 | 20903.27 | 198.57 | 20873 | 20234.2 | 393.94 | 19358 | 18427.5 | 507.79 |
| | | 2op | 20945 | 20640.13 | 173.46 | 21057 | 20924.2 | 86.12 | 20793 | 20210.03 | 334.68 | 19228 | 18382.7 | 455.08 |
| 51 | 20 | rnd | 21136 | 20867.8 | 166.03 | 21186 | 20974.87 | 166.16 | 21144 | 20794.97 | 247.7 | 20745 | 20408.2 | 211.93 |
| | | 2op | 20829 | 20772.3 | 72.18 | 20997 | 20863.87 | 68.74 | 20829 | 20753.6 | 86.29 | 20641 | 20280.8 | 220.84 |
| | 50 | rnd | 21210 | 20918.53 | 198.69 | 21212 | 20909.33 | 181.22 | 21181 | 20912.9 | 142.32 | 20815 | 20307.17 | 339.05 |
| | | 2op | 20843 | 20773.4 | 79.03 | 21057 | 20913.73 | 88.46 | 20931 | 20780.73 | 71.11 | 20829 | 20134.8 | 384.24 |

Table A.2616: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21184 | 20864.47 | 190.37 | 21178 | 20924.9 | 178.13 | 21204 | 20900.43 | 251.28 | 20873 | 20509.67 | 225.68 |
| | | 2op | 21161 | 20841.6 | 126.64 | 21193 | 20931.57 | 107.89 | 21152 | 20882.33 | 121.23 | 20939 | 20547.1 | 206.42 |
| | 50 | rnd | 21162 | 20826.03 | 233.98 | 21176 | 20963.67 | 138.93 | 21268 | 20913.77 | 173.41 | 21095 | 20728.63 | 235.93 |
| | | 2op | 21101 | 20847.83 | 125.92 | 21190 | 21028.33 | 81.25 | 21206 | 20939.53 | 124.62 | 21089 | 20713.57 | 184.34 |
| 51 | 20 | rnd | 21172 | 20834.17 | 213.84 | 21196 | 20916.83 | 191.31 | 21186 | 20962.23 | 155.89 | 21125 | 20797.83 | 229.4 |
| | | 2op | 21015 | 20850.57 | 65.45 | 21057 | 20903.6 | 82.86 | 21015 | 20860.43 | 59.19 | 21024 | 20832.4 | 98.63 |
| | 50 | rnd | 21238 | 20816.03 | 285.37 | 21186 | 20935.27 | 177.58 | 21212 | 20954.23 | 141.9 | 21126 | 20860.2 | 202.9 |
| | | 2op | 21025 | 20845 | 47.59 | 21154 | 20951.6 | 93.87 | 21166 | 20876.6 | 83.17 | 21146 | 20868.43 | 122.52 |

Table A.2617: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21136 | 20663.6 | 298.85 | 21157 | 20782.73 | 229.8 | 20842 | 20056.8 | 399.13 | 18639 | 18090.27 | 389.03 |
| | | 2op | 20997 | 20679.17 | 165.49 | 21057 | 20767.9 | 100.96 | 20590 | 19889.6 | 413 | 18679 | 18138.1 | 339.76 |
| | 50 | rnd | 21181 | 20867.13 | 177.28 | 21218 | 20887.07 | 197.56 | 21000 | 20043.17 | 507.62 | 19097 | 18289.87 | 428.25 |
| | | 2op | 20880 | 20690.17 | 139.93 | 21051 | 20873.27 | 97.46 | 20766 | 20243.17 | 336.75 | 19468 | 18356.63 | 433.87 |
| 51 | 20 | rnd | 21173 | 20880.3 | 196.27 | 21196 | 20945.57 | 177.28 | 21161 | 20760.77 | 207.25 | 20687 | 20323.33 | 195.33 |
| | | 2op | 20889 | 20788.47 | 84.89 | 21057 | 20884.63 | 70.56 | 20829 | 20734.07 | 93.88 | 20558 | 20252.47 | 202.8 |
| | 50 | rnd | 21173 | 20844.8 | 186.24 | 21169 | 20912.1 | 183.84 | 21161 | 20904.7 | 163.81 | 20906 | 20303.37 | 328.31 |
| | | 2op | 20922 | 20761.4 | 89.55 | 21057 | 20910.03 | 68.42 | 20997 | 20796.67 | 83.63 | 20735 | 20167.17 | 300.1 |

Table A.2618: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20870.67 | 206.67 | 21135 | 20942.63 | 172.64 | 21130 | 20806.43 | 210.7 | 21115 | 20439.9 | 298.73 |
| | | 2op | 21154 | 20869 | 108.87 | 21210 | 20902.8 | 93.82 | 21217 | 20885.37 | 134.07 | 20793 | 20456.93 | 207.73 |
| | 50 | rnd | 21233 | 20881.27 | 219.5 | 21212 | 20994.23 | 138.92 | 21149 | 20784.4 | 227.68 | 20946 | 20640.57 | 185.97 |
| | | 2op | 21077 | 20887.9 | 105.6 | 21128 | 20992.67 | 74.1 | 21139 | 20904.03 | 123.11 | 21049 | 20712.7 | 200.71 |
| 51 | 20 | rnd | 21171 | 20835.33 | 230.68 | 21161 | 20917.97 | 160.18 | 21203 | 20887.33 | 239.32 | 21211 | 20810.67 | 198.04 |
| | | 2op | 21052 | 20847.37 | 82.95 | 21193 | 20920.6 | 94.07 | 21115 | 20856.67 | 65.9 | 21197 | 20818.7 | 127.01 |
| | 50 | rnd | 21153 | 20871.87 | 189.99 | 21177 | 20963.5 | 173.68 | 21187 | 20988.37 | 116.49 | 21138 | 20836.7 | 168.06 |
| | | 2op | 21123 | 20858.17 | 92.65 | 21115 | 20978.33 | 87.27 | 21047 | 20891.37 | 81.66 | 21122 | 20845.4 | 100.57 |

Table A.2619: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21218 | 20950.1 | 169.39 | 21165 | 20848.2 | 208.15 | 20954 | 20323.87 | 400.49 | 18699 | 17382.47 | 686.56 |
| | | 2op | 20829 | 20806.5 | 33.68 | 20833 | 20806.03 | 34.25 | 20870 | 20183.87 | 369.91 | 18227 | 17221.87 | 542.78 |
| | 50 | rnd | 21215 | 20906.53 | 211.71 | 21161 | 20886.33 | 163.17 | 21081 | 20300.47 | 455.34 | 18602 | 17293.63 | 605.32 |
| | | 2op | 20911 | 20813.73 | 43.85 | 20911 | 20811.33 | 46.02 | 20769 | 20369.93 | 326.44 | 18683 | 17314 | 664.89 |
| 51 | 20 | rnd | 21203 | 20882.17 | 199.51 | 21210 | 20990.07 | 159.06 | 21271 | 20912.13 | 208.43 | 20408 | 19504.93 | 381.37 |
| | | 2op | 20889 | 20831 | 10.95 | 21059 | 20904.97 | 92.26 | 20987 | 20812.3 | 66.53 | 20084 | 19448.43 | 278.55 |
| | 50 | rnd | 21203 | 20915.8 | 153.04 | 21200 | 21002.2 | 140.44 | 21202 | 20788.3 | 226.86 | 20545 | 19809.5 | 406.56 |
| | | 2op | 20997 | 20844.3 | 42.09 | 21059 | 20924.47 | 80.22 | 20987 | 20777.67 | 128.41 | 20427 | 19684.23 | 520.19 |

Table A.2620: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21245 | 20879.03 | 218.16 | 21270 | 20960.17 | 150.45 | 21116 | 20790.1 | 209.49 | 20730 | 19810.13 | 533.42 |
| | | 2op | 21029 | 20839.6 | 40.18 | 21193 | 20902.1 | 103.36 | 21019 | 20805 | 119.49 | 20420 | 19741.3 | 464.13 |
| | 50 | rnd | 21271 | 20905.13 | 164.41 | 21226 | 20999.53 | 140.03 | 21190 | 20782.47 | 185.47 | 20856 | 20361.63 | 320.73 |
| | | 2op | 21019 | 20857.93 | 59.09 | 21193 | 20913.73 | 114.62 | 21159 | 20865.27 | 121.99 | 21048 | 20446.6 | 325.77 |
| 51 | 20 | rnd | 21157 | 20873.8 | 189.74 | 21202 | 20923.2 | 191.87 | 21160 | 20878.87 | 221.81 | 21120 | 20647.47 | 255.87 |
| | | 2op | 20889 | 20831 | 10.95 | 21047 | 20888.37 | 73.29 | 20987 | 20830.27 | 50.1 | 20931 | 20677.83 | 180.89 |
| | 50 | rnd | 21196 | 20881.1 | 180.63 | 21166 | 20878.37 | 181.78 | 21211 | 20892.83 | 216.62 | 21150 | 20733.83 | 215.59 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21209 | 20987.13 | 131.12 | 21009 | 20849.53 | 72.41 | 21131 | 20813.9 | 119.23 |

Table A.2621: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 587.6 | 4.28 | 595 | 592.23 | 1.92 | 595 | 591.8 | 2.12 | 588 | 578.5 | 4 |
| | | 2op | 596 | 590.63 | 3.5 | 596 | 593.67 | 1.63 | 595 | 592.27 | 2.16 | 588 | 580.17 | 3.96 |
| | 50 | rnd | 594 | 589.2 | 3.1 | 596 | 593.87 | 1.63 | 596 | 593.4 | 1.77 | 592 | 583.87 | 3.6 |
| | | 2op | 595 | 591.17 | 2.64 | 596 | 594.07 | 1.48 | 596 | 593.63 | 1.47 | 591 | 583.37 | 4.12 |
| 51 | 20 | rnd | 596 | 590 | 3.38 | 596 | 593.07 | 1.7 | 596 | 594 | 1.41 | 595 | 592.33 | 1.73 |
| | | 2op | 595 | 592.07 | 3.1 | 596 | 594.33 | 1.03 | 596 | 595 | 0.45 | 595 | 594.1 | 1.54 |
| | 50 | rnd | 596 | 590.7 | 3.09 | 596 | 593.93 | 1.41 | 596 | 594.5 | 1.25 | 595 | 592 | 2.05 |
| | | 2op | 595 | 591.73 | 3.3 | 596 | 594.93 | 0.78 | 596 | 595.2 | 0.61 | 596 | 594.03 | 1.73 |

Table A.2622: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.27 | 2.95 | 596 | 593.33 | 1.86 | 596 | 593.23 | 2.22 | 595 | 589.27 | 3.65 |
| | | 2op | 596 | 592.33 | 2.51 | 596 | 593.8 | 2.2 | 596 | 593.83 | 1.8 | 594 | 588.77 | 4.82 |
| | 50 | rnd | 596 | 592.13 | 2.99 | 596 | 594.07 | 1.98 | 596 | 594.6 | 1.07 | 595 | 590.4 | 3.76 |
| | | 2op | 595 | 593.07 | 1.8 | 596 | 594.33 | 1.24 | 596 | 594.17 | 1.23 | 595 | 591.8 | 2.51 |
| 51 | 20 | rnd | 595 | 591.13 | 2.39 | 596 | 593.67 | 1.71 | 596 | 593.4 | 3.76 | 596 | 592.73 | 2.45 |
| | | 2op | 595 | 593.23 | 2.66 | 596 | 594.57 | 1.25 | 596 | 594.9 | 0.8 | 596 | 594.43 | 1.01 |
| | 50 | rnd | 596 | 592.5 | 2.22 | 596 | 594.53 | 1.17 | 596 | 594.53 | 1.43 | 596 | 593.77 | 1.81 |
| | | 2op | 595 | 593 | 2.32 | 596 | 594.83 | 1.02 | 596 | 595.23 | 0.63 | 596 | 594.3 | 1.09 |

Table A.2623: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 588.4 | 4.44 | 595 | 591.7 | 2.1 | 596 | 591.53 | 2.93 | 586 | 576.97 | 5.64 |
| | | 2op | 595 | 587.67 | 3.96 | 596 | 593 | 1.8 | 595 | 592.9 | 1.79 | 585 | 577.23 | 3.61 |
| | 50 | rnd | 594 | 588.37 | 3.54 | 596 | 593.3 | 1.47 | 595 | 593.33 | 1.47 | 588 | 579.6 | 4.23 |
| | | 2op | 595 | 590.03 | 3.49 | 596 | 593.93 | 1.31 | 595 | 593.43 | 1.28 | 587 | 580.07 | 3.96 |
| 51 | 20 | rnd | 596 | 590.67 | 3.77 | 596 | 593.17 | 1.49 | 596 | 594.3 | 1.51 | 595 | 592.6 | 2.34 |
| | | 2op | 595 | 592.63 | 2.37 | 596 | 594.53 | 1.07 | 596 | 594.9 | 0.55 | 595 | 594.53 | 1.17 |
| | 50 | rnd | 596 | 589.4 | 3.53 | 596 | 594.17 | 1.12 | 596 | 594.63 | 0.93 | 596 | 591.87 | 1.76 |
| | | 2op | 596 | 592.13 | 3.22 | 596 | 594.8 | 0.89 | 596 | 594.8 | 0.66 | 596 | 593.27 | 1.89 |

Table A.2624: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 590.57 | 3.54 | 596 | 593.63 | 2.24 | 596 | 592.87 | 2.19 | 595 | 589.77 | 2.56 |
| | | 2op | 596 | 591.7 | 3.23 | 596 | 593.93 | 1.68 | 596 | 593.23 | 1.87 | 595 | 590.93 | 3.16 |
| | 50 | rnd | 595 | 591.07 | 2.75 | 596 | 594.4 | 1.3 | 596 | 594.23 | 1.19 | 595 | 591.1 | 3.57 |
| | | 2op | 595 | 592.23 | 2.45 | 596 | 594.7 | 1.24 | 596 | 594.13 | 1.63 | 595 | 591 | 2.95 |
| 51 | 20 | rnd | 595 | 590.67 | 3.42 | 596 | 593.53 | 1.7 | 596 | 594.43 | 1.61 | 595 | 593.1 | 1.49 |
| | | 2op | 595 | 593.27 | 1.39 | 596 | 594.8 | 0.61 | 596 | 594.87 | 0.86 | 596 | 594.63 | 1.27 |
| | 50 | rnd | 596 | 591.67 | 2.59 | 596 | 594.73 | 0.91 | 596 | 594.47 | 1.25 | 596 | 593.33 | 1.99 |
| | | 2op | 596 | 593.33 | 2.23 | 596 | 594.9 | 0.84 | 596 | 595.03 | 0.85 | 596 | 593.53 | 1.63 |

Table A.2625: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.03 | 2.74 | 596 | 593.47 | 1.61 | 593 | 580.53 | 6.12 | 574 | 553.87 | 7.96 |
| | | 2op | 596 | 593.53 | 1.74 | 596 | 594.37 | 0.96 | 595 | 580.87 | 6.61 | 567 | 551.47 | 5.21 |
| | 50 | rnd | 596 | 591.77 | 2.36 | 596 | 592.97 | 1.65 | 593 | 581.57 | 4.61 | 580 | 555.63 | 9.72 |
| | | 2op | 595 | 593.43 | 1.63 | 595 | 593.63 | 1.3 | 592 | 582.47 | 4.45 | 573 | 555.5 | 7.69 |
| 51 | 20 | rnd | 596 | 591.33 | 2.51 | 596 | 593.53 | 1.61 | 596 | 591.23 | 1.74 | 589 | 581.6 | 4.4 |
| | | 2op | 595 | 593.73 | 1.26 | 596 | 594.5 | 0.68 | 595 | 592.57 | 1.91 | 594 | 582.53 | 6.06 |
| | 50 | rnd | 596 | 593 | 1.91 | 596 | 593.33 | 1.6 | 595 | 589.13 | 2.8 | 593 | 578.3 | 9.31 |
| | | 2op | 596 | 594.53 | 0.9 | 596 | 594.6 | 0.56 | 595 | 590.17 | 3.5 | 589 | 576.6 | 6.03 |

Table A.2626: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.77 | 2.71 | 596 | 594 | 1.34 | 591 | 582.17 | 5.69 | 588 | 558.1 | 12.18 |
| | | 2op | 596 | 594.33 | 0.71 | 596 | 595.07 | 0.58 | 592 | 584.5 | 5.75 | 585 | 558.53 | 10.89 |
| | 50 | rnd | 595 | 591.77 | 2.01 | 595 | 593.2 | 1.75 | 595 | 587.27 | 5.88 | 587 | 568.1 | 10.84 |
| | | 2op | 596 | 593.93 | 1.41 | 596 | 594.63 | 1.25 | 594 | 587.83 | 4.96 | 593 | 570.97 | 9.97 |
| 51 | 20 | rnd | 596 | 592.83 | 1.97 | 596 | 594.3 | 1.12 | 596 | 592.03 | 3.06 | 593 | 581.6 | 6.45 |
| | | 2op | 595 | 594.13 | 0.35 | 596 | 595.03 | 0.41 | 595 | 593.07 | 2.39 | 595 | 581.07 | 10.28 |
| | 50 | rnd | 596 | 592.83 | 1.53 | 596 | 593.87 | 1.53 | 596 | 592.33 | 2.47 | 595 | 584.9 | 7.41 |
| | | 2op | 596 | 594.67 | 0.55 | 596 | 595.03 | 0.32 | 595 | 593.6 | 1.57 | 594 | 583.43 | 6.76 |

Table A.2627: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 766.1 | 6.65 | 777 | 773.8 | 2.3 | 777 | 773.13 | 2.18 | 766 | 758.17 | 5.33 |
| | | 2op | 775 | 765.73 | 5.83 | 777 | 773.27 | 2.05 | 775 | 772.2 | 1.92 | 765 | 758.3 | 4.88 |
| | 50 | rnd | 777 | 769.87 | 3.67 | 776 | 774.17 | 1.34 | 777 | 775 | 1.34 | 772 | 763.23 | 4.05 |
| | | 2op | 776 | 768.53 | 3.2 | 777 | 773.83 | 1.66 | 777 | 774.43 | 1.61 | 769 | 762.37 | 3.52 |
| 51 | 20 | rnd | 777 | 770.8 | 3.25 | 777 | 773.53 | 2.22 | 777 | 774.17 | 1.91 | 777 | 772.57 | 2.24 |
| | | 2op | 770 | 767.17 | 4.88 | 776 | 772.37 | 2.24 | 777 | 773.23 | 1.41 | 774 | 771.4 | 1.96 |
| | 50 | rnd | 777 | 771.9 | 2.93 | 777 | 774.43 | 1.99 | 777 | 775.63 | 1.07 | 777 | 772.27 | 3.39 |
| | | 2op | 770 | 768.17 | 1.97 | 777 | 773.63 | 1.9 | 777 | 774.93 | 1.55 | 775 | 772.4 | 1.67 |

Table A.2628: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 770.8 | 4.87 | 777 | 774.37 | 2.37 | 777 | 773.8 | 2.58 | 777 | 770.67 | 6.49 |
| | | 2op | 775 | 769 | 3.15 | 777 | 774.63 | 1.97 | 777 | 773.17 | 1.82 | 775 | 768.63 | 3.69 |
| | 50 | rnd | 777 | 772.03 | 5.08 | 777 | 775.33 | 1.47 | 777 | 775.03 | 1.81 | 777 | 771.73 | 3.35 |
| | | 2op | 775 | 770.4 | 4.96 | 777 | 775.4 | 1.4 | 777 | 774.73 | 1.76 | 777 | 771.87 | 3.59 |
| 51 | 20 | rnd | 777 | 770.73 | 5.22 | 776 | 773 | 2.92 | 777 | 773.87 | 2.18 | 777 | 772.63 | 2.66 |
| | | 2op | 775 | 769.03 | 2.13 | 777 | 772.53 | 4 | 775 | 773.27 | 1.08 | 774 | 771.67 | 1.56 |
| | 50 | rnd | 777 | 772 | 4.59 | 777 | 774.53 | 1.53 | 777 | 775.27 | 1.48 | 777 | 774.1 | 1.88 |
| | | 2op | 774 | 769.53 | 2.05 | 777 | 774.2 | 2.14 | 777 | 775.03 | 1.77 | 775 | 772.43 | 1.5 |

Table A.2629: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 766.93 | 4.62 | 777 | 773.97 | 1.73 | 777 | 772.07 | 2.6 | 771 | 755.5 | 5.82 |
| | | 2op | 774 | 766.1 | 5.43 | 777 | 773.33 | 1.69 | 776 | 771.17 | 2.78 | 767 | 756.3 | 5.32 |
| | 50 | rnd | 775 | 768.83 | 4.01 | 777 | 774.2 | 1.47 | 777 | 774.17 | 1.56 | 770 | 761.5 | 4.28 |
| | | 2op | 774 | 768.3 | 3.69 | 777 | 773.67 | 1.49 | 777 | 774.63 | 1.67 | 771 | 760.07 | 4.27 |
| 51 | 20 | rnd | 775 | 769.17 | 3.51 | 777 | 773.37 | 2.28 | 777 | 773.8 | 1.94 | 777 | 773.23 | 2.58 |
| | | 2op | 771 | 767.57 | 2.6 | 777 | 771.8 | 2.12 | 776 | 773.17 | 1.44 | 774 | 771.37 | 1.63 |
| | 50 | rnd | 777 | 770.73 | 3.73 | 777 | 774.37 | 1.87 | 777 | 774.47 | 1.55 | 777 | 773.3 | 2.44 |
| | | 2op | 775 | 769.57 | 2.34 | 777 | 773.93 | 1.84 | 777 | 774.2 | 1.58 | 776 | 772.07 | 2.05 |

Table A.2630: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.53 | 2.81 | 777 | 774.77 | 1.85 | 777 | 773.97 | 2.06 | 775 | 769 | 5.63 |
| | | 2op | 777 | 770.9 | 2.94 | 777 | 774.47 | 2 | 777 | 772.63 | 2.22 | 775 | 767.2 | 6.57 |
| | 50 | rnd | 777 | 772.7 | 2.9 | 777 | 774.77 | 1.43 | 777 | 774.67 | 1.52 | 777 | 771.53 | 2.92 |
| | | 2op | 775 | 770.83 | 1.91 | 777 | 774.63 | 1.75 | 777 | 775.2 | 1.4 | 777 | 770.87 | 2.89 |
| 51 | 20 | rnd | 777 | 771.13 | 4.68 | 777 | 773.77 | 2.36 | 777 | 774.1 | 1.84 | 777 | 772.93 | 3 |
| | | 2op | 775 | 767.97 | 4.59 | 776 | 772.87 | 2.16 | 777 | 773.43 | 1.57 | 775 | 771.37 | 3.11 |
| | 50 | rnd | 777 | 773.73 | 1.93 | 777 | 774.7 | 1.78 | 777 | 775.7 | 1.15 | 777 | 773.43 | 2.84 |
| | | 2op | 775 | 769.97 | 2.51 | 777 | 773.93 | 1.48 | 777 | 775 | 1.84 | 777 | 772.7 | 1.95 |

Table A.2631: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 770.23 | 3.78 | 776 | 773.43 | 1.55 | 775 | 761.9 | 6.98 | 749 | 722.8 | 9.97 |
| | | 2op | 773 | 769.33 | 1.52 | 777 | 773.27 | 1.87 | 770 | 761.17 | 5.15 | 741 | 718.47 | 12.66 |
| | 50 | rnd | 777 | 771.53 | 3.26 | 777 | 773.07 | 1.44 | 771 | 761.47 | 4.56 | 756 | 722.3 | 12.44 |
| | | 2op | 775 | 769.6 | 2.08 | 777 | 773.23 | 2.05 | 770 | 761.93 | 3.55 | 761 | 725.1 | 16.96 |
| 51 | 20 | rnd | 775 | 770.9 | 3.58 | 777 | 773.13 | 2.49 | 777 | 772.97 | 2.55 | 776 | 761.8 | 7.4 |
| | | 2op | 771 | 769.6 | 0.62 | 777 | 772.53 | 2.26 | 777 | 770.33 | 2.23 | 771 | 760.3 | 6.04 |
| | 50 | rnd | 777 | 772.1 | 2.44 | 777 | 773.27 | 2.07 | 777 | 770.27 | 2.82 | 775 | 755.83 | 10.87 |
| | | 2op | 772 | 769.77 | 1.01 | 777 | 772.27 | 2 | 771 | 768.8 | 1.42 | 770 | 754.23 | 10.32 |

Table A.2632: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 770.6 | 3.35 | 776 | 773.87 | 1.74 | 775 | 762.6 | 10.52 | 775 | 730.7 | 18.63 |
| | | 2op | 775 | 769.6 | 1.92 | 777 | 773.83 | 1.6 | 770 | 761.83 | 5.36 | 767 | 735.07 | 16.93 |
| | 50 | rnd | 777 | 772.43 | 2.66 | 777 | 774.8 | 1.54 | 775 | 768.97 | 5.33 | 775 | 747.6 | 13.81 |
| | | 2op | 777 | 770.67 | 2.77 | 777 | 774.07 | 1.62 | 775 | 767.87 | 5.67 | 766 | 746.2 | 11.8 |
| 51 | 20 | rnd | 777 | 771.63 | 2.77 | 777 | 773.4 | 2.47 | 777 | 772.3 | 3.26 | 774 | 757.4 | 13.49 |
| | | 2op | 772 | 769.63 | 0.93 | 777 | 772.13 | 1.78 | 774 | 771.03 | 1.96 | 770 | 757.27 | 9.94 |
| | 50 | rnd | 777 | 773.73 | 2.23 | 777 | 774.03 | 1.94 | 777 | 773.6 | 2.49 | 776 | 765.8 | 6.84 |
| | | 2op | 775 | 770.53 | 1.8 | 777 | 773.17 | 1.78 | 776 | 771.5 | 1.98 | 774 | 765.23 | 5.85 |

Table A.2633: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 911.4 | 4.95 | 921 | 915.27 | 2.53 | 921 | 915.83 | 2.48 | 916 | 898.67 | 5.92 |
| | | 2op | 916 | 909.4 | 4.81 | 919 | 915.87 | 1.87 | 917 | 914.6 | 1.75 | 910 | 899.67 | 4.89 |
| | 50 | rnd | 919 | 913.27 | 3.32 | 921 | 916.8 | 1.63 | 921 | 917.1 | 1.69 | 916 | 904.17 | 5.32 |
| | | 2op | 918 | 912.2 | 4.04 | 921 | 917.43 | 1.43 | 919 | 916.9 | 1.16 | 911 | 903.67 | 2.97 |
| 51 | 20 | rnd | 921 | 913.83 | 4.36 | 921 | 917.17 | 2.55 | 921 | 917.03 | 2.36 | 921 | 915.47 | 2.97 |
| | | 2op | 916 | 914.27 | 2.96 | 918 | 915.53 | 2 | 921 | 917 | 1.11 | 918 | 915.9 | 1.03 |
| | 50 | rnd | 921 | 914.33 | 3.59 | 921 | 917.03 | 2.04 | 921 | 917.17 | 2.09 | 921 | 915.4 | 2.9 |
| | | 2op | 917 | 914.3 | 2.63 | 921 | 916.63 | 2.09 | 921 | 917.67 | 1.42 | 918 | 915.73 | 1.68 |

Table A.2634: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.5 | 3.28 | 921 | 916.5 | 3.04 | 921 | 916.1 | 2.8 | 919 | 914.1 | 3.73 |
| | | 2op | 919 | 913.43 | 3.8 | 921 | 917.73 | 2.03 | 921 | 917.17 | 2.31 | 919 | 913.7 | 3 |
| | 50 | rnd | 921 | 915.3 | 2.9 | 921 | 917.8 | 2.35 | 921 | 918.4 | 2.06 | 921 | 914.17 | 3.22 |
| | | 2op | 921 | 914.9 | 2.63 | 921 | 918 | 2.02 | 921 | 918.97 | 2.13 | 921 | 915.2 | 3.71 |
| 51 | 20 | rnd | 919 | 914.1 | 3.6 | 921 | 915.8 | 2.44 | 921 | 917.57 | 2.21 | 921 | 916.23 | 3.11 |
| | | 2op | 917 | 914.57 | 2.13 | 919 | 916.27 | 2.03 | 921 | 917.53 | 1.68 | 921 | 916.23 | 1.43 |
| | 50 | rnd | 919 | 914.1 | 3.2 | 921 | 916.23 | 2.37 | 921 | 917.23 | 2.14 | 921 | 915.03 | 3.42 |
| | | 2op | 917 | 915.13 | 1.81 | 921 | 918.6 | 2.09 | 921 | 919.17 | 1.72 | 921 | 916.87 | 1.5 |

Table A.2635: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 911.27 | 5.11 | 921 | 916.07 | 2.48 | 919 | 915 | 2.84 | 914 | 897.2 | 7.35 |
| | | 2op | 916 | 910.63 | 3.68 | 921 | 915.77 | 1.98 | 921 | 915.3 | 2.41 | 911 | 897.47 | 6.06 |
| | 50 | rnd | 919 | 911.93 | 3.9 | 921 | 916.87 | 2.32 | 919 | 916.73 | 2.18 | 914 | 902.97 | 4.87 |
| | | 2op | 917 | 911.97 | 4.25 | 919 | 916.23 | 1.55 | 921 | 917.47 | 1.98 | 911 | 902.27 | 5.02 |
| 51 | 20 | rnd | 919 | 913.77 | 3.68 | 921 | 915.77 | 2.78 | 921 | 917.03 | 1.73 | 921 | 916.43 | 3.06 |
| | | 2op | 916 | 913.3 | 3.29 | 919 | 915.57 | 1.81 | 921 | 916.9 | 1.16 | 917 | 915.23 | 1.45 |
| | 50 | rnd | 918 | 912.37 | 3.62 | 921 | 916.43 | 2.31 | 919 | 917.5 | 1.33 | 921 | 915.5 | 3.24 |
| | | 2op | 918 | 914.03 | 2.93 | 921 | 917.43 | 1.65 | 921 | 917.47 | 1.94 | 918 | 915.57 | 1.74 |

Table A.2636: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.17 | 3.74 | 921 | 917.33 | 1.99 | 921 | 916.53 | 2.54 | 919 | 913.87 | 3.53 |
| | | 2op | 919 | 914.23 | 2.27 | 921 | 918.13 | 1.94 | 921 | 917 | 2.07 | 921 | 914.23 | 4.22 |
| | 50 | rnd | 921 | 914 | 3.26 | 921 | 916.93 | 2.08 | 921 | 917.7 | 2.07 | 921 | 915.63 | 3.49 |
| | | 2op | 921 | 915.53 | 2.85 | 921 | 918.43 | 1.87 | 921 | 918.33 | 2.6 | 921 | 915.47 | 3.22 |
| 51 | 20 | rnd | 919 | 914.4 | 2.25 | 919 | 915.73 | 2.02 | 921 | 916.3 | 2.41 | 921 | 916.33 | 3.27 |
| | | 2op | 917 | 914.9 | 2.11 | 921 | 916.5 | 2.1 | 921 | 918.13 | 2.19 | 921 | 916.67 | 1.71 |
| | 50 | rnd | 921 | 915.03 | 3.05 | 921 | 916.87 | 2 | 921 | 918.1 | 1.6 | 921 | 915.7 | 2.77 |
| | | 2op | 919 | 914.57 | 2.43 | 921 | 918.3 | 1.73 | 921 | 918.6 | 1.81 | 921 | 916.83 | 1.74 |

Table A.2637: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 913.37 | 3.45 | 921 | 916.17 | 2.1 | 918 | 903.37 | 7.55 | 888 | 858.83 | 13.16 |
| | | 2op | 916 | 915.17 | 1.9 | 919 | 916.2 | 1.47 | 916 | 903.7 | 6.67 | 883 | 855.17 | 11.08 |
| | 50 | rnd | 918 | 914.57 | 2.75 | 921 | 916.17 | 2.18 | 914 | 903.93 | 5.53 | 889 | 859.47 | 14.16 |
| | | 2op | 917 | 915.37 | 1.61 | 921 | 916.33 | 1.37 | 916 | 905.3 | 6.12 | 889 | 858.43 | 14.19 |
| 51 | 20 | rnd | 921 | 915.2 | 2.89 | 921 | 916.53 | 2.61 | 921 | 914.97 | 3.42 | 918 | 904.63 | 6.27 |
| | | 2op | 916 | 916 | 0 | 918 | 916.17 | 0.46 | 919 | 915.6 | 1.65 | 916 | 904.43 | 5.64 |
| | 50 | rnd | 921 | 916.27 | 2.43 | 921 | 917.1 | 3.07 | 919 | 912.17 | 3.12 | 913 | 899 | 8.88 |
| | | 2op | 916 | 916 | 0 | 921 | 916.67 | 1.4 | 917 | 913.3 | 2.78 | 912 | 898.07 | 13.21 |

Table A.2638: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 913.97 | 3.22 | 921 | 916.93 | 2.42 | 917 | 908.57 | 6.62 | 914 | 872.17 | 19.03 |
| | | 2op | 918 | 915.27 | 1.84 | 921 | 917.43 | 1.77 | 918 | 907.57 | 9.99 | 913 | 877.6 | 17.9 |
| | 50 | rnd | 919 | 915.5 | 2.66 | 921 | 918.1 | 1.84 | 919 | 913.9 | 3.13 | 917 | 895.97 | 16.2 |
| | | 2op | 918 | 914.73 | 2.36 | 921 | 917.53 | 1.74 | 919 | 913.57 | 4.32 | 914 | 889.23 | 14.46 |
| 51 | 20 | rnd | 921 | 915.7 | 2.41 | 921 | 917.13 | 2.49 | 921 | 915.7 | 3.19 | 918 | 906.6 | 11.16 |
| | | 2op | 916 | 915.83 | 0.91 | 921 | 916.73 | 1.55 | 917 | 915.8 | 1.3 | 921 | 908.47 | 9.71 |
| | 50 | rnd | 921 | 916.3 | 3.31 | 921 | 916.2 | 3.12 | 921 | 915.5 | 3 | 921 | 911.93 | 5.98 |
| | | 2op | 916 | 915.97 | 0.18 | 921 | 916.33 | 1.09 | 919 | 915.4 | 2.04 | 919 | 910.47 | 4.53 |

Table A.2639: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1535.03 | 11.26 | 1539 | 1516.3 | 12 | 1536 | 1467.77 | 23.2 | 1408 | 1343.63 | 29.25 |
| | | 2op | 1552 | 1533.43 | 12.81 | 1553 | 1523.63 | 11.87 | 1520 | 1469.83 | 17.7 | 1409 | 1342.9 | 37.53 |
| | 50 | rnd | 1560 | 1536.97 | 15.3 | 1541 | 1522.73 | 8.75 | 1528 | 1492.97 | 19.15 | 1468 | 1387.4 | 29.54 |
| | | 2op | 1558 | 1530.13 | 16.47 | 1548 | 1523.2 | 8.36 | 1549 | 1495.63 | 15.9 | 1440 | 1373.13 | 27.45 |
| 51 | 20 | rnd | 1570 | 1543.67 | 14.28 | 1565 | 1542.47 | 13.05 | 1575 | 1541.4 | 13.25 | 1543 | 1504.3 | 19.34 |
| | | 2op | 1556 | 1543.63 | 9.8 | 1567 | 1547.23 | 12.19 | 1563 | 1543.3 | 9.85 | 1537 | 1507.77 | 17.28 |
| | 50 | rnd | 1569 | 1544.6 | 13.71 | 1561 | 1539.9 | 10.07 | 1567 | 1534.63 | 12.42 | 1517 | 1481.53 | 21.81 |
| | | 2op | 1562 | 1546.57 | 9.95 | 1562 | 1545.1 | 8.99 | 1556 | 1536.43 | 12.33 | 1531 | 1493.73 | 16.94 |

Table A.2640: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1577 | 1557.4 | 13.53 | 1572 | 1559.27 | 7.25 | 1566 | 1550.17 | 13.21 | 1535 | 1490.9 | 18.68 |
| | | 2op | 1575 | 1557.63 | 10.46 | 1576 | 1559.83 | 8.04 | 1567 | 1549.77 | 9.45 | 1528 | 1486.5 | 23.95 |
| | 50 | rnd | 1572 | 1558.77 | 8.82 | 1574 | 1560.4 | 6.69 | 1575 | 1558.63 | 10.1 | 1565 | 1521.9 | 19.89 |
| | | 2op | 1572 | 1558.1 | 9.54 | 1572 | 1563.03 | 5.61 | 1575 | 1557.57 | 9.38 | 1556 | 1526.9 | 16.04 |
| 51 | 20 | rnd | 1571 | 1558.77 | 11.04 | 1572 | 1559.93 | 8.07 | 1573 | 1559.8 | 10.46 | 1564 | 1540.27 | 14.38 |
| | | 2op | 1572 | 1556.43 | 8.44 | 1570 | 1560.87 | 6.75 | 1575 | 1560.03 | 7.27 | 1559 | 1544.93 | 9.03 |
| | 50 | rnd | 1569 | 1554.37 | 11.1 | 1578 | 1562.13 | 7.39 | 1577 | 1560.27 | 6.38 | 1573 | 1550.9 | 10.98 |
| | | 2op | 1568 | 1558.33 | 5.42 | 1573 | 1563.07 | 5.29 | 1570 | 1560.23 | 5.85 | 1571 | 1551.03 | 8.92 |

Table A.2641: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1561 | 1532.5 | 13.41 | 1534 | 1514.13 | 7.59 | 1526 | 1459.27 | 21.99 | 1433 | 1338.13 | 35.4 |
| | | 2op | 1554 | 1529.77 | 17.45 | 1548 | 1522.53 | 13.01 | 1514 | 1469 | 19.98 | 1429 | 1336.83 | 33.35 |
| | 50 | rnd | 1558 | 1530.8 | 15.96 | 1530 | 1519.77 | 7.2 | 1512 | 1483.2 | 15.73 | 1441 | 1372.93 | 31.77 |
| | | 2op | 1557 | 1532.1 | 14.09 | 1552 | 1523.23 | 10.08 | 1526 | 1493.67 | 15.49 | 1439 | 1359.87 | 28.69 |
| 51 | 20 | rnd | 1577 | 1547.9 | 12.77 | 1563 | 1535.87 | 12.47 | 1566 | 1541.53 | 13.03 | 1537 | 1496.8 | 19.28 |
| | | 2op | 1564 | 1546.13 | 13.96 | 1562 | 1542.93 | 10.66 | 1558 | 1538.1 | 12.5 | 1540 | 1497.83 | 18.08 |
| | 50 | rnd | 1572 | 1545.13 | 12.48 | 1562 | 1541.43 | 9.48 | 1559 | 1536.53 | 9.86 | 1555 | 1494.77 | 21.56 |
| | | 2op | 1562 | 1543.33 | 12.63 | 1566 | 1545.8 | 9.73 | 1569 | 1542.73 | 9.49 | 1545 | 1494.67 | 22.24 |

Table A.2642: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1555.57 | 9.47 | 1573 | 1558.63 | 7.84 | 1568 | 1546.37 | 10.7 | 1537 | 1481.4 | 26.9 |
| | | 2op | 1575 | 1555.7 | 15.28 | 1575 | 1559.33 | 7.63 | 1565 | 1546.1 | 10.49 | 1525 | 1487.4 | 23.03 |
| | 50 | rnd | 1575 | 1558.5 | 9.2 | 1576 | 1561.17 | 7.53 | 1581 | 1557.07 | 11.8 | 1566 | 1517.4 | 20.33 |
| | | 2op | 1574 | 1560.3 | 7.66 | 1581 | 1562.73 | 8.43 | 1575 | 1555.27 | 14.35 | 1541 | 1510.9 | 17.55 |
| 51 | 20 | rnd | 1577 | 1558.8 | 9.85 | 1580 | 1559.23 | 8.71 | 1574 | 1557.77 | 9.98 | 1561 | 1543.8 | 12.84 |
| | | 2op | 1567 | 1557.43 | 7.81 | 1574 | 1560.67 | 6.55 | 1569 | 1559.67 | 5.73 | 1562 | 1545.1 | 9.52 |
| | 50 | rnd | 1576 | 1560.13 | 9.98 | 1579 | 1561.63 | 8.46 | 1579 | 1560.53 | 8.27 | 1571 | 1548.8 | 13.57 |
| | | 2op | 1569 | 1558.6 | 6.37 | 1579 | 1561.73 | 7.97 | 1577 | 1563.2 | 7.59 | 1569 | 1549.87 | 9.82 |

Table A.2643: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1546.97 | 12.18 | 1571 | 1539.27 | 15.09 | 1543 | 1467.53 | 34.57 | 1286 | 1218.4 | 41.25 |
| | | 2op | 1565 | 1549.33 | 8.31 | 1560 | 1540.17 | 11.69 | 1533 | 1480.7 | 32.14 | 1364 | 1207.8 | 56.69 |
| | 50 | rnd | 1562 | 1542.03 | 13 | 1568 | 1531.17 | 15.77 | 1528 | 1469.8 | 39.68 | 1397 | 1275.9 | 65.17 |
| | | 2op | 1560 | 1546.6 | 9.42 | 1557 | 1531.37 | 12.76 | 1524 | 1466.43 | 39.23 | 1369 | 1268.47 | 49.05 |
| 51 | 20 | rnd | 1574 | 1558.6 | 11.42 | 1573 | 1558.57 | 8.79 | 1567 | 1531.9 | 19.27 | 1483 | 1416.63 | 33.15 |
| | | 2op | 1568 | 1557.13 | 3.95 | 1572 | 1558.03 | 4.73 | 1565 | 1540.77 | 17.2 | 1524 | 1438.67 | 37.85 |
| | 50 | rnd | 1574 | 1560.3 | 7.56 | 1572 | 1558.13 | 7.89 | 1568 | 1506.67 | 18.33 | 1499 | 1444.43 | 32.32 |
| | | 2op | 1566 | 1557.77 | 4.17 | 1573 | 1558.6 | 6.43 | 1563 | 1508.83 | 26.91 | 1497 | 1436.6 | 37.09 |

Table A.2644: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1580 | 1559.13 | 9.09 | 1575 | 1557.77 | 8.91 | 1569 | 1517.8 | 28.96 | 1448 | 1353.23 | 66.65 |
| | | 2op | 1568 | 1558.93 | 5.03 | 1573 | 1561.5 | 6.99 | 1555 | 1509.27 | 33.05 | 1444 | 1364.6 | 47.65 |
| | 50 | rnd | 1574 | 1560.03 | 8.24 | 1572 | 1557.63 | 7.49 | 1572 | 1533.07 | 22.25 | 1498 | 1432.17 | 39.7 |
| | | 2op | 1571 | 1560.1 | 5.91 | 1570 | 1559.17 | 6.02 | 1566 | 1531.83 | 24.9 | 1551 | 1452.3 | 51.9 |
| 51 | 20 | rnd | 1578 | 1559.47 | 8.23 | 1576 | 1561 | 6.72 | 1575 | 1547.23 | 16.58 | 1551 | 1492.57 | 37.51 |
| | | 2op | 1564 | 1557 | 2.82 | 1571 | 1567.2 | 3.36 | 1571 | 1548.17 | 11.39 | 1536 | 1477.23 | 30.96 |
| | 50 | rnd | 1572 | 1559.27 | 7.11 | 1573 | 1559.23 | 7.2 | 1576 | 1549.83 | 13 | 1569 | 1522.77 | 23.79 |
| | | 2op | 1568 | 1559.6 | 4.45 | 1570 | 1559.73 | 5.26 | 1566 | 1545.43 | 17.95 | 1568 | 1520.77 | 32.45 |

Table A.2645: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1562 | 1520.13 | 20.1 | 1536 | 1515.1 | 12.35 | 1511 | 1462.37 | 26.8 | 1405 | 1326.07 | 28.38 |
| | | 2op | 1557 | 1515.17 | 20.64 | 1538 | 1514.67 | 10.5 | 1526 | 1462.17 | 28 | 1411 | 1343.43 | 23.59 |
| | 50 | rnd | 1545 | 1519.73 | 18.2 | 1550 | 1523.9 | 10.41 | 1536 | 1487 | 21.77 | 1445 | 1364.93 | 33.8 |
| | | 2op | 1542 | 1513.93 | 19.39 | 1542 | 1519.67 | 11.03 | 1520 | 1480 | 18.3 | 1436 | 1366.8 | 31.76 |
| 51 | 20 | rnd | 1556 | 1533.3 | 16.45 | 1569 | 1541.4 | 11.99 | 1566 | 1540.63 | 11.87 | 1548 | 1500.5 | 21.9 |
| | | 2op | 1556 | 1528.93 | 14.55 | 1558 | 1538.2 | 10.63 | 1550 | 1531.03 | 9.38 | 1530 | 1493.43 | 21.15 |
| | 50 | rnd | 1559 | 1534.9 | 16.02 | 1560 | 1537.43 | 9.68 | 1552 | 1537.63 | 11.39 | 1550 | 1486.1 | 24.45 |
| | | 2op | 1555 | 1527.17 | 16.68 | 1556 | 1532.4 | 10.8 | 1553 | 1537.4 | 10.14 | 1550 | 1479 | 28.64 |

Table A.2646: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1552.1 | 13.09 | 1568 | 1555.87 | 7.62 | 1566 | 1543.77 | 15.95 | 1538 | 1481 | 27.69 |
| | | 2op | 1567 | 1550.03 | 10.18 | 1563 | 1554.33 | 6.09 | 1562 | 1541.13 | 12.51 | 1526 | 1484.07 | 26.79 |
| | 50 | rnd | 1571 | 1551.37 | 10.18 | 1570 | 1556.23 | 7.26 | 1567 | 1554.47 | 8.53 | 1556 | 1521.03 | 15.73 |
| | | 2op | 1569 | 1547 | 14 | 1573 | 1555.73 | 7.27 | 1567 | 1552.8 | 8.08 | 1566 | 1511.9 | 22.34 |
| 51 | 20 | rnd | 1567 | 1553.97 | 11.09 | 1571 | 1555.57 | 9.44 | 1570 | 1556.37 | 10.26 | 1563 | 1540.93 | 12.66 |
| | | 2op | 1565 | 1544.07 | 17.81 | 1573 | 1556.07 | 8.46 | 1567 | 1555.87 | 8.45 | 1564 | 1535.2 | 16.76 |
| | 50 | rnd | 1570 | 1551.87 | 7.58 | 1567 | 1555.5 | 7.69 | 1568 | 1559.1 | 6.13 | 1567 | 1542.2 | 14.21 |
| | | 2op | 1568 | 1551.97 | 10.36 | 1564 | 1553.63 | 8.2 | 1570 | 1556.6 | 7.73 | 1564 | 1540 | 14.49 |

Table A.2647: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1551 | 1519.8 | 16.66 | 1545 | 1515.87 | 15.41 | 1504 | 1454.6 | 25.11 | 1398 | 1326.6 | 27.02 |
| | | 2op | 1548 | 1510.7 | 25.5 | 1541 | 1514.9 | 13.04 | 1497 | 1446.57 | 31.08 | 1387 | 1321.63 | 29.2 |
| | 50 | rnd | 1550 | 1517 | 18.43 | 1558 | 1523.03 | 12.16 | 1542 | 1483.23 | 19.92 | 1430 | 1345.47 | 34.49 |
| | | 2op | 1549 | 1510.83 | 18.15 | 1565 | 1517.7 | 15.53 | 1501 | 1478.63 | 14.12 | 1436 | 1354.37 | 33.89 |
| 51 | 20 | rnd | 1555 | 1534.73 | 8.65 | 1554 | 1537.6 | 10.77 | 1563 | 1540.37 | 14.23 | 1532 | 1497.4 | 18.48 |
| | | 2op | 1556 | 1524.8 | 16.35 | 1565 | 1531.3 | 11.35 | 1565 | 1531.67 | 14.63 | 1529 | 1494.53 | 16.95 |
| | 50 | rnd | 1561 | 1534.7 | 16.87 | 1557 | 1536.13 | 10.68 | 1561 | 1537.3 | 12.53 | 1526 | 1482.33 | 27 |
| | | 2op | 1552 | 1525.13 | 12.99 | 1551 | 1532.9 | 11.4 | 1562 | 1536.33 | 10.6 | 1519 | 1478.57 | 26.14 |

Table A.2648: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1547.87 | 15 | 1568 | 1554.83 | 10.75 | 1564 | 1544.07 | 14.89 | 1542 | 1479.33 | 26.63 |
| | | 2op | 1572 | 1548.83 | 16.11 | 1570 | 1554.93 | 8.77 | 1559 | 1542.03 | 12.54 | 1534 | 1469.73 | 35.16 |
| | 50 | rnd | 1569 | 1554.87 | 10.58 | 1570 | 1555.47 | 7.5 | 1566 | 1551.73 | 8.63 | 1555 | 1503.53 | 24.9 |
| | | 2op | 1566 | 1548.57 | 15.89 | 1567 | 1555.7 | 7.03 | 1565 | 1551.63 | 10.18 | 1561 | 1508.3 | 21.23 |
| 51 | 20 | rnd | 1565 | 1550.2 | 9.21 | 1568 | 1550.47 | 9.98 | 1569 | 1553.77 | 8.99 | 1563 | 1539.8 | 12.97 |
| | | 2op | 1565 | 1549 | 12.48 | 1571 | 1553.43 | 10.42 | 1569 | 1554.7 | 7.83 | 1556 | 1532.9 | 14.69 |
| | 50 | rnd | 1565 | 1554.47 | 8.54 | 1568 | 1555.27 | 9.31 | 1568 | 1558.47 | 6.52 | 1565 | 1547.13 | 14.22 |
| | | 2op | 1566 | 1551.53 | 10.8 | 1567 | 1556.97 | 7.83 | 1567 | 1557.17 | 6.52 | 1568 | 1540.17 | 15.54 |

Table A.2649: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1557 | 1538.5 | 11.76 | 1559 | 1533.77 | 14.18 | 1530 | 1471.03 | 38.05 | 1335 | 1192.67 | 54.93 |
| | | 2op | 1552 | 1524.07 | 12.68 | 1545 | 1517.67 | 11.61 | 1513 | 1462.83 | 35.41 | 1306 | 1191.3 | 47.29 |
| | 50 | rnd | 1560 | 1536.87 | 12.65 | 1554 | 1531.03 | 14.26 | 1511 | 1471.27 | 31.82 | 1384 | 1271.67 | 55.67 |
| | | 2op | 1552 | 1530.37 | 10.86 | 1551 | 1519.97 | 13.29 | 1523 | 1460.97 | 37.23 | 1358 | 1264.6 | 58.03 |
| 51 | 20 | rnd | 1567 | 1552.03 | 10.88 | 1566 | 1552.83 | 8.56 | 1569 | 1533.97 | 20.69 | 1501 | 1425.9 | 41.92 |
| | | 2op | 1556 | 1539.87 | 7.64 | 1556 | 1542.1 | 7.13 | 1555 | 1520.7 | 17.81 | 1492 | 1421.4 | 38.36 |
| | 50 | rnd | 1565 | 1548.67 | 9.48 | 1560 | 1548.43 | 7.78 | 1550 | 1506.27 | 24.41 | 1515 | 1446.83 | 32.35 |
| | | 2op | 1556 | 1543.83 | 9.41 | 1556 | 1539.97 | 8.47 | 1524 | 1489.57 | 24.68 | 1510 | 1446.13 | 35.55 |

Table A.2650: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1552.63 | 10.16 | 1570 | 1556.37 | 6.87 | 1547 | 1502.5 | 29.74 | 1501 | 1363.67 | 67.16 |
| | | 2op | 1569 | 1549.93 | 12.14 | 1568 | 1552.37 | 9.55 | 1555 | 1510 | 29.56 | 1489 | 1357.3 | 78.28 |
| | 50 | rnd | 1570 | 1552.07 | 7.68 | 1568 | 1556.7 | 7.46 | 1560 | 1525.7 | 22.22 | 1536 | 1421.87 | 51.68 |
| | | 2op | 1570 | 1553.53 | 9.57 | 1567 | 1554.47 | 8.42 | 1569 | 1527.87 | 23.78 | 1505 | 1420.23 | 50.79 |
| 51 | 20 | rnd | 1572 | 1555.97 | 9.23 | 1570 | 1556.67 | 9.32 | 1564 | 1537.97 | 16.83 | 1551 | 1489.53 | 41.63 |
| | | 2op | 1564 | 1553.87 | 7.32 | 1565 | 1557.43 | 2.85 | 1564 | 1532.93 | 23.89 | 1532 | 1468.67 | 36.04 |
| | 50 | rnd | 1567 | 1555.37 | 8.73 | 1568 | 1553.1 | 11.44 | 1566 | 1545.7 | 14.64 | 1555 | 1523.13 | 22.67 |
| | | 2op | 1565 | 1556 | 7.46 | 1565 | 1554.03 | 6.77 | 1563 | 1542.3 | 13.94 | 1557 | 1513.6 | 25.48 |

Table A.2651: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1542 | 1511.63 | 17.5 | 1533 | 1509.5 | 11.36 | 1496 | 1456.93 | 19.27 | 1396 | 1324.6 | 29.05 |
| | | 2op | 1546 | 1514.3 | 16.19 | 1536 | 1507.73 | 10.12 | 1487 | 1451.27 | 19.81 | 1394 | 1323.6 | 28.53 |
| | 50 | rnd | 1551 | 1515.87 | 13.42 | 1526 | 1509.87 | 8 | 1521 | 1482.97 | 17.11 | 1456 | 1360.8 | 38.8 |
| | | 2op | 1536 | 1509.93 | 15.87 | 1536 | 1513.4 | 10.05 | 1516 | 1478.97 | 15.63 | 1416 | 1355.23 | 23.53 |
| 51 | 20 | rnd | 1554 | 1528.1 | 16.73 | 1557 | 1533.57 | 14.84 | 1558 | 1533.87 | 12.29 | 1527 | 1492.37 | 19.43 |
| | | 2op | 1557 | 1534.63 | 12.48 | 1549 | 1531.7 | 10.05 | 1553 | 1533.13 | 10.87 | 1522 | 1488.27 | 20.18 |
| | 50 | rnd | 1562 | 1535.53 | 14.1 | 1553 | 1530.93 | 11.84 | 1554 | 1530.27 | 10.78 | 1524 | 1477.77 | 23.09 |
| | | 2op | 1548 | 1530.77 | 12.16 | 1543 | 1527.4 | 7.62 | 1542 | 1527.13 | 8.23 | 1530 | 1480.87 | 20.15 |

Table A.2652: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1547.23 | 11.93 | 1567 | 1554.53 | 6.11 | 1568 | 1538.87 | 13.07 | 1525 | 1477.73 | 24.48 |
| | | 2op | 1563 | 1548.17 | 8.08 | 1565 | 1553.5 | 8.67 | 1549 | 1537.97 | 8.35 | 1543 | 1474.03 | 20.67 |
| | 50 | rnd | 1563 | 1549.33 | 8.32 | 1565 | 1551.93 | 6.59 | 1566 | 1549.13 | 8.55 | 1551 | 1511.1 | 20.81 |
| | | 2op | 1565 | 1550.93 | 9.18 | 1565 | 1551.13 | 9.85 | 1570 | 1551.73 | 8.62 | 1544 | 1507.47 | 18.76 |
| 51 | 20 | rnd | 1562 | 1550.27 | 8.17 | 1566 | 1551.1 | 10.22 | 1563 | 1550.37 | 10.27 | 1560 | 1536.37 | 11.45 |
| | | 2op | 1565 | 1548.67 | 8.67 | 1563 | 1550.17 | 7.87 | 1561 | 1551.4 | 5.61 | 1561 | 1538.37 | 15.52 |
| | 50 | rnd | 1561 | 1549.27 | 8.51 | 1564 | 1550.53 | 7.16 | 1568 | 1552.9 | 7.62 | 1562 | 1541.83 | 12.39 |
| | | 2op | 1565 | 1549.8 | 6.53 | 1566 | 1554.4 | 6.4 | 1568 | 1552.17 | 9.04 | 1566 | 1540.73 | 15.56 |

Table A.2653: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1532 | 1508.07 | 14.04 | 1519 | 1502.27 | 10.2 | 1498 | 1455 | 24.14 | 1391 | 1325.37 | 28.22 |
| | | 2op | 1548 | 1509.57 | 17.56 | 1531 | 1504.83 | 9.57 | 1494 | 1448.5 | 16.99 | 1385 | 1314.03 | 27.13 |
| | 50 | rnd | 1540 | 1510.87 | 19.1 | 1526 | 1509.5 | 7.2 | 1501 | 1473.63 | 13.17 | 1439 | 1350.97 | 35.79 |
| | | 2op | 1544 | 1510.07 | 15.1 | 1532 | 1509.37 | 8.02 | 1507 | 1473.77 | 18.64 | 1411 | 1357.47 | 29.97 |
| 51 | 20 | rnd | 1558 | 1534.43 | 13.68 | 1560 | 1531.07 | 16.38 | 1564 | 1531.4 | 16.18 | 1515 | 1481.13 | 18.75 |
| | | 2op | 1548 | 1528.1 | 15.49 | 1548 | 1529.5 | 12.33 | 1548 | 1530.83 | 9.26 | 1513 | 1486.97 | 17.58 |
| | 50 | rnd | 1559 | 1526.33 | 15.94 | 1556 | 1530.07 | 12.76 | 1557 | 1526.43 | 12.13 | 1509 | 1475.3 | 20.66 |
| | | 2op | 1548 | 1529.83 | 16.41 | 1548 | 1530.07 | 12.72 | 1548 | 1528.1 | 11.11 | 1544 | 1476.53 | 25.75 |

Table A.2654: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1549.1 | 12 | 1564 | 1549.93 | 9.01 | 1563 | 1540.6 | 10.67 | 1542 | 1468.63 | 28.02 |
| | | 2op | 1566 | 1548.2 | 7.75 | 1570 | 1553.13 | 8.56 | 1559 | 1541.3 | 10.6 | 1508 | 1477.1 | 19.96 |
| | 50 | rnd | 1565 | 1546.1 | 10.02 | 1565 | 1551.73 | 6.87 | 1560 | 1548.07 | 8.43 | 1550 | 1500.87 | 26.73 |
| | | 2op | 1566 | 1551.93 | 8.17 | 1564 | 1550.4 | 9.26 | 1558 | 1548.03 | 7.83 | 1526 | 1498 | 17.49 |
| 51 | 20 | rnd | 1562 | 1547.03 | 13.03 | 1565 | 1551.67 | 8.03 | 1565 | 1545.53 | 10.16 | 1561 | 1530.1 | 14.79 |
| | | 2op | 1559 | 1547.57 | 7.64 | 1564 | 1549.33 | 6.64 | 1566 | 1549.33 | 6.43 | 1555 | 1535.53 | 14.22 |
| | 50 | rnd | 1563 | 1550.43 | 7.38 | 1568 | 1551.67 | 8.51 | 1565 | 1552.57 | 9.93 | 1558 | 1539.63 | 12.66 |
| | | 2op | 1560 | 1547.93 | 9.08 | 1564 | 1550.67 | 7.52 | 1565 | 1552.3 | 5.81 | 1560 | 1543.83 | 9.32 |

Table A.2655: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1536.9 | 15.23 | 1560 | 1532.8 | 16.62 | 1517 | 1470.37 | 34.79 | 1309 | 1191.07 | 40.93 |
| | | 2op | 1548 | 1536.1 | 12.68 | 1548 | 1528.93 | 15.58 | 1545 | 1475.43 | 28.41 | 1286 | 1200.03 | 44.88 |
| | 50 | rnd | 1560 | 1528.93 | 15.32 | 1552 | 1522.7 | 13.97 | 1522 | 1464.5 | 24.91 | 1349 | 1255.93 | 54.23 |
| | | 2op | 1548 | 1531.2 | 9.65 | 1540 | 1520.23 | 12.1 | 1523 | 1467.8 | 29.1 | 1354 | 1264.53 | 45.39 |
| 51 | 20 | rnd | 1561 | 1548.5 | 6.3 | 1567 | 1549.33 | 11.5 | 1566 | 1527.8 | 25.07 | 1508 | 1426.13 | 39 |
| | | 2op | 1548 | 1548 | 0 | 1549 | 1547.73 | 1.66 | 1560 | 1529.33 | 16.6 | 1490 | 1405.4 | 42.23 |
| | 50 | rnd | 1564 | 1549.57 | 8.03 | 1560 | 1545.37 | 10.99 | 1553 | 1509.5 | 25.57 | 1502 | 1433.03 | 38.45 |
| | | 2op | 1549 | 1546.47 | 3.95 | 1549 | 1547 | 2.64 | 1542 | 1501.13 | 21.88 | 1522 | 1444.47 | 34.87 |

Table A.2656: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1553.43 | 8.73 | 1565 | 1550.73 | 9.56 | 1546 | 1500.1 | 28.95 | 1443 | 1357.87 | 49.7 |
| | | 2op | 1564 | 1550.17 | 5.8 | 1559 | 1549.77 | 6 | 1543 | 1499.2 | 27.09 | 1482 | 1373.17 | 67.74 |
| | 50 | rnd | 1567 | 1548.4 | 7.33 | 1564 | 1552.9 | 6.78 | 1559 | 1523.67 | 21.44 | 1533 | 1425.13 | 44.71 |
| | | 2op | 1561 | 1551.83 | 4.86 | 1561 | 1552.9 | 5.02 | 1556 | 1530.87 | 19.99 | 1507 | 1436.6 | 49.35 |
| 51 | 20 | rnd | 1565 | 1550.87 | 7.98 | 1563 | 1553.57 | 7.88 | 1564 | 1540.4 | 14.64 | 1541 | 1476 | 35.73 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1566 | 1549.93 | 3.58 | 1557 | 1540.8 | 12.09 | 1537 | 1483.57 | 36.39 |
| | 50 | rnd | 1567 | 1548.97 | 8 | 1570 | 1552.77 | 8.32 | 1565 | 1541.93 | 14.84 | 1557 | 1519.03 | 18.75 |
| | | 2op | 1553 | 1548.53 | 1.68 | 1561 | 1549.23 | 3.24 | 1559 | 1543.3 | 11.56 | 1548 | 1497.57 | 29.73 |

Table A.2657: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2655 | 2591.73 | 30.02 | 2623 | 2556 | 31.28 | 2521 | 2415.73 | 43.94 | 2201 | 2055.37 | 67.62 |
| | | 2op | 2643 | 2608.8 | 22.68 | 2631 | 2564 | 33.48 | 2496 | 2406.93 | 57.13 | 2162 | 2051.53 | 70.74 |
| | 50 | rnd | 2688 | 2626.3 | 30.03 | 2666 | 2570.87 | 27.9 | 2554 | 2493.8 | 41.76 | 2328 | 2179.33 | 77.75 |
| | | 2op | 2681 | 2623.7 | 24.1 | 2645 | 2574.07 | 25.9 | 2524 | 2473.87 | 37.72 | 2304 | 2154.97 | 76.6 |
| 51 | 20 | rnd | 2716 | 2629.67 | 35.89 | 2686 | 2630.83 | 23.84 | 2646 | 2586.23 | 35.25 | 2540 | 2411.97 | 46.91 |
| | | 2op | 2727 | 2651.7 | 28.87 | 2703 | 2631.43 | 29.1 | 2667 | 2597.2 | 33.52 | 2534 | 2430.7 | 51.04 |
| | 50 | rnd | 2727 | 2657.67 | 25.09 | 2699 | 2628.03 | 24.79 | 2636 | 2589.67 | 32.29 | 2557 | 2467.4 | 55.96 |
| | | 2op | 2715 | 2666.9 | 24.1 | 2683 | 2627.23 | 24.93 | 2658 | 2609.33 | 26.67 | 2571 | 2453.17 | 67.68 |

Table A.2658: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2765 | 2730.93 | 21.24 | 2771 | 2718 | 23.18 | 2710 | 2632.63 | 46.65 | 2573 | 2444.33 | 65.67 |
| | | 2op | 2771 | 2730.23 | 23.23 | 2778 | 2728.97 | 24.65 | 2721 | 2648.7 | 32.42 | 2559 | 2434.43 | 64.38 |
| | 50 | rnd | 2759 | 2731.73 | 14.96 | 2758 | 2732.67 | 15.99 | 2723 | 2684.67 | 22.64 | 2649 | 2536.8 | 69.93 |
| | | 2op | 2760 | 2739.57 | 12.88 | 2765 | 2737.7 | 17.12 | 2750 | 2698.03 | 30.47 | 2622 | 2519.73 | 66.82 |
| 51 | 20 | rnd | 2768 | 2734.87 | 17.53 | 2762 | 2737.57 | 14.34 | 2766 | 2710.77 | 26.12 | 2692 | 2615 | 50.91 |
| | | 2op | 2777 | 2743.17 | 21.81 | 2763 | 2743.43 | 16.22 | 2764 | 2723.9 | 26.45 | 2672 | 2610.37 | 50.79 |
| | 50 | rnd | 2766 | 2743.1 | 15.3 | 2764 | 2742.27 | 15.32 | 2763 | 2723.93 | 16.56 | 2704 | 2652.43 | 34.25 |
| | | 2op | 2778 | 2749.6 | 17.67 | 2776 | 2751.13 | 14.6 | 2766 | 2734.3 | 24.56 | 2723 | 2647.8 | 45.33 |

Table A.2659: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2658 | 2599.7 | 26.37 | 2605 | 2542.8 | 33.52 | 2500 | 2406.87 | 65.88 | 2279 | 2035.47 | 90.41 |
| | | 2op | 2699 | 2610.67 | 29.48 | 2616 | 2542.67 | 30.91 | 2537 | 2413.53 | 69.73 | 2095 | 2022.6 | 49.82 |
| | 50 | rnd | 2663 | 2614.43 | 29.93 | 2608 | 2565.3 | 22.34 | 2522 | 2459.5 | 38.93 | 2288 | 2105.67 | 91.39 |
| | | 2op | 2668 | 2623.87 | 22.62 | 2626 | 2568.83 | 21.68 | 2550 | 2463.1 | 56.3 | 2269 | 2145.03 | 62.73 |
| 51 | 20 | rnd | 2693 | 2642.03 | 28.03 | 2674 | 2626.5 | 20.17 | 2667 | 2586.87 | 37.78 | 2570 | 2423.87 | 52.28 |
| | | 2op | 2710 | 2651.57 | 30.12 | 2708 | 2639.23 | 31.59 | 2661 | 2582.63 | 37.3 | 2508 | 2415.5 | 42.22 |
| | 50 | rnd | 2718 | 2660.97 | 27.88 | 2667 | 2616.5 | 18.22 | 2693 | 2595.63 | 33.04 | 2556 | 2447.13 | 49.21 |
| | | 2op | 2711 | 2674.9 | 24.39 | 2677 | 2630.4 | 20.08 | 2669 | 2601.4 | 34.46 | 2544 | 2450.03 | 57.86 |

Table A.2660: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2769 | 2730.37 | 21.49 | 2759 | 2707.8 | 27.46 | 2740 | 2651.3 | 37.75 | 2527 | 2413.5 | 59.26 |
| | | 2op | 2779 | 2741.37 | 18.9 | 2774 | 2719.1 | 31.46 | 2701 | 2636.9 | 31.77 | 2578 | 2445.53 | 70.75 |
| | 50 | rnd | 2773 | 2740.57 | 15.44 | 2756 | 2728.4 | 17.81 | 2717 | 2666.93 | 26.84 | 2673 | 2516.67 | 74.34 |
| | | 2op | 2776 | 2742.23 | 16.06 | 2768 | 2736.97 | 16.33 | 2750 | 2680.77 | 26.98 | 2596 | 2499.33 | 63.6 |
| 51 | 20 | rnd | 2764 | 2731.17 | 19.79 | 2771 | 2732.93 | 18.12 | 2754 | 2710.43 | 22.99 | 2674 | 2594.3 | 51.55 |
| | | 2op | 2775 | 2750.57 | 12.96 | 2775 | 2747.9 | 13.43 | 2765 | 2716.77 | 25.12 | 2743 | 2615.63 | 54 |
| | 50 | rnd | 2773 | 2740.03 | 12.49 | 2770 | 2741.7 | 15.63 | 2752 | 2728.63 | 13.72 | 2756 | 2651 | 48.78 |
| | | 2op | 2770 | 2751.37 | 14.09 | 2770 | 2752.1 | 10 | 2760 | 2729.37 | 21.02 | 2755 | 2647 | 53.9 |

Table A.2661: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2726 | 2640.17 | 34.28 | 2691 | 2613.47 | 40.99 | 2607 | 2470.1 | 49.4 | 2138 | 1932.5 | 95.6 |
| | | 2op | 2711 | 2653.8 | 29.01 | 2696 | 2617.27 | 40.03 | 2564 | 2468.9 | 53.08 | 2023 | 1893.07 | 76.2 |
| | 50 | rnd | 2695 | 2646 | 23.64 | 2698 | 2617.03 | 29.46 | 2548 | 2462.43 | 55.92 | 2211 | 2026.07 | 85.39 |
| | | 2op | 2701 | 2655.27 | 23.05 | 2673 | 2617.1 | 22.49 | 2568 | 2482.63 | 49.13 | 2210 | 2028.37 | 101.03 |
| 51 | 20 | rnd | 2762 | 2728.63 | 19.62 | 2763 | 2726.17 | 17.43 | 2716 | 2666.67 | 30.3 | 2433 | 2304.07 | 81.03 |
| | | 2op | 2762 | 2752.67 | 10.63 | 2771 | 2752.77 | 12.64 | 2749 | 2675.2 | 48.42 | 2455 | 2329.2 | 61.21 |
| | 50 | rnd | 2742 | 2705.27 | 20.2 | 2730 | 2686.73 | 18.13 | 2662 | 2609.73 | 28.68 | 2509 | 2399.43 | 48.49 |
| | | 2op | 2759 | 2726.93 | 20.27 | 2753 | 2703.33 | 29.92 | 2706 | 2620.63 | 42.62 | 2518 | 2410.8 | 59.25 |

Table A.2662: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2766 | 2740.17 | 16.19 | 2771 | 2733.2 | 19.61 | 2695 | 2604.83 | 49.63 | 2426 | 2300.23 | 87.35 |
| | | 2op | 2778 | 2749.53 | 12.46 | 2776 | 2740.57 | 18.19 | 2696 | 2614.03 | 53 | 2467 | 2333.43 | 79.65 |
| | 50 | rnd | 2763 | 2741.03 | 13.34 | 2766 | 2736.37 | 15.35 | 2716 | 2661.9 | 31.5 | 2562 | 2464.43 | 56.91 |
| | | 2op | 2774 | 2751.07 | 11.35 | 2770 | 2748.5 | 16.26 | 2760 | 2671.1 | 50.87 | 2664 | 2460.2 | 80.56 |
| 51 | 20 | rnd | 2769 | 2743.9 | 12.72 | 2763 | 2744.53 | 11.02 | 2758 | 2695.93 | 38.78 | 2677 | 2548.13 | 67.65 |
| | | 2op | 2775 | 2761.83 | 7.29 | 2770 | 2760.27 | 8.31 | 2755 | 2717.9 | 24.87 | 2644 | 2552.6 | 45.19 |
| | 50 | rnd | 2769 | 2748.4 | 12.43 | 2763 | 2736.53 | 16.41 | 2750 | 2704.6 | 29.47 | 2696 | 2603 | 58.17 |
| | | 2op | 2776 | 2762.4 | 6.84 | 2772 | 2752.93 | 14.39 | 2764 | 2718.77 | 29.92 | 2737 | 2630.3 | 57.37 |

Table A.2663: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2716 | 2668.63 | 28.95 | 2686 | 2625.47 | 33.11 | 2587 | 2476.37 | 61.14 | 2199 | 2065.93 | 56.28 |
| | | 2op | 2720 | 2673.13 | 25.76 | 2685 | 2618.37 | 34.68 | 2604 | 2472.37 | 68.44 | 2185 | 2056.6 | 65.75 |
| | 50 | rnd | 2728 | 2686.93 | 23.56 | 2711 | 2643 | 24.52 | 2664 | 2552.53 | 43.65 | 2325 | 2182.73 | 73.87 |
| | | 2op | 2729 | 2688.8 | 21.68 | 2688 | 2637.7 | 21.23 | 2609 | 2532.33 | 54.77 | 2344 | 2190.17 | 67.57 |
| 51 | 20 | rnd | 2768 | 2708.83 | 29.54 | 2738 | 2693.07 | 23.98 | 2749 | 2652.73 | 48.07 | 2601 | 2474.6 | 63.97 |
| | | 2op | 2744 | 2706.77 | 22.83 | 2737 | 2693.77 | 20.89 | 2720 | 2659.2 | 30.93 | 2574 | 2453.43 | 56.2 |
| | 50 | rnd | 2763 | 2718.13 | 21.57 | 2737 | 2693.8 | 21.89 | 2752 | 2666.2 | 37.25 | 2606 | 2515.17 | 63.59 |
| | | 2op | 2766 | 2721.6 | 24.48 | 2732 | 2690 | 18.68 | 2699 | 2650.77 | 28.07 | 2627 | 2502.37 | 50.53 |

Table A.2664: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2793.57 | 25.06 | 2833 | 2783.43 | 23.93 | 2780 | 2705.9 | 46.48 | 2596 | 2469.27 | 56.62 |
| | | 2op | 2842 | 2795.7 | 22.71 | 2830 | 2782.27 | 28.18 | 2777 | 2693.73 | 42.09 | 2636 | 2498.13 | 67.64 |
| | 50 | rnd | 2837 | 2805.1 | 23.93 | 2829 | 2805.33 | 16.3 | 2811 | 2761.3 | 26.31 | 2701 | 2604.1 | 69.12 |
| | | 2op | 2827 | 2806.53 | 17.28 | 2835 | 2804.03 | 14.23 | 2802 | 2739.33 | 35.47 | 2709 | 2602.3 | 68.51 |
| 51 | 20 | rnd | 2828 | 2800.67 | 17.69 | 2831 | 2807.27 | 19.6 | 2831 | 2776.3 | 30.47 | 2749 | 2658.2 | 58.95 |
| | | 2op | 2838 | 2792.6 | 23.76 | 2820 | 2799.83 | 15.02 | 2830 | 2774.33 | 25.27 | 2800 | 2668.53 | 54.38 |
| | 50 | rnd | 2833 | 2807.3 | 14.74 | 2840 | 2810.63 | 17.11 | 2832 | 2799.4 | 15.87 | 2821 | 2720.67 | 58.63 |
| | | 2op | 2830 | 2803.77 | 15.78 | 2842 | 2807.87 | 17.64 | 2844 | 2797 | 17.81 | 2784 | 2716.23 | 32.96 |

Table A.2665: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2727 | 2662.07 | 27.37 | 2683 | 2620.2 | 37.32 | 2580 | 2473.7 | 57.26 | 2195 | 2045.5 | 71.21 |
| | | 2op | 2748 | 2662.6 | 32.08 | 2673 | 2611.67 | 31.7 | 2609 | 2459.27 | 64.68 | 2216 | 2075.07 | 73.56 |
| | 50 | rnd | 2727 | 2687.2 | 21.92 | 2680 | 2631.97 | 24.35 | 2608 | 2504.9 | 67.01 | 2348 | 2183.83 | 92.23 |
| | | 2op | 2712 | 2672.3 | 20.48 | 2675 | 2636.13 | 19.08 | 2612 | 2536.17 | 56.4 | 2273 | 2148.3 | 69.48 |
| 51 | 20 | rnd | 2779 | 2714 | 25.61 | 2756 | 2697.97 | 25.67 | 2726 | 2646.63 | 47.5 | 2546 | 2451.03 | 55.32 |
| | | 2op | 2743 | 2694.47 | 22.59 | 2725 | 2685.6 | 21.82 | 2702 | 2636 | 42.4 | 2571 | 2465.93 | 59.69 |
| | 50 | rnd | 2768 | 2721.3 | 28.36 | 2736 | 2684.17 | 22.74 | 2684 | 2650.4 | 24.97 | 2654 | 2519 | 61.67 |
| | | 2op | 2751 | 2713.07 | 21.84 | 2718 | 2688.4 | 16.63 | 2715 | 2643.37 | 40.08 | 2609 | 2521.5 | 56.13 |

Table A.2666: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2836 | 2803.43 | 18.7 | 2829 | 2777.37 | 24.37 | 2780 | 2700.83 | 43.15 | 2609 | 2458.43 | 64.48 |
| | | 2op | 2836 | 2803.87 | 19.24 | 2823 | 2787.23 | 21.1 | 2758 | 2675.17 | 35.32 | 2625 | 2479.47 | 69.45 |
| | 50 | rnd | 2838 | 2807.27 | 20.84 | 2834 | 2806.1 | 14.24 | 2798 | 2749.17 | 29.29 | 2671 | 2576.03 | 50.47 |
| | | 2op | 2837 | 2805.37 | 18.24 | 2837 | 2798.8 | 20.08 | 2818 | 2745.13 | 36.09 | 2710 | 2547.97 | 73.97 |
| 51 | 20 | rnd | 2837 | 2807.4 | 19.22 | 2848 | 2809.9 | 22.06 | 2825 | 2777.27 | 22.09 | 2792 | 2680 | 49.24 |
| | | 2op | 2833 | 2792.07 | 26.91 | 2829 | 2804.87 | 16.52 | 2823 | 2771.13 | 26.29 | 2776 | 2670.43 | 50.62 |
| | 50 | rnd | 2839 | 2802.9 | 21.85 | 2838 | 2808.23 | 20.08 | 2834 | 2797.93 | 17.92 | 2794 | 2705.3 | 41.07 |
| | | 2op | 2843 | 2808.53 | 14.85 | 2841 | 2812.47 | 16.44 | 2836 | 2798.87 | 21.15 | 2787 | 2718.3 | 40.47 |

Table A.2667: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2768 | 2704.43 | 31.7 | 2769 | 2687.87 | 30.5 | 2629 | 2539.3 | 54.07 | 2090 | 1948.7 | 67.94 |
| | | 2op | 2760 | 2702.47 | 25.5 | 2733 | 2678.3 | 27.85 | 2588 | 2488.13 | 68.16 | 2154 | 1918.53 | 91.16 |
| | 50 | rnd | 2748 | 2714.07 | 21.5 | 2740 | 2675.07 | 23.7 | 2623 | 2529.6 | 61.13 | 2210 | 2061.43 | 79.96 |
| | | 2op | 2753 | 2704.87 | 25.97 | 2720 | 2672.1 | 24.98 | 2601 | 2542.17 | 39.81 | 2314 | 2060.17 | 83.43 |
| 51 | 20 | rnd | 2834 | 2799.4 | 20.32 | 2842 | 2800.17 | 19.78 | 2799 | 2721.27 | 47.14 | 2461 | 2358.9 | 73.48 |
| | | 2op | 2812 | 2795.8 | 13.63 | 2813 | 2796.17 | 14.78 | 2793 | 2710.83 | 41.81 | 2484 | 2365.77 | 61.4 |
| | 50 | rnd | 2814 | 2775.33 | 24.72 | 2822 | 2758.07 | 25.78 | 2764 | 2684.07 | 38.62 | 2584 | 2436.03 | 65.65 |
| | | 2op | 2802 | 2767.7 | 22.87 | 2798 | 2764.53 | 22.66 | 2755 | 2663.67 | 35.51 | 2539 | 2436.57 | 50.82 |

Table A.2668: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2838 | 2809.83 | 15.12 | 2835 | 2795.43 | 25.88 | 2785 | 2691.43 | 55.97 | 2541 | 2332.3 | 85.77 |
| | | 2op | 2841 | 2809.5 | 15.61 | 2834 | 2794.03 | 18.84 | 2773 | 2683.57 | 57.54 | 2495 | 2387.37 | 73.22 |
| | 50 | rnd | 2841 | 2813.9 | 13.89 | 2842 | 2808.9 | 20.89 | 2781 | 2719.6 | 43.02 | 2643 | 2516.17 | 72.85 |
| | | 2op | 2833 | 2811.8 | 11.56 | 2838 | 2812.37 | 14.58 | 2785 | 2717.23 | 44.69 | 2628 | 2509.4 | 77.02 |
| 51 | 20 | rnd | 2829 | 2812.63 | 13.45 | 2838 | 2813.6 | 17.52 | 2816 | 2763.7 | 38.91 | 2714 | 2606.8 | 64.31 |
| | | 2op | 2830 | 2805.83 | 8.25 | 2830 | 2804.73 | 8.87 | 2815 | 2761.97 | 33.53 | 2719 | 2614.57 | 52.34 |
| | 50 | rnd | 2842 | 2817.4 | 13.87 | 2838 | 2813.27 | 14.27 | 2818 | 2771.67 | 35.18 | 2781 | 2658.77 | 65.03 |
| | | 2op | 2845 | 2813.93 | 11 | 2838 | 2809.53 | 15.21 | 2810 | 2770.7 | 29.84 | 2747 | 2673.97 | 53.68 |

Table A.2669: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2579 | 2545.6 | 24.54 | 2574 | 2497.4 | 30.42 | 2498 | 2358.47 | 50.32 | 2167 | 2000.53 | 75.91 |
| | | 2op | 2604 | 2556.93 | 26.42 | 2578 | 2516.87 | 37.77 | 2456 | 2362.93 | 58.66 | 2120 | 1996.93 | 56.99 |
| | 50 | rnd | 2593 | 2558.57 | 22.64 | 2548 | 2509.47 | 18.17 | 2489 | 2421.13 | 32.72 | 2295 | 2132.33 | 77.9 |
| | | 2op | 2616 | 2565.13 | 26.82 | 2565 | 2517 | 19.12 | 2495 | 2420.33 | 46.29 | 2270 | 2110.23 | 72.97 |
| 51 | 20 | rnd | 2655 | 2584.57 | 28.35 | 2621 | 2570.1 | 24.96 | 2596 | 2534.43 | 38.49 | 2450 | 2361.7 | 45.2 |
| | | 2op | 2646 | 2582.1 | 31.87 | 2654 | 2582.5 | 24.2 | 2600 | 2527.67 | 41.94 | 2515 | 2361.43 | 49.58 |
| | 50 | rnd | 2643 | 2595.23 | 22.9 | 2622 | 2563.23 | 21.8 | 2583 | 2527.67 | 33.79 | 2475 | 2390.9 | 67.07 |
| | | 2op | 2654 | 2605.43 | 24.57 | 2617 | 2568.6 | 19.63 | 2635 | 2533.93 | 37.15 | 2542 | 2396.43 | 58.05 |

Table A.2670: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2670.23 | 20.55 | 2714 | 2662.5 | 28.07 | 2641 | 2577.7 | 30.85 | 2506 | 2371.77 | 67.41 |
| | | 2op | 2708 | 2675.93 | 25.18 | 2712 | 2662.9 | 19.43 | 2665 | 2581.37 | 41.36 | 2558 | 2389.43 | 66.58 |
| | 50 | rnd | 2708 | 2678.13 | 18.25 | 2706 | 2674.93 | 20.95 | 2667 | 2623.83 | 24.45 | 2601 | 2462.8 | 66.56 |
| | | 2op | 2708 | 2685.9 | 12.73 | 2699 | 2678.93 | 13.69 | 2698 | 2635.2 | 30.59 | 2606 | 2499.07 | 48.56 |
| 51 | 20 | rnd | 2706 | 2675.83 | 16.53 | 2700 | 2678.8 | 14.84 | 2701 | 2652.43 | 27.43 | 2665 | 2551.23 | 47.29 |
| | | 2op | 2707 | 2684.97 | 16.85 | 2710 | 2680.7 | 18.75 | 2716 | 2664.2 | 24.13 | 2672 | 2575.97 | 50 |
| | 50 | rnd | 2711 | 2688.77 | 12.93 | 2714 | 2686.1 | 13.44 | 2700 | 2672.9 | 17.43 | 2642 | 2587.27 | 41.98 |
| | | 2op | 2713 | 2688.47 | 13.14 | 2710 | 2694.5 | 9.75 | 2704 | 2683.77 | 12.57 | 2666 | 2597.4 | 43.35 |

Table A.2671: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2592 | 2537.6 | 29.25 | 2585 | 2492.5 | 39.92 | 2461 | 2336.93 | 60.81 | 2130 | 1990.47 | 63.53 |
| | | 2op | 2586 | 2538.4 | 28.52 | 2536 | 2495.4 | 29.41 | 2445 | 2347.23 | 73.27 | 2206 | 2013.13 | 70.47 |
| | 50 | rnd | 2604 | 2558.97 | 25.32 | 2554 | 2513.4 | 21.73 | 2519 | 2420.9 | 47.52 | 2289 | 2084.7 | 83.5 |
| | | 2op | 2593 | 2564.13 | 21.21 | 2566 | 2512.87 | 24.89 | 2513 | 2427.53 | 46.85 | 2297 | 2093.3 | 87.51 |
| 51 | 20 | rnd | 2643 | 2580.1 | 31.23 | 2612 | 2570.8 | 22.59 | 2595 | 2524.83 | 38.38 | 2482 | 2350.8 | 55.89 |
| | | 2op | 2637 | 2596.8 | 27.23 | 2647 | 2584.37 | 26.26 | 2616 | 2527 | 39.04 | 2465 | 2368.4 | 44.83 |
| | 50 | rnd | 2647 | 2602.93 | 21.18 | 2624 | 2563.07 | 22.91 | 2578 | 2525.3 | 26.96 | 2492 | 2401.53 | 52.44 |
| | | 2op | 2656 | 2605.97 | 21.48 | 2621 | 2566.77 | 20.32 | 2598 | 2533.17 | 34.91 | 2489 | 2409.97 | 44.57 |

Table A.2672: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2701 | 2676.4 | 17.97 | 2706 | 2662 | 23.74 | 2659 | 2587.6 | 38.26 | 2496 | 2387.97 | 59.24 |
| | | 2op | 2708 | 2674.17 | 19.34 | 2693 | 2658.9 | 22.74 | 2644 | 2570.07 | 38.34 | 2477 | 2381.87 | 57.33 |
| | 50 | rnd | 2700 | 2678.8 | 16.27 | 2704 | 2679.47 | 16.5 | 2677 | 2617.13 | 31.86 | 2559 | 2457.7 | 54.94 |
| | | 2op | 2709 | 2687.4 | 16.17 | 2703 | 2676.27 | 16.26 | 2692 | 2627.13 | 37.58 | 2610 | 2463.9 | 70.6 |
| 51 | 20 | rnd | 2709 | 2676 | 18.29 | 2699 | 2675.5 | 16.94 | 2691 | 2650.4 | 27.01 | 2631 | 2548.5 | 49.98 |
| | | 2op | 2706 | 2677.27 | 20.52 | 2705 | 2680 | 18.15 | 2690 | 2660.77 | 19.49 | 2656 | 2551.53 | 49.39 |
| | 50 | rnd | 2708 | 2681.6 | 12.61 | 2712 | 2687.63 | 13.46 | 2699 | 2674.27 | 13.71 | 2672 | 2587.27 | 43.28 |
| | | 2op | 2704 | 2686.5 | 14.38 | 2708 | 2690 | 11.22 | 2702 | 2675.43 | 21.6 | 2647 | 2601.53 | 36.84 |

Table A.2673: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2629 | 2579.2 | 28.97 | 2658 | 2566.03 | 32.97 | 2524 | 2413.4 | 55.8 | 2086 | 1887.5 | 77.21 |
| | | 2op | 2658 | 2597.6 | 29.76 | 2663 | 2578.87 | 34.26 | 2491 | 2409.3 | 64.22 | 2012 | 1863.1 | 76.07 |
| | 50 | rnd | 2640 | 2587.67 | 29.12 | 2607 | 2543.9 | 35.85 | 2511 | 2419.57 | 52.7 | 2147 | 1983.63 | 90.34 |
| | | 2op | 2641 | 2597.57 | 20.25 | 2593 | 2558.73 | 23.9 | 2487 | 2425.8 | 37.41 | 2106 | 1987.1 | 61.86 |
| 51 | 20 | rnd | 2698 | 2667.13 | 16.06 | 2698 | 2666.6 | 19.14 | 2685 | 2609 | 28.97 | 2429 | 2298.17 | 56 |
| | | 2op | 2700 | 2681.13 | 13.38 | 2700 | 2679.57 | 12.7 | 2704 | 2624.17 | 39.39 | 2395 | 2257.7 | 76.34 |
| | 50 | rnd | 2687 | 2648.47 | 17.74 | 2691 | 2643.23 | 25 | 2615 | 2553.77 | 33.75 | 2457 | 2345.73 | 51.9 |
| | | 2op | 2682 | 2652.67 | 17.03 | 2686 | 2653.5 | 14.48 | 2631 | 2562.17 | 40.75 | 2509 | 2345.97 | 58.11 |

Table A.2674: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2707 | 2685.77 | 12.95 | 2709 | 2679.77 | 17.86 | 2662 | 2567.77 | 46.66 | 2433 | 2304.3 | 75.05 |
| | | 2op | 2715 | 2690.9 | 14.99 | 2703 | 2683.6 | 17.95 | 2642 | 2579.37 | 35.22 | 2428 | 2264.4 | 91.99 |
| | 50 | rnd | 2711 | 2687.77 | 13.85 | 2706 | 2681.63 | 18.79 | 2670 | 2605 | 42.31 | 2549 | 2404.63 | 71.43 |
| | | 2op | 2708 | 2689.8 | 9.45 | 2705 | 2686.97 | 10.56 | 2693 | 2612 | 37.33 | 2559 | 2401.93 | 68.91 |
| 51 | 20 | rnd | 2706 | 2684.47 | 14.46 | 2705 | 2686.53 | 11.99 | 2701 | 2646.63 | 30.57 | 2643 | 2511.27 | 51.93 |
| | | 2op | 2705 | 2694.53 | 6.31 | 2705 | 2693 | 8.61 | 2699 | 2641.83 | 32.8 | 2657 | 2521.47 | 59.37 |
| | 50 | rnd | 2709 | 2684.37 | 14.9 | 2701 | 2676.27 | 15.98 | 2698 | 2652.63 | 29.62 | 2653 | 2554.9 | 46.08 |
| | | 2op | 2708 | 2695.67 | 7.86 | 2713 | 2688.57 | 13.87 | 2693 | 2649.93 | 32.45 | 2666 | 2562.9 | 55.91 |

Table A.2675: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16447 | 16224.47 | 110.72 | 16009 | 15459.27 | 248.58 | 13451 | 12655.37 | 392.95 | 11330 | 10605.43 | 236.77 |
| | | 2op | 16517 | 16231.7 | 151.01 | 15729 | 15376.97 | 181.82 | 13174 | 12594.1 | 336.01 | 11225 | 10599.17 | 265.4 |
| | 50 | rnd | 16421 | 16187.47 | 128.67 | 16219 | 15805.23 | 181.19 | 14372 | 13696.97 | 393.2 | 11174 | 10752.77 | 234.4 |
| | | 2op | 16403 | 16217.93 | 116.47 | 16160 | 15815.27 | 180.35 | 14381 | 13813.87 | 348.27 | 11127 | 10756.07 | 234.27 |
| 51 | 20 | rnd | 16702 | 16450.8 | 127.88 | 16626 | 16299.43 | 126.62 | 15782 | 15080.33 | 431.63 | 12911 | 12359.1 | 311.66 |
| | | 2op | 16660 | 16467.47 | 111.68 | 16624 | 16301.8 | 139.5 | 15582 | 15039.3 | 322.19 | 13016 | 12432.2 | 254.66 |
| | 50 | rnd | 16630 | 16464.23 | 94.52 | 16597 | 16389.73 | 125.02 | 16012 | 15680 | 193.28 | 13849 | 12995.03 | 403.18 |
| | | 2op | 16684 | 16475.27 | 91.9 | 16661 | 16399.93 | 107.86 | 16067 | 15722.5 | 232.25 | 13846 | 13094.27 | 334.02 |

Table A.2676: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17802 | 17667.6 | 68.03 | 17621 | 17486.1 | 73.72 | 17360 | 16954.37 | 184.46 | 16052 | 15087.17 | 367.48 |
| | | 2op | 17775 | 17705.43 | 46.59 | 17698 | 17512.47 | 87.66 | 17454 | 17000.87 | 173.71 | 15720 | 14945.37 | 425.66 |
| | 50 | rnd | 17835 | 17741.8 | 61.2 | 17735 | 17554.93 | 122.51 | 17500 | 17321.9 | 114.48 | 16576 | 15958.77 | 332.36 |
| | | 2op | 17858 | 17728.13 | 60.05 | 17754 | 17583.3 | 106.12 | 17662 | 17348.3 | 168.78 | 16765 | 16085.33 | 330.62 |
| 51 | 20 | rnd | 17780 | 17685.17 | 66.71 | 17856 | 17601 | 123.41 | 17594 | 17415.87 | 140.41 | 16966 | 16639.43 | 247.63 |
| | | 2op | 17853 | 17713.67 | 74.34 | 17791 | 17606.13 | 88.41 | 17730 | 17451.03 | 123.95 | 17100 | 16747.13 | 203.73 |
| | 50 | rnd | 17842 | 17734.6 | 44.08 | 17798 | 17656.4 | 71.75 | 17774 | 17573.3 | 92.89 | 17309 | 17011.53 | 217.17 |
| | | 2op | 17858 | 17754.87 | 61 | 17842 | 17671.27 | 73.09 | 17727 | 17566.57 | 85.28 | 17419 | 17028.93 | 209.54 |

Table A.2677: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16361 | 16164.97 | 124.52 | 15821 | 15418.73 | 203.37 | 13479 | 12678.57 | 388.85 | 10889 | 10495.4 | 247.25 |
| | | 2op | 16423 | 16160.37 | 130.65 | 16018 | 15456.9 | 312.38 | 13612 | 12591.47 | 417.84 | 11128 | 10461.57 | 249.48 |
| | 50 | rnd | 16351 | 16164.57 | 119.21 | 16031 | 15729.17 | 164.52 | 14050 | 13547.77 | 411.84 | 11138 | 10634.3 | 310.58 |
| | | 2op | 16420 | 16226.3 | 139.31 | 16103 | 15770 | 180.82 | 14703 | 13618.5 | 483.47 | 11169 | 10670.17 | 274.82 |
| 51 | 20 | rnd | 16760 | 16459.93 | 116.7 | 16557 | 16318.27 | 119.8 | 15435 | 14992.27 | 356.38 | 12836 | 12358.37 | 261.16 |
| | | 2op | 16792 | 16448.47 | 139.3 | 16543 | 16291.67 | 139.23 | 15457 | 15042.03 | 327.87 | 12976 | 12312.93 | 373.93 |
| | 50 | rnd | 16717 | 16488.7 | 130.67 | 16552 | 16370.53 | 85.05 | 15921 | 15636 | 169.44 | 13731 | 13132.6 | 330.08 |
| | | 2op | 16620 | 16447.7 | 101.47 | 16688 | 16383.7 | 107.63 | 16083 | 15643 | 313.56 | 13595 | 13003.83 | 269.42 |

Table A.2678: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17819 | 17687.13 | 66.4 | 17627 | 17470.93 | 91.18 | 17287 | 16881.7 | 253.43 | 15452 | 14810.43 | 393.81 |
| | | 2op | 17832 | 17666.83 | 92.04 | 17767 | 17503.03 | 90.4 | 17290 | 16944.87 | 216.66 | 15705 | 14917.27 | 483.79 |
| | 50 | rnd | 17845 | 17717.7 | 64.76 | 17743 | 17553.3 | 106.94 | 17530 | 17219.67 | 186.87 | 16573 | 15843.6 | 340.13 |
| | | 2op | 17851 | 17730.13 | 67.45 | 17757 | 17564.1 | 82.06 | 17545 | 17268.2 | 168.94 | 16487 | 15893.53 | 306.82 |
| 51 | 20 | rnd | 17829 | 17686.73 | 69.08 | 17782 | 17567.9 | 84.93 | 17722 | 17438.97 | 113.27 | 17138 | 16768.83 | 231.64 |
| | | 2op | 17831 | 17714.2 | 56.83 | 17796 | 17610.07 | 105.02 | 17691 | 17516.53 | 104.34 | 17248 | 16645.27 | 304.69 |
| | 50 | rnd | 17848 | 17726.3 | 61.48 | 17765 | 17659.63 | 68.9 | 17766 | 17562.27 | 89.42 | 17307 | 16964.83 | 215.21 |
| | | 2op | 17877 | 17761.03 | 75.32 | 17771 | 17662.67 | 64.9 | 17806 | 17570.73 | 104.69 | 17497 | 17114.03 | 180.81 |

Table A.2679: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 16830 | 16555.57 | 146.95 | 16754 | 16474.37 | 148.6 | 14317 | 13420.03 | 447.34 | 11142 | 10617.47 | 284.54 |
| | | 2op | 16801 | 16533.77 | 126.74 | 16631 | 16447.5 | 105.22 | 14650 | 13553.9 | 462.2 | 10947 | 10456.17 | 243.19 |
| | 50 | rnd | 16711 | 16390.47 | 119.75 | 16562 | 16357.3 | 125.92 | 14705 | 13928.3 | 468.32 | 11166 | 10629.83 | 248.12 |
| | | 2op | 16614 | 16347.57 | 144.55 | 16658 | 16363.3 | 133.88 | 14603 | 13845.9 | 413.38 | 11003 | 10589.93 | 197.77 |
| 51 | 20 | rnd | 17255 | 17031.2 | 99.31 | 17202 | 17000.23 | 130 | 16397 | 15953.73 | 256.25 | 13090 | 12215.3 | 312.52 |
| | | 2op | 17275 | 17009.97 | 139.28 | 17356 | 17017 | 154.58 | 16363 | 15936.8 | 225.73 | 12595 | 12146.33 | 266.87 |
| | 50 | rnd | 16939 | 16744.47 | 118.64 | 17067 | 16757.5 | 142.68 | 16295 | 15969.07 | 237.45 | 13177 | 12640.2 | 314.28 |
| | | 2op | 16922 | 16753 | 96.79 | 16927 | 16744.87 | 137.04 | 16351 | 16013.5 | 186.35 | 13450 | 12741.33 | 359.3 |

Table A.2680: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17777 | 17692.2 | 48.78 | 17781 | 17604.13 | 99.83 | 17374 | 16956.5 | 198.18 | 15310 | 14591.67 | 347.99 |
| | | 2op | 17812 | 17718.9 | 48.65 | 17847 | 17681.97 | 86.32 | 17263 | 16997.37 | 213.88 | 15284 | 14578.47 | 440.91 |
| | 50 | rnd | 17837 | 17754.73 | 34.57 | 17813 | 17681.4 | 81.57 | 17509 | 17281.3 | 159.93 | 16148 | 15600.1 | 273.64 |
| | | 2op | 17855 | 17761.5 | 63.39 | 17802 | 17696 | 63.69 | 17554 | 17292.53 | 154.92 | 16077 | 15500.2 | 338.13 |
| 51 | 20 | rnd | 17851 | 17728.8 | 65.49 | 17830 | 17703.6 | 66.68 | 17623 | 17500.2 | 110.88 | 16557 | 16097.17 | 177.04 |
| | | 2op | 17863 | 17754.5 | 51.89 | 17869 | 17718.5 | 58.38 | 17667 | 17513.23 | 76.14 | 16609 | 16147.57 | 235.2 |
| | 50 | rnd | 17810 | 17750.1 | 32.41 | 17831 | 17720.37 | 47 | 17754 | 17575.9 | 99.34 | 17018 | 16534.13 | 249.78 |
| | | 2op | 17896 | 17797.47 | 48.77 | 17842 | 17741.73 | 56.06 | 17718 | 17587.13 | 74.3 | 17223 | 16637.03 | 305.63 |

Table A.2681: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 20187 | 19963.73 | 133.78 | 19302 | 18886.7 | 273.65 | 15726 | 15047.27 | 433.81 | 13278 | 12823.17 | 271.13 |
| | | 2op | 20410 | 19996.93 | 187.45 | 19349 | 18755.17 | 433.34 | 15787 | 14951.73 | 475.7 | 13325 | 12839.77 | 211.52 |
| | 50 | rnd | 20276 | 19977 | 164.76 | 19689 | 19360.1 | 216.78 | 17297 | 16476 | 521.14 | 13638 | 13161.5 | 314.05 |
| | | 2op | 20244 | 19995.17 | 138.11 | 19747 | 19319.73 | 220.01 | 17436 | 16432.7 | 477.42 | 13819 | 13040.73 | 323.8 |
| 51 | 20 | rnd | 20519 | 20229.83 | 130.08 | 20285 | 19985.13 | 170.55 | 18864 | 18157.93 | 379.29 | 15571 | 14861.13 | 382.72 |
| | | 2op | 20527 | 20287.2 | 132.37 | 20393 | 20052.8 | 201.78 | 18905 | 18155.2 | 426.45 | 15603 | 14979.07 | 344.75 |
| | 50 | rnd | 20574 | 20257.5 | 132.2 | 20476 | 20153.4 | 160.62 | 19457 | 19067.23 | 292.45 | 16281 | 15634.87 | 403.22 |
| | | 2op | 20517 | 20273.27 | 146.06 | 20458 | 20206.8 | 139.76 | 19583 | 19062.37 | 339.54 | 16709 | 15673.1 | 438.17 |

Table A.2682: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22057 | 21901.67 | 88.35 | 21871 | 21622.93 | 142.98 | 21474 | 20813.93 | 319.68 | 19349 | 18457.7 | 541.4 |
| | | 2op | 22042 | 21908 | 76.84 | 21884 | 21656.43 | 98.07 | 21418 | 20996.73 | 263.69 | 19284 | 18445 | 408.16 |
| | 50 | rnd | 22086 | 21972.3 | 65.14 | 21933 | 21757.4 | 97.31 | 21757 | 21367.97 | 149.21 | 20572 | 19702.83 | 483.13 |
| | | 2op | 22087 | 21961.43 | 62.18 | 21990 | 21781.13 | 94.1 | 21793 | 21432.87 | 166.93 | 20579 | 19791.23 | 403.27 |
| 51 | 20 | rnd | 22094 | 21920.43 | 82.52 | 21950 | 21770.27 | 127.79 | 21880 | 21582.2 | 153.04 | 20944 | 20455.53 | 325.72 |
| | | 2op | 22123 | 21961.83 | 78.53 | 22000 | 21770.4 | 97.69 | 21862 | 21563.9 | 140.48 | 21041 | 20570.53 | 273.32 |
| | 50 | rnd | 22098 | 21964.77 | 67.68 | 21981 | 21837.73 | 83.67 | 21861 | 21719.4 | 84.54 | 21393 | 21023.1 | 218.32 |
| | | 2op | 22118 | 21972.9 | 84.09 | 22043 | 21853.83 | 110.4 | 21947 | 21731.9 | 124.14 | 21435 | 20930.6 | 266.48 |

Table A.2683: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 20226 | 19946.03 | 143.79 | 19247 | 18662.33 | 377.73 | 16210 | 14935.63 | 473.61 | 13190 | 12747.93 | 249.42 |
| | | 2op | 20290 | 19978.9 | 173.26 | 19300 | 18710 | 291.6 | 15720 | 14990.23 | 412.75 | 13213 | 12714.27 | 263.18 |
| | 50 | rnd | 20195 | 19958.87 | 137.28 | 19762 | 19283.17 | 275.21 | 17030 | 16385.77 | 400.44 | 13624 | 12975.03 | 375.16 |
| | | 2op | 20211 | 19965.77 | 114.66 | 19704 | 19299.57 | 258.33 | 17235 | 16433.67 | 531.73 | 13693 | 12957.97 | 313.16 |
| 51 | 20 | rnd | 20638 | 20262.63 | 157.73 | 20278 | 20037.7 | 129.55 | 18991 | 18305.43 | 317.8 | 15806 | 14815.73 | 310.86 |
| | | 2op | 20528 | 20288.07 | 101.69 | 20310 | 20047.43 | 161.1 | 18937 | 18208.67 | 365.23 | 15826 | 14914.17 | 327.45 |
| | 50 | rnd | 20448 | 20209.3 | 131.26 | 20418 | 20137.77 | 134.05 | 19588 | 18954.37 | 327.21 | 16561 | 15638 | 422.74 |
| | | 2op | 20573 | 20316.37 | 131.84 | 20403 | 20130.1 | 141.59 | 19500 | 18993.8 | 263.24 | 16401 | 15573.67 | 417.16 |

Table A.2684: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22045 | 21870.9 | 74.52 | 21930 | 21668.03 | 125.93 | 21377 | 20904.73 | 244.72 | 19277 | 18347.07 | 485.89 |
| | | 2op | 22067 | 21887.07 | 96.67 | 21926 | 21636.3 | 142.53 | 21112 | 20800.1 | 207.8 | 19163 | 18437.03 | 450.69 |
| | 50 | rnd | 22101 | 21942 | 82 | 21923 | 21687.13 | 110.94 | 21753 | 21315.77 | 164.5 | 20279 | 19450.33 | 512.67 |
| | | 2op | 22103 | 21965.97 | 77.28 | 21967 | 21790.37 | 123.38 | 21808 | 21313.97 | 259.44 | 20148 | 19530.5 | 315.89 |
| 51 | 20 | rnd | 22097 | 21935.43 | 83.52 | 21999 | 21802.4 | 86.29 | 21766 | 21550.13 | 126.46 | 21142 | 20519.53 | 302.74 |
| | | 2op | 22049 | 21935.47 | 74.85 | 22044 | 21773.4 | 115.38 | 21868 | 21646.77 | 133.89 | 21109 | 20631.87 | 311.97 |
| | 50 | rnd | 22051 | 21967.6 | 58.33 | 22084 | 21832.07 | 113.96 | 21902 | 21687.4 | 119.95 | 21658 | 20948.7 | 299.52 |
| | | 2op | 22114 | 21980.03 | 70.76 | 22108 | 21863.93 | 98.36 | 21957 | 21735 | 123.02 | 21482 | 20961.67 | 227.93 |

Table A.2685: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 20573 | 20372.2 | 136.35 | 20652 | 20294 | 157.8 | 16967 | 16134.43 | 426.25 | 13446 | 12784.73 | 338.46 |
| | | 2op | 20575 | 20338.4 | 152.18 | 20456 | 20192.5 | 166.84 | 16931 | 16128.33 | 424.2 | 13481 | 12889.03 | 266.37 |
| | 50 | rnd | 20521 | 20209.13 | 125.58 | 20371 | 20095.03 | 157.05 | 17699 | 16668.77 | 608.02 | 13370 | 12892.37 | 295.06 |
| | | 2op | 20500 | 20142.43 | 159.5 | 20387 | 20140.6 | 148.1 | 17567 | 16852.7 | 458.39 | 13503 | 12886.17 | 266.58 |
| 51 | 20 | rnd | 21242 | 20890.43 | 145.58 | 21174 | 20896.73 | 123.55 | 19967 | 19259.5 | 411.6 | 15090 | 14550.4 | 261.31 |
| | | 2op | 21289 | 20931.67 | 129.1 | 21110 | 20872.33 | 122.64 | 20057 | 19374.23 | 346.48 | 15129 | 14611.27 | 339.4 |
| | 50 | rnd | 20823 | 20539.73 | 119.44 | 20957 | 20566.2 | 143.58 | 20066 | 19442.5 | 301.17 | 16287 | 15328.97 | 386.68 |
| | | 2op | 20930 | 20584.97 | 145.58 | 20900 | 20622.3 | 137.07 | 20064 | 19483.07 | 289.08 | 16310 | 15426.53 | 408.06 |

Table A.2686: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22113 | 21940.3 | 81.68 | 21993 | 21816.2 | 100.34 | 21156 | 20864.8 | 225.15 | 18551 | 17913.13 | 308.54 |
| | | 2op | 22054 | 21946.1 | 72.89 | 22007 | 21837.53 | 90.9 | 21302 | 20901.6 | 211.53 | 18797 | 17802 | 440.55 |
| | 50 | rnd | 22140 | 21986.97 | 73.53 | 22035 | 21900.33 | 78.59 | 21611 | 21323.8 | 140.69 | 19702 | 19050.57 | 394.38 |
| | | 2op | 22104 | 22001.53 | 58.4 | 22051 | 21940.17 | 69.67 | 21832 | 21293.5 | 184.99 | 19695 | 19173.17 | 305.02 |
| 51 | 20 | rnd | 22131 | 21968.53 | 77.67 | 22127 | 21929.93 | 81.05 | 21870 | 21639.8 | 122.97 | 20345 | 19625.9 | 402.31 |
| | | 2op | 22156 | 22016.53 | 70.64 | 22114 | 21974.57 | 71.17 | 21890 | 21675.07 | 121.99 | 20597 | 19593.4 | 432.03 |
| | 50 | rnd | 22110 | 22026.47 | 49.54 | 22080 | 21969.73 | 52.17 | 21925 | 21741.23 | 121.7 | 20932 | 20132.53 | 444.37 |
| | | 2op | 22153 | 22038.43 | 64.14 | 22139 | 21987.63 | 75.56 | 22051 | 21817.93 | 92.75 | 21128 | 20332.43 | 519.61 |

Table A.2687: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22518 | 22179 | 140.55 | 21306 | 20719.97 | 325.03 | 17082 | 16430.57 | 446.61 | 14602 | 14041.03 | 268.51 |
| | | 2op | 22480 | 22156.57 | 146.59 | 21123 | 20592.53 | 268.37 | 17565 | 16512.8 | 483.62 | 14874 | 14092.5 | 289.56 |
| | 50 | rnd | 22532 | 22223.87 | 179.32 | 21631 | 21287.43 | 257.98 | 18804 | 17998.83 | 594.52 | 14839 | 14362.47 | 248.14 |
| | | 2op | 22505 | 22158.93 | 145.21 | 21800 | 21323.73 | 252.66 | 19026 | 18006.43 | 568.93 | 15093 | 14296.37 | 347.42 |
| 51 | 20 | rnd | 22775 | 22443.1 | 169.02 | 22527 | 22141.27 | 163.36 | 20684 | 19743.33 | 566.79 | 17003 | 16398.5 | 327.46 |
| | | 2op | 22859 | 22521.27 | 167.95 | 22489 | 22121.6 | 182.51 | 20721 | 19829.5 | 402.61 | 16955 | 16340.27 | 337.83 |
| | 50 | rnd | 22716 | 22516.93 | 131.97 | 22721 | 22311.63 | 198.45 | 21390 | 20957.77 | 290.1 | 17677 | 16993 | 436.06 |
| | | 2op | 22697 | 22481.37 | 171.43 | 22779 | 22340 | 187.64 | 21496 | 20970.67 | 309.08 | 17819 | 17053.63 | 435.42 |

Table A.2688: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24619 | 24437.4 | 100.41 | 24322 | 24035.2 | 156.58 | 23661 | 23125.27 | 321.79 | 21028 | 20238.23 | 528.43 |
| | | 2op | 24566 | 24399 | 84.57 | 24327 | 24153.5 | 102.89 | 23706 | 23228.8 | 270.15 | 21153 | 20069.4 | 567.19 |
| | 50 | rnd | 24678 | 24493.23 | 96.1 | 24512 | 24280.1 | 107.25 | 24188 | 23791.17 | 229.47 | 22403 | 21690.43 | 483.28 |
| | | 2op | 24685 | 24536.03 | 64.11 | 24530 | 24289.83 | 107.49 | 24191 | 23711.47 | 216.95 | 22359 | 21655.17 | 467.42 |
| 51 | 20 | rnd | 24615 | 24459.43 | 98.16 | 24584 | 24290.5 | 134.82 | 24305 | 24086.03 | 151.57 | 23542 | 22711.67 | 366.17 |
| | | 2op | 24669 | 24456.2 | 93.76 | 24600 | 24299 | 129.97 | 24395 | 24049.27 | 161.09 | 23125 | 22596.7 | 310.38 |
| | 50 | rnd | 24703 | 24547.63 | 81.28 | 24625 | 24377.97 | 113.69 | 24438 | 24200.8 | 130.56 | 23804 | 23087.17 | 433.74 |
| | | 2op | 24718 | 24558.2 | 79.17 | 24565 | 24375.07 | 108.33 | 24498 | 24240.33 | 160.93 | 23822 | 23172.13 | 380.96 |

Table A.2689: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22524 | 22145.17 | 134.99 | 21316 | 20688.87 | 299.34 | 17548 | 16354.03 | 441.99 | 14374 | 13942.67 | 225.83 |
| | | 2op | 22518 | 22141.3 | 133.12 | 21345 | 20656.6 | 337.36 | 17259 | 16472.9 | 432.03 | 14514 | 14020.87 | 232.16 |
| | 50 | rnd | 22538 | 22211.67 | 163.83 | 21803 | 21215.53 | 255.41 | 18950 | 17841.83 | 601.02 | 14943 | 14178.77 | 337.23 |
| | | 2op | 22385 | 22113.83 | 163.49 | 21870 | 21342.57 | 230.18 | 18879 | 17922.6 | 617.12 | 15013 | 14222.2 | 301.61 |
| 51 | 20 | rnd | 22755 | 22413.7 | 168.31 | 22448 | 22088.3 | 171.13 | 20496 | 19707.93 | 476.12 | 16829 | 16265.73 | 327.97 |
| | | 2op | 22684 | 22439.97 | 133.63 | 22430 | 22116.67 | 202.41 | 20732 | 19859 | 462.01 | 16909 | 16311.77 | 313.05 |
| | 50 | rnd | 22772 | 22454.43 | 122.64 | 22528 | 22313.13 | 134.18 | 21538 | 20963.03 | 358.66 | 17624 | 16988.9 | 398.36 |
| | | 2op | 22807 | 22469.9 | 165.31 | 22524 | 22314.5 | 150.21 | 21274 | 20910.23 | 271.01 | 17870 | 17121.57 | 436.18 |

Table A.2690: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24658 | 24432 | 93.91 | 24392 | 24140.27 | 149.52 | 23595 | 23060.83 | 280.33 | 21363 | 20176.47 | 549.22 |
| | | 2op | 24732 | 24419.87 | 113.26 | 24531 | 24133.77 | 199.52 | 23815 | 23107.27 | 335.84 | 21459 | 20171.87 | 671.59 |
| | 50 | rnd | 24633 | 24496.67 | 79.41 | 24566 | 24236.93 | 137.34 | 23989 | 23666.5 | 237.65 | 22343 | 21507.83 | 427.85 |
| | | 2op | 24633 | 24471.37 | 94.93 | 24493 | 24271.5 | 125.23 | 24050 | 23671.47 | 239.04 | 22002 | 21368.43 | 401.82 |
| 51 | 20 | rnd | 24602 | 24465.1 | 89.59 | 24529 | 24292.87 | 136.89 | 24401 | 24009.4 | 196.39 | 23162 | 22639.23 | 341.94 |
| | | 2op | 24609 | 24444.8 | 77.74 | 24489 | 24274.53 | 140.11 | 24353 | 24051.33 | 180.6 | 23249 | 22739.4 | 336.19 |
| | 50 | rnd | 24720 | 24572.67 | 82.01 | 24597 | 24394.23 | 110.04 | 24386 | 24170.23 | 129.7 | 23691 | 23214.93 | 220.85 |
| | | 2op | 24701 | 24551.23 | 80.51 | 24670 | 24381.7 | 125.39 | 24505 | 24215.23 | 149.78 | 23736 | 23335.77 | 248.53 |

Table A.2691: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22786 | 22504.6 | 135.1 | 22827 | 22422.7 | 156.8 | 18200 | 17471.23 | 474.81 | 14841 | 14094.7 | 302.62 |
| | | 2op | 22890 | 22552.77 | 149.63 | 22785 | 22434.5 | 165.89 | 18265 | 17507.9 | 665.52 | 14924 | 14140.37 | 335.33 |
| | 50 | rnd | 22686 | 22389.5 | 133.65 | 22486 | 22289.27 | 139.45 | 19472 | 18256.2 | 624.51 | 15119 | 14176.97 | 284.18 |
| | | 2op | 22648 | 22401.07 | 143.49 | 22561 | 22279.6 | 158.44 | 19257 | 18292.97 | 586.71 | 14743 | 14229.97 | 274.78 |
| 51 | 20 | rnd | 23524 | 23028.03 | 186.12 | 23524 | 23042.57 | 185.81 | 22024 | 21143.5 | 416.04 | 17270 | 16014.83 | 489.28 |
| | | 2op | 23417 | 23022.13 | 159.29 | 23503 | 23071.67 | 167.33 | 21789 | 21034.63 | 415.01 | 16630 | 16040.47 | 353.68 |
| | 50 | rnd | 23131 | 22752.37 | 172.8 | 22943 | 22742.2 | 141.8 | 21966 | 21366.8 | 356.45 | 17649 | 16887.83 | 328.52 |
| | | 2op | 23044 | 22734.1 | 137.98 | 23036 | 22728.33 | 178.79 | 21731 | 21230.77 | 287.09 | 17634 | 16958.3 | 382.51 |

Table A.2692: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24598 | 24446.77 | 102.65 | 24573 | 24358.27 | 97.78 | 23474 | 23137.67 | 219.33 | 20388 | 19596.97 | 346.67 |
| | | 2op | 24763 | 24475.17 | 108.27 | 24529 | 24350.43 | 92.14 | 23587 | 23164.57 | 232.2 | 20933 | 19574.1 | 518.02 |
| | 50 | rnd | 24706 | 24531.03 | 77.79 | 24564 | 24392 | 102.95 | 24075 | 23657.1 | 247.6 | 21971 | 21237.13 | 343.05 |
| | | 2op | 24693 | 24550.27 | 65.3 | 24653 | 24468.17 | 114.59 | 24059 | 23650.53 | 229.54 | 21803 | 21122.63 | 427.37 |
| 51 | 20 | rnd | 24724 | 24492.8 | 92.26 | 24722 | 24455.27 | 107.54 | 24285 | 24062.7 | 116.11 | 22230 | 21325.1 | 329.32 |
| | | 2op | 24644 | 24502.53 | 80.76 | 24644 | 24452.4 | 90.09 | 24326 | 24074.03 | 124.87 | 22426 | 21473.43 | 447.3 |
| | 50 | rnd | 24687 | 24581.8 | 63.71 | 24675 | 24514.97 | 78.77 | 24356 | 24238.43 | 79.78 | 23247 | 22366.7 | 590.7 |
| | | 2op | 24726 | 24624.5 | 61.22 | 24723 | 24549.77 | 73.1 | 24443 | 24252.2 | 139.95 | 23399 | 22259.27 | 598.89 |

Table A.2693: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 42229 | 41713.53 | 188.88 | 38977 | 37924.97 | 660.78 | 30738 | 29459.8 | 647.68 | 27619 | 26776.93 | 358.46 |
| | | 2op | 42260 | 41759.27 | 250.53 | 39015 | 38095.7 | 599.87 | 30526 | 29543.13 | 576.54 | 27718 | 27000.5 | 399.36 |
| | 50 | rnd | 42831 | 42350.97 | 211.87 | 40902 | 39813.5 | 639.45 | 33364 | 31901.13 | 767.45 | 28249 | 27046.8 | 389.39 |
| | | 2op | 42764 | 42435.43 | 166.97 | 40711 | 39774.3 | 513.24 | 33496 | 31737.9 | 754.26 | 27702 | 27057.53 | 331.56 |
| 51 | 20 | rnd | 42598 | 42294.67 | 183.44 | 42421 | 41665.9 | 375.23 | 37047 | 35594.73 | 720.99 | 30496 | 29774.2 | 442.32 |
| | | 2op | 42751 | 42361.87 | 219.43 | 42563 | 41752.7 | 426.02 | 37978 | 35913.8 | 823.4 | 30899 | 29807.17 | 479.59 |
| | 50 | rnd | 43295 | 42925.43 | 209.71 | 42990 | 42473.57 | 298.09 | 39248 | 38221.6 | 709.76 | 31706 | 30799 | 566.94 |
| | | 2op | 43363 | 42940.9 | 239.72 | 42924 | 42512.13 | 222.78 | 39413 | 38129.83 | 862.25 | 32288 | 30956.2 | 745.1 |

Table A.2694: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47663 | 47324.13 | 143.48 | 47542 | 46916.73 | 232.76 | 45922 | 44895.87 | 511.05 | 40131 | 38920.3 | 728.81 |
| | | 2op | 47633 | 47270.23 | 200.34 | 47176 | 46851.63 | 182.5 | 45680 | 44918.83 | 433.65 | 40903 | 38898 | 1011.21 |
| | 50 | rnd | 47872 | 47522.23 | 128 | 47455 | 47106.43 | 211.37 | 46965 | 46167.17 | 346.85 | 43415 | 41974.97 | 1000.7 |
| | | 2op | 47800 | 47535.5 | 149.78 | 47485 | 47153.77 | 207.15 | 46697 | 46145.6 | 309.06 | 43267 | 42002.33 | 923.64 |
| 51 | 20 | rnd | 47712 | 47393.53 | 195.14 | 47615 | 47162.63 | 206.07 | 47172 | 46670.03 | 270.13 | 45270 | 44056.7 | 590.27 |
| | | 2op | 47792 | 47362.77 | 198.55 | 47543 | 47127.7 | 197.92 | 47271 | 46665.73 | 306.77 | 45097 | 43797.2 | 662.01 |
| | 50 | rnd | 47851 | 47561.77 | 128.35 | 47704 | 47321.97 | 199.55 | 47270 | 47005.5 | 175.18 | 45990 | 44965.07 | 706.63 |
| | | 2op | 47779 | 47610.43 | 116.3 | 47646 | 47293.6 | 174.97 | 47427 | 47021.93 | 180.6 | 45957 | 45057.63 | 423.62 |

Table A.2695: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 42106 | 41625.27 | 240.86 | 38747 | 37792.83 | 737.87 | 30293 | 29450.77 | 510.03 | 27496 | 26622.87 | 412.06 |
| | | 2op | 42088 | 41670.4 | 238.77 | 38917 | 37773.47 | 713.42 | 30341 | 29539.93 | 536.41 | 27559 | 26564.07 | 453.23 |
| | 50 | rnd | 42876 | 42291.87 | 239.42 | 40507 | 39609.03 | 714.07 | 33404 | 31654.8 | 887.15 | 27625 | 26773.77 | 382.91 |
| | | 2op | 42834 | 42325.2 | 205.79 | 40843 | 39532.6 | 578.33 | 33269 | 31622.83 | 994.84 | 27814 | 26911.6 | 389.15 |
| 51 | 20 | rnd | 42691 | 42278.33 | 186.28 | 42263 | 41787.17 | 309.18 | 36843 | 35627.97 | 790.64 | 31090 | 29852.47 | 410.76 |
| | | 2op | 42840 | 42330.6 | 234.66 | 42696 | 41790.17 | 385.68 | 36522 | 35380.17 | 871.2 | 31029 | 29854.27 | 509.68 |
| | 50 | rnd | 43192 | 42884.97 | 211.1 | 42959 | 42504.2 | 280.37 | 39823 | 38134.03 | 1020.13 | 32093 | 30848.97 | 612.11 |
| | | 2op | 43631 | 43011.27 | 266.32 | 43048 | 42452.2 | 319.95 | 39373 | 38007.7 | 813.71 | 31753 | 30806.27 | 591.93 |

Table A.2696: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47779 | 47319.1 | 137.83 | 47163 | 46816.1 | 226.29 | 45889 | 44915.27 | 557.18 | 40488 | 39077.33 | 850.01 |
| | | 2op | 47672 | 47304.2 | 175.57 | 47243 | 46878.83 | 233.11 | 45792 | 44864.4 | 570.84 | 40743 | 38946.7 | 1186.23 |
| | 50 | rnd | 47744 | 47475.23 | 145.37 | 47377 | 47067.9 | 217.82 | 46436 | 45869.1 | 373.22 | 42185 | 41137.23 | 613.52 |
| | | 2op | 47733 | 47449.83 | 152.26 | 47303 | 46985.03 | 190.27 | 46545 | 45879.53 | 382.67 | 42848 | 41426.4 | 759.97 |
| 51 | 20 | rnd | 47711 | 47422.47 | 151.2 | 47512 | 47092.83 | 214.35 | 47071 | 46573.63 | 220.3 | 45002 | 43808.13 | 664 |
| | | 2op | 47630 | 47383.67 | 128.13 | 47474 | 47123.1 | 186.7 | 47081 | 46626.5 | 260.52 | 45055 | 43865.97 | 580.2 |
| | 50 | rnd | 47793 | 47498.73 | 153.29 | 47722 | 47289.67 | 175.37 | 47302 | 46991.43 | 193.44 | 45625 | 44779.73 | 560.92 |
| | | 2op | 47807 | 47586.57 | 136.01 | 47703 | 47336.27 | 177.19 | 47490 | 47017.47 | 214.16 | 45614 | 45007.97 | 424.9 |

Table A.2697: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 42410 | 42079.3 | 175.3 | 42620 | 42132.37 | 214.85 | 33153 | 32066.53 | 722.36 | 27481 | 26775.07 | 452.03 |
| | | 2op | 42651 | 42202.67 | 246.69 | 42760 | 42197.33 | 288.16 | 33134 | 31941.6 | 667.01 | 27621 | 26793.5 | 381.5 |
| | 50 | rnd | 42743 | 42290.2 | 218.6 | 42613 | 42316.33 | 170.67 | 34392 | 32462.47 | 1133.93 | 27536 | 26765.03 | 310.53 |
| | | 2op | 42732 | 42317.73 | 243.3 | 42750 | 42337 | 217.91 | 34981 | 32890.63 | 1015.87 | 27725 | 26886.47 | 368.52 |
| 51 | 20 | rnd | 43501 | 42824.07 | 363.25 | 43501 | 42824.07 | 363.25 | 39185 | 38147.43 | 702.54 | 31302 | 29531.53 | 766.25 |
| | | 2op | 43515 | 42940.13 | 310.8 | 43448 | 42953.6 | 295.91 | 39717 | 38183.63 | 999 | 31153 | 29868.03 | 655.98 |
| | 50 | rnd | 42767 | 42413.27 | 230.46 | 42767 | 42406.77 | 201.26 | 40696 | 39316.7 | 759.4 | 32085 | 30975.6 | 522.29 |
| | | 2op | 42826 | 42390.57 | 220.27 | 42888 | 42424.27 | 249.12 | 41034 | 39651.37 | 662.61 | 31926 | 30995.5 | 534.2 |

Table A.2698: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47634 | 47255.93 | 179.66 | 47591 | 47116.5 | 204.46 | 45174 | 44743.43 | 350.45 | 39483 | 37843.53 | 731.79 |
| | | 2op | 47788 | 47387.37 | 166.76 | 47574 | 47256.23 | 153.93 | 45543 | 44912.63 | 391.7 | 39600 | 38057.77 | 726.26 |
| | 50 | rnd | 47700 | 47514.67 | 112.85 | 47528 | 47339.23 | 91.98 | 46420 | 45901.5 | 321.68 | 41997 | 40701.33 | 672.74 |
| | | 2op | 47845 | 47575 | 157.58 | 47810 | 47399.63 | 183.88 | 46472 | 45802.53 | 548.59 | 42040 | 40954.6 | 812.98 |
| 51 | 20 | rnd | 47747 | 47422.43 | 152.06 | 47710 | 47386.93 | 153.26 | 47128 | 46734.8 | 187.66 | 42922 | 40198.67 | 1593.11 |
| | | 2op | 47850 | 47480.83 | 147.54 | 47803 | 47440 | 143.12 | 47227 | 46828.77 | 220.86 | 43091 | 40509.83 | 1555.14 |
| | 50 | rnd | 47876 | 47597.73 | 118.15 | 47735 | 47518.03 | 114.65 | 47340 | 47014.8 | 168.22 | 44831 | 41607.03 | 1803.69 |
| | | 2op | 47820 | 47649.83 | 123.67 | 47790 | 47578.3 | 134.74 | 47309 | 47047.27 | 160.07 | 43084 | 41439 | 1200.44 |

Table A.2699: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48686 | 48107.93 | 279.49 | 44771 | 43539.37 | 914.08 | 36174 | 34199.53 | 725.84 | 32023 | 31167.3 | 407.71 |
| | | 2op | 48686 | 48191.93 | 245.64 | 45037 | 43853.63 | 705.54 | 35453 | 34249.03 | 728.83 | 32237 | 31123.43 | 410.82 |
| | 50 | rnd | 49710 | 49242.37 | 240.45 | 47140 | 45942.6 | 838.81 | 37411 | 36192.57 | 769.29 | 32566 | 31416.8 | 484.63 |
| | | 2op | 49715 | 49292.8 | 243.65 | 47338 | 46281.3 | 593.99 | 38140 | 36900.6 | 791.92 | 32253 | 31357.3 | 496.4 |
| 51 | 20 | rnd | 49321 | 48808.7 | 244.65 | 49377 | 48622 | 404.95 | 41981 | 40619 | 906.22 | 36042 | 34517.37 | 563.74 |
| | | 2op | 49222 | 48755.5 | 252.41 | 49397 | 48497.77 | 371.78 | 42376 | 40881.93 | 986.68 | 35438 | 34677.97 | 459.76 |
| | 50 | rnd | 50281 | 49834.57 | 221.93 | 50011 | 49366.6 | 375.82 | 46264 | 44268.67 | 868.65 | 37067 | 35793.33 | 600.81 |
| | | 2op | 50462 | 49912.1 | 211.01 | 50038 | 49271.33 | 437.65 | 45218 | 43953.3 | 864.14 | 36882 | 35921.3 | 547.24 |

Table A.2700: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55640 | 55242.27 | 203.58 | 55131 | 54729.43 | 258.77 | 53482 | 52594.23 | 441.97 | 46873 | 45342.63 | 911.51 |
| | | 2op | 55707 | 55265.97 | 172.04 | 55184 | 54783.63 | 248.46 | 53548 | 52637.97 | 501.28 | 47748 | 45396.33 | 980.76 |
| | 50 | rnd | 55812 | 55422.93 | 173.69 | 55470 | 55033.17 | 235.04 | 54589 | 53898 | 402.29 | 50360 | 48872.8 | 1096.2 |
| | | 2op | 55758 | 55481.87 | 162.98 | 55321 | 55061 | 158.96 | 54782 | 54072.1 | 434.1 | 50143 | 48822 | 743.37 |
| 51 | 20 | rnd | 55609 | 55353.27 | 154.17 | 55524 | 55130.43 | 224.57 | 55224 | 54422.57 | 381.25 | 52739 | 51423.03 | 663.36 |
| | | 2op | 55713 | 55357.67 | 178.09 | 55455 | 55078.77 | 182.17 | 55083 | 54480.83 | 346.38 | 52346 | 51348.47 | 600.68 |
| | 50 | rnd | 55868 | 55595.03 | 127.74 | 55575 | 55231.73 | 176.17 | 55480 | 54879.3 | 256.82 | 53894 | 52504.27 | 519.45 |
| | | 2op | 55790 | 55607.67 | 135.51 | 55653 | 55283.37 | 191.02 | 55347 | 54937.17 | 211.28 | 53495 | 52507.13 | 810.64 |

Table A.2701: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48544 | 48083.87 | 252.78 | 45204 | 43106 | 917.87 | 35159 | 33969.37 | 579.27 | 31768 | 30863.13 | 405.21 |
| | | 2op | 48609 | 48085.2 | 267.15 | 44968 | 43559.3 | 819.21 | 35107 | 34125.27 | 582.74 | 31692 | 30919.33 | 460.25 |
| | 50 | rnd | 49448 | 49104.5 | 190.99 | 47313 | 45907.43 | 630.9 | 38066 | 36336.1 | 824.14 | 32280 | 31046.57 | 539.8 |
| | | 2op | 49454 | 49120.5 | 216.47 | 47065 | 45875.87 | 831.15 | 38659 | 36226.03 | 1032.64 | 32055 | 31243.63 | 412.52 |
| 51 | 20 | rnd | 49538 | 48754.07 | 254.68 | 49456 | 48446.57 | 462.87 | 42043 | 40502.3 | 954.44 | 35801 | 34519.07 | 526.17 |
| | | 2op | 49232 | 48761 | 240.63 | 49139 | 48324.6 | 487.44 | 43191 | 40955.83 | 896.28 | 35887 | 34565.2 | 628.98 |
| | 50 | rnd | 50102 | 49742.4 | 194.37 | 50032 | 49438.73 | 336.91 | 45526 | 44180.13 | 1003.08 | 36896 | 35596.6 | 567.11 |
| | | 2op | 50371 | 49830.07 | 240.99 | 49952 | 49344.7 | 458.87 | 45591 | 43797.8 | 929.66 | 37294 | 35657.77 | 694.63 |

Table A.2702: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55693 | 55259.97 | 213.79 | 55075 | 54745.27 | 226.1 | 53292 | 52418.93 | 658.79 | 48006 | 45262.87 | 1160.81 |
| | | 2op | 55554 | 55308.1 | 161.2 | 55288 | 54754.57 | 231.55 | 53780 | 52494.5 | 680.97 | 46917 | 45404.8 | 1096.39 |
| | 50 | rnd | 55756 | 55490.2 | 145.4 | 55409 | 55037.83 | 179.96 | 54502 | 53768.87 | 348.81 | 50076 | 48550.5 | 876.22 |
| | | 2op | 55702 | 55502.27 | 172.04 | 55509 | 55006.43 | 263.49 | 54299 | 53736.07 | 312.24 | 49936 | 48664.67 | 764.96 |
| 51 | 20 | rnd | 55623 | 55330.67 | 204.61 | 55474 | 55012.63 | 207.75 | 55026 | 54482.13 | 299.22 | 52496 | 51349.23 | 653.13 |
| | | 2op | 55761 | 55382.8 | 194.14 | 55574 | 55210.27 | 159.03 | 55098 | 54439.13 | 283.58 | 52218 | 51148.83 | 812.87 |
| | 50 | rnd | 55807 | 55530.1 | 125.14 | 55730 | 55274.03 | 202.75 | 55224 | 54901 | 183.35 | 53736 | 52675.13 | 617.41 |
| | | 2op | 55842 | 55593.33 | 161.3 | 55556 | 55260.43 | 183.02 | 55507 | 54961.43 | 297.47 | 53418 | 52667.83 | 581.53 |

Table A.2703: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48826 | 48361.73 | 273.92 | 48844 | 48386.1 | 249.33 | 37819 | 36714.37 | 615.34 | 31988 | 31142.5 | 412.81 |
| | | 2op | 49045 | 48436.4 | 286.45 | 49045 | 48626.73 | 208.46 | 38633 | 37212.4 | 926.38 | 31985 | 31259.83 | 355.04 |
| | 50 | rnd | 49133 | 48686.53 | 203.38 | 49134 | 48676.03 | 260.21 | 39739 | 37701.77 | 1242.2 | 32130 | 31158.23 | 401.15 |
| | | 2op | 49377 | 48751.17 | 247.63 | 49219 | 48710.1 | 250.57 | 39988 | 37849.57 | 1190.7 | 32177 | 31370.8 | 304.03 |
| 51 | 20 | rnd | 49643 | 49113.5 | 269.64 | 49643 | 49113.5 | 269.64 | 45951 | 44500.7 | 846.39 | 36172 | 34539.07 | 860.99 |
| | | 2op | 49878 | 49173.17 | 336.43 | 49776 | 49166.1 | 350.4 | 45822 | 44120.97 | 1014.37 | 35860 | 34405.9 | 648.3 |
| | 50 | rnd | 49012 | 48580.63 | 242.15 | 48971 | 48525.1 | 202.12 | 47561 | 45794.37 | 805.14 | 36900 | 35868.63 | 744.9 |
| | | 2op | 48964 | 48519.3 | 243.14 | 49466 | 48609.27 | 297.89 | 47313 | 45984.37 | 886.7 | 37289 | 35908.17 | 695.67 |

Table A.2704: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55533 | 55250.87 | 150.79 | 55468 | 55100.03 | 163.46 | 53597 | 52535.27 | 427.38 | 46233 | 44523.87 | 671.4 |
| | | 2op | 55692 | 55342.53 | 151.84 | 55413 | 55210.23 | 154.99 | 53345 | 52410.43 | 472.4 | 45981 | 44328.83 | 674.18 |
| | 50 | rnd | 55769 | 55442.67 | 155.14 | 55652 | 55255.07 | 197.46 | 54273 | 53480.4 | 568.21 | 48971 | 47628.8 | 563.29 |
| | | 2op | 55754 | 55581.33 | 109.18 | 55585 | 55374.03 | 150.57 | 54382 | 53606.03 | 500.92 | 49591 | 47860.33 | 793.59 |
| 51 | 20 | rnd | 55753 | 55409.07 | 181.32 | 55750 | 55381.37 | 187.88 | 54982 | 54587.17 | 295.44 | 50380 | 46287.67 | 1769.97 |
| | | 2op | 55858 | 55470.27 | 165.61 | 55843 | 55435.9 | 176.88 | 55121 | 54587.63 | 293.93 | 50394 | 46199.4 | 1590.55 |
| | 50 | rnd | 55734 | 55572.57 | 110.54 | 55730 | 55486.3 | 117.97 | 55290 | 54936.47 | 187.54 | 50661 | 47726.63 | 1961.36 |
| | | 2op | 55815 | 55627.63 | 107.92 | 55748 | 55548 | 101.84 | 55519 | 55025.93 | 210.13 | 52749 | 48127.57 | 2263.4 |

Table A.2705: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

**Results With Post Optimization and Forced Recentre**

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47269 | 47112.2 | 76.22 | 47290 | 47129.77 | 113.66 | 47421 | 47167.5 | 119.83 | 47456 | 47187.43 | 120.81 |
| | | 2op | 47331 | 47177.93 | 79.3 | 47325 | 47154.5 | 92.11 | 47408 | 47156.3 | 126.19 | 47405 | 47204.7 | 103.24 |
| | 50 | rnd | 47370 | 47130 | 111.51 | 47381 | 47154.57 | 118.7 | 47375 | 47147.43 | 117.22 | 47441 | 47138.57 | 122.41 |
| | | 2op | 47367 | 47169.63 | 94.48 | 47365 | 47195.9 | 100.79 | 47412 | 47202.4 | 99.09 | 47388 | 47175.17 | 146.03 |
| 51 | 20 | rnd | 47429 | 47207.63 | 87.76 | 47394 | 47206.53 | 99.11 | 47391 | 47208.27 | 76.91 | 47385 | 47220.67 | 101.53 |
| | | 2op | 47384 | 47207.53 | 98.56 | 47362 | 47232.5 | 62.77 | 47383 | 47186.33 | 102.74 | 47401 | 47211.07 | 90.11 |
| | 50 | rnd | 47357 | 47206.13 | 76.68 | 47451 | 47214.3 | 99.92 | 47401 | 47214.1 | 107.44 | 47363 | 47225.37 | 90.91 |
| | | 2op | 47392 | 47182.67 | 96.77 | 47408 | 47219.07 | 82.32 | 47425 | 47195.8 | 97.68 | 47429 | 47206.1 | 93.89 |

Table A.2706: *acin*1: basicRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47367 | 47159.5 | 108.04 | 47361 | 47173.3 | 110.85 | 47358 | 47184 | 105.74 | 47378 | 47193.47 | 130.19 |
| | | 2op | 47481 | 47259 | 91.01 | 47411 | 47234.9 | 118.4 | 47465 | 47226.83 | 98.13 | 47396 | 47230.03 | 116.06 |
| | 50 | rnd | 47313 | 47144.67 | 107.41 | 47426 | 47230.17 | 108.57 | 47385 | 47181.33 | 114.07 | 47463 | 47254.6 | 97.7 |
| | | 2op | 47395 | 47231.87 | 81.99 | 47425 | 47284.7 | 77.71 | 47418 | 47223.63 | 100.71 | 47427 | 47216.03 | 131.96 |
| 51 | 20 | rnd | 47385 | 47230.63 | 99.29 | 47437 | 47331.3 | 59.94 | 47395 | 47206.53 | 107.72 | 47457 | 47218.13 | 117.36 |
| | | 2op | 47438 | 47275.83 | 75.12 | 47438 | 47335.53 | 61.38 | 47374 | 47236.93 | 82.46 | 47413 | 47267.2 | 91.48 |
| | 50 | rnd | 47342 | 47218.07 | 86.84 | 47497 | 47324.77 | 79.95 | 47358 | 47219.3 | 71 | 47423 | 47238.57 | 89.51 |
| | | 2op | 47325 | 47227.93 | 79.35 | 47451 | 47340.23 | 76.51 | 47408 | 47240.2 | 91.67 | 47417 | 47256.3 | 82.45 |

Table A.2707: *acin*1: transRRGA – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47349 | 47164 | 82.16 | 47292 | 47160.67 | 100.04 | 47377 | 47186.03 | 89.34 | 47363 | 47179.37 | 85.28 |
| | | 2op | 47350 | 47207 | 81.06 | 47312 | 47162.97 | 73.56 | 47323 | 47134.03 | 143.5 | 47394 | 47188.2 | 119.02 |
| | 50 | rnd | 47336 | 47151.57 | 118.07 | 47350 | 47142.7 | 107.1 | 47379 | 47146.7 | 97.01 | 47353 | 47168.97 | 122.35 |
| | | 2op | 47427 | 47185.73 | 116.75 | 47406 | 47199.17 | 94.04 | 47362 | 47174.6 | 117.74 | 47432 | 47159.7 | 119.43 |
| 51 | 20 | rnd | 47323 | 47210.33 | 66.35 | 47316 | 47196.7 | 84.24 | 47397 | 47237.97 | 90.62 | 47418 | 47224.63 | 104.81 |
| | | 2op | 47388 | 47228.63 | 98.57 | 47515 | 47229.83 | 108.36 | 47404 | 47217.87 | 86.65 | 47336 | 47223.8 | 77.45 |
| | 50 | rnd | 47373 | 47183.27 | 105.78 | 47346 | 47195.9 | 96.23 | 47379 | 47199.93 | 94.91 | 47360 | 47196.57 | 80.11 |
| | | 2op | 47410 | 47209.1 | 77.74 | 47350 | 47203.47 | 98.14 | 47384 | 47203.53 | 112.75 | 47376 | 47212.97 | 80.02 |

Table A.2708: *acin*1: basicRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47359 | 47204.13 | 102.11 | 47410 | 47175.17 | 104.35 | 47405 | 47218.8 | 93.19 | 47399 | 47256.6 | 85.7 |
| | | 2op | 47422 | 47266.27 | 101.06 | 47432 | 47266.63 | 93.72 | 47371 | 47232.23 | 95.84 | 47454 | 47243.63 | 85.99 |
| | 50 | rnd | 47408 | 47159.93 | 118.76 | 47418 | 47205.43 | 109.65 | 47334 | 47164.07 | 105.64 | 47411 | 47208 | 129.56 |
| | | 2op | 47427 | 47243.97 | 110.3 | 47405 | 47303.3 | 79.79 | 47445 | 47242.93 | 132.36 | 47416 | 47219.43 | 109.68 |
| 51 | 20 | rnd | 47346 | 47212.4 | 84.6 | 47424 | 47292.27 | 79.99 | 47348 | 47227.13 | 84.53 | 47436 | 47257.7 | 114.54 |
| | | 2op | 47440 | 47274.3 | 79.52 | 47489 | 47345.6 | 78.51 | 47402 | 47241.7 | 93.71 | 47340 | 47242.43 | 86.74 |
| | 50 | rnd | 47322 | 47199.53 | 101.18 | 47484 | 47356.67 | 61.23 | 47406 | 47201.37 | 99.89 | 47421 | 47250.47 | 125.05 |
| | | 2op | 47396 | 47264 | 83 | 47465 | 47357.2 | 49.8 | 47380 | 47262.27 | 82.02 | 47430 | 47254.93 | 71.56 |

Table A.2709: *acin*1: transRRGA+RS – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47359 | 47236.03 | 70.32 | 47094 | 46770.9 | 143.73 | 47097 | 46752.8 | 158.26 | 47028 | 46743.03 | 137.86 |
| | | 2op | 47356 | 47265.67 | 42.51 | 47149 | 46800.2 | 219.07 | 47072 | 46760.13 | 200.26 | 47140 | 46787.7 | 189.04 |
| | 50 | rnd | 47419 | 47217.4 | 85.41 | 47072 | 46780.97 | 142.72 | 47095 | 46821.27 | 136.49 | 47085 | 46761.63 | 176.58 |
| | | 2op | 47494 | 47265.4 | 68 | 47141 | 46774.67 | 205.06 | 46994 | 46783.53 | 149.7 | 47016 | 46796 | 117.57 |
| 51 | 20 | rnd | 47368 | 47253.2 | 62.99 | 47151 | 46821.63 | 182.78 | 47225 | 46896.53 | 170.95 | 47082 | 46827.87 | 163.98 |
| | | 2op | 47396 | 47336.6 | 35.12 | 47109 | 46812.2 | 187.08 | 47258 | 46895.67 | 189.91 | 47182 | 46792.5 | 171.09 |
| | 50 | rnd | 47452 | 47316.9 | 58.59 | 47143 | 46898.6 | 130.48 | 47288 | 46842.7 | 160.16 | 47152 | 46794.47 | 151.33 |
| | | 2op | 47427 | 47352.5 | 38.23 | 47184 | 46882.1 | 145.29 | 47131 | 46861.9 | 155.39 | 47085 | 46789.47 | 126.81 |

Table A.2710: *acin*1: basicRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47381 | 47233.8 | 94.1 | 47133 | 46872.4 | 135.31 | 47111 | 46803.5 | 163.84 | 47065 | 46759.43 | 137.73 |
| | | 2op | 47434 | 47299.17 | 55.83 | 47239 | 46950.73 | 165.43 | 47092 | 46832.33 | 148.04 | 47095 | 46809.43 | 163.67 |
| | 50 | rnd | 47433 | 47258.43 | 82.61 | 47350 | 47114.2 | 153.82 | 47381 | 46858.77 | 193.58 | 47143 | 46799.8 | 173.63 |
| | | 2op | 47477 | 47330 | 74.35 | 47289 | 47066.73 | 198.23 | 47115 | 46924.67 | 125.69 | 47047 | 46756.63 | 187.31 |
| 51 | 20 | rnd | 47374 | 47295.63 | 50.75 | 47231 | 46974.33 | 150.14 | 47333 | 46958.77 | 167.93 | 47075 | 46815.13 | 171.69 |
| | | 2op | 47413 | 47346.93 | 31.98 | 47394 | 47045.77 | 150.12 | 47285 | 46897.83 | 195.57 | 47102 | 46849.87 | 155.17 |
| | 50 | rnd | 47417 | 47315.9 | 48.49 | 47393 | 47238.7 | 112.72 | 47352 | 46989.3 | 134.11 | 47112 | 46796.43 | 162.96 |
| | | 2op | 47443 | 47367.8 | 32.03 | 47416 | 47192.87 | 148.28 | 47227 | 46984.13 | 152.32 | 47064 | 46806.87 | 164.05 |

Table A.2711: *acin*1: transRRGA+IM – Suspected Optimal is 47618

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151264 | 151017.63 | 244.17 | 151246 | 150889.4 | 370.69 | 151251 | 150855.7 | 385.72 | 151242 | 150876.03 | 355.09 |
| | | 2op | 151252 | 150870.17 | 363.34 | 151258 | 150873.37 | 471.14 | 151233 | 150899.7 | 301.93 | 151229 | 150729.97 | 368.92 |
| | 50 | rnd | 151239 | 150990.5 | 339.16 | 151291 | 150940.77 | 364.71 | 151224 | 150906.93 | 384.29 | 151237 | 150795.57 | 453.47 |
| | | 2op | 151260 | 150957.87 | 309.02 | 151239 | 150886.57 | 338.09 | 151232 | 150981.27 | 311.93 | 151241 | 150865.1 | 283.13 |
| 51 | 20 | rnd | 151290 | 151050.87 | 338.27 | 151271 | 151015.43 | 319.75 | 151263 | 150855.67 | 384.01 | 151252 | 150753.3 | 465.39 |
| | | 2op | 151276 | 151052.73 | 262.31 | 151265 | 151003.5 | 316.17 | 151248 | 150916.5 | 352.11 | 151253 | 151004.13 | 282.27 |
| | 50 | rnd | 151228 | 151057.17 | 207.12 | 151263 | 151071.63 | 267.32 | 151266 | 151049 | 234.7 | 151242 | 150792.77 | 383.75 |
| | | 2op | 151260 | 151132.93 | 138.77 | 151280 | 151001.03 | 333.04 | 151252 | 150921.07 | 359.52 | 151197 | 150871.47 | 399.93 |

Table A.2712: *acin*2: basicRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151298 | 151035.53 | 275.78 | 151289 | 151084.07 | 240.77 | 151301 | 151068.77 | 243.22 | 151234 | 150809.27 | 455.6 |
| | | 2op | 151285 | 151104.47 | 214.94 | 151310 | 151056.4 | 244.44 | 151290 | 151028.23 | 252.71 | 151267 | 150867.87 | 424.1 |
| | 50 | rnd | 151301 | 151076.97 | 237.63 | 151311 | 151116 | 235.73 | 151299 | 151018.1 | 264 | 151250 | 150958.87 | 335.77 |
| | | 2op | 151308 | 151144.23 | 160.94 | 151270 | 151093.1 | 249.6 | 151283 | 151130.53 | 178.44 | 151305 | 151069.1 | 225.92 |
| 51 | 20 | rnd | 151279 | 151140.93 | 173.84 | 151266 | 151093.7 | 221.73 | 151283 | 151102.33 | 213.82 | 151256 | 151104.8 | 213.82 |
| | | 2op | 151341 | 151152.97 | 168.84 | 151293 | 151175.87 | 130.34 | 151286 | 151115.53 | 188.83 | 151262 | 151035.23 | 309.1 |
| | 50 | rnd | 151271 | 151146.07 | 150.25 | 151284 | 151180.67 | 130.71 | 151275 | 151122.2 | 186.41 | 151335 | 151115 | 219.36 |
| | | 2op | 151317 | 151163.4 | 147.63 | 151343 | 151153.5 | 191.24 | 151301 | 151084.03 | 225.4 | 151293 | 150997.07 | 276.93 |

Table A.2713: *acin*2: transRRGA – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151255 | 151031.3 | 219.85 | 151226 | 150831.5 | 458.78 | 151237 | 150729.83 | 467.77 | 151208 | 150616.43 | 424.59 |
| | | 2op | 151251 | 150992.83 | 280.83 | 151265 | 150986.47 | 289.58 | 151247 | 150849.87 | 394.37 | 151214 | 150736.9 | 516.65 |
| | 50 | rnd | 151234 | 151013.33 | 252.66 | 151243 | 150932.03 | 368.76 | 151294 | 150890.63 | 380.02 | 151236 | 150764.5 | 412.14 |
| | | 2op | 151236 | 150927.43 | 378.08 | 151294 | 150964.8 | 346.4 | 151252 | 150757.37 | 460.95 | 151261 | 150867 | 465.38 |
| 51 | 20 | rnd | 151252 | 150978.63 | 326.24 | 151229 | 150991.1 | 298.66 | 151272 | 151031.13 | 249.9 | 151240 | 150825.57 | 394.38 |
| | | 2op | 151259 | 150966.3 | 352.96 | 151268 | 151033.23 | 258.64 | 151240 | 150904.47 | 345.69 | 151256 | 150855.5 | 313.7 |
| | 50 | rnd | 151253 | 151003.6 | 317.94 | 151246 | 151035.73 | 265.5 | 151230 | 150980.63 | 275.95 | 151243 | 150990.77 | 312.82 |
| | | 2op | 151256 | 151006.07 | 250.48 | 151316 | 151049.23 | 304.84 | 151210 | 150966.53 | 286.02 | 151214 | 150856.83 | 393.36 |

Table A.2714: *acin*2: basicRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151320 | 151177.67 | 149.2 | 151315 | 151101.13 | 248.26 | 151276 | 151122.9 | 195.56 | 151249 | 150916.23 | 298.06 |
| | | 2op | 151324 | 151047.33 | 297.05 | 151284 | 151126.83 | 201.39 | 151280 | 150963.7 | 358.82 | 151272 | 150888.8 | 358.27 |
| | 50 | rnd | 151307 | 151131.73 | 196.88 | 151286 | 151109.8 | 241.42 | 151260 | 151079.93 | 265.37 | 151275 | 151033.77 | 320.14 |
| | | 2op | 151321 | 151188.1 | 125.25 | 151254 | 151014.9 | 297.47 | 151289 | 151076.37 | 288.61 | 151247 | 150932.9 | 438.94 |
| 51 | 20 | rnd | 151284 | 151142.4 | 183.59 | 151342 | 151190.93 | 86.52 | 151273 | 151107.67 | 208.01 | 151300 | 151016.5 | 310.91 |
| | | 2op | 151321 | 151075.6 | 284.14 | 151297 | 151083.03 | 264.54 | 151278 | 151010.23 | 341.12 | 151292 | 150973.3 | 319.67 |
| | 50 | rnd | 151290 | 151105.8 | 172.5 | 151300 | 151141.93 | 188.08 | 151309 | 151102.03 | 282.31 | 151319 | 151135.3 | 186.46 |
| | | 2op | 151261 | 151104.23 | 197.65 | 151303 | 151136.23 | 178.84 | 151302 | 151150.27 | 189.33 | 151271 | 151027.93 | 256.08 |

Table A.2715: *acin*2: transRRGA+RS – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151295 | 151089.67 | 190.64 | 151193 | 150691.07 | 494.66 | 151266 | 150820.5 | 358.69 | 151268 | 150712.8 | 442.37 |
| | | 2op | 151265 | 151067.4 | 236.77 | 151231 | 150708.93 | 487.25 | 151242 | 150737.53 | 553.76 | 151258 | 150604.1 | 553.21 |
| | 50 | rnd | 151231 | 150997.07 | 269.43 | 151220 | 150874.8 | 431.35 | 151225 | 150617.17 | 521.82 | 151232 | 150760.57 | 467.15 |
| | | 2op | 151256 | 150957.37 | 321.7 | 151238 | 150746.47 | 423.58 | 151231 | 150719.3 | 532.95 | 151241 | 150883.03 | 421.65 |
| 51 | 20 | rnd | 151276 | 151142.57 | 147.33 | 151207 | 150685.63 | 500.48 | 151224 | 150705.57 | 443.32 | 151262 | 150684.17 | 479 |
| | | 2op | 151239 | 151085.73 | 247.74 | 151212 | 150758 | 441.68 | 151233 | 150785.33 | 523.48 | 151250 | 150675.9 | 494.36 |
| | 50 | rnd | 151301 | 151161.73 | 113.19 | 151206 | 150702.97 | 438.17 | 151202 | 150776.7 | 436.2 | 151246 | 150687.2 | 467.92 |
| | | 2op | 151264 | 151105.07 | 199.61 | 151221 | 150599.97 | 576.34 | 151232 | 150791.53 | 386.37 | 151161 | 150560.9 | 460.85 |

Table A.2716: *acin*2: basicRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 151329 | 151197.47 | 74.05 | 151240 | 150755.47 | 531.82 | 151213 | 150838.1 | 486.65 | 151296 | 150864.4 | 398.24 |
| | | 2op | 151284 | 151105.47 | 196.99 | 151248 | 150751.57 | 453.64 | 151222 | 150682.37 | 532.68 | 151212 | 150757.3 | 399.83 |
| | 50 | rnd | 151277 | 151135.17 | 262.12 | 151232 | 150855.3 | 350.43 | 151251 | 150881.6 | 345.83 | 151190 | 150721.7 | 459.22 |
| | | 2op | 151302 | 151215.9 | 45.73 | 151227 | 150757.8 | 503.49 | 151239 | 150817.57 | 316.12 | 151199 | 150652.9 | 484.01 |
| 51 | 20 | rnd | 151318 | 151185.87 | 81.86 | 151221 | 150926.77 | 318.61 | 151199 | 150810.27 | 387.43 | 151245 | 150976.37 | 263.67 |
| | | 2op | 151290 | 151222.33 | 47.69 | 151253 | 150727.53 | 421.55 | 151234 | 150813.63 | 401.92 | 151193 | 150706.5 | 482.21 |
| | 50 | rnd | 151278 | 151162.47 | 154.98 | 151279 | 150903.2 | 319.61 | 151227 | 150834.27 | 492.41 | 151238 | 150766.63 | 437.93 |
| | | 2op | 151335 | 151172.93 | 132.34 | 151277 | 150878.9 | 405.13 | 151232 | 150824.9 | 461.04 | 151236 | 150797.57 | 490.19 |

Table A.2717: *acin*2: transRRGA+IM – Suspected Optimal is 151553

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167036 | 166458.73 | 330.49 | 167015 | 166502 | 337.94 | 166981 | 166386.47 | 369.8 | 166805 | 166227.9 | 430.81 |
| | | 2op | 167160 | 166566.43 | 300.49 | 166949 | 166517.07 | 334.71 | 166975 | 166431.97 | 404.89 | 166834 | 166384.23 | 326.8 |
| | 50 | rnd | 167019 | 166617.73 | 289.07 | 166996 | 166624.83 | 251.95 | 166795 | 166386.7 | 358.98 | 166919 | 166405.4 | 381.45 |
| | | 2op | 166909 | 166518.3 | 274.06 | 166775 | 166388.43 | 337.98 | 166805 | 166300.17 | 423.97 | 166980 | 166362.3 | 370.18 |
| 51 | 20 | rnd | 167175 | 166684.17 | 240.8 | 167186 | 166629.93 | 224.2 | 167120 | 166588.7 | 265.93 | 166961 | 166370.93 | 387.51 |
| | | 2op | 166811 | 166598.2 | 140.18 | 167204 | 166485.6 | 342.76 | 166921 | 166512.5 | 320.77 | 166952 | 166431.47 | 389.02 |
| | 50 | rnd | 167175 | 166731.67 | 263.36 | 167043 | 166615.07 | 323.75 | 167106 | 166651.37 | 285.1 | 166952 | 166416.6 | 456.49 |
| | | 2op | 166973 | 166583.3 | 192.66 | 166980 | 166624.7 | 195.12 | 166801 | 166511.13 | 207.74 | 166866 | 166441.17 | 331.11 |

Table A.2718: *acin*3: basicRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167145 | 166591.03 | 235.09 | 167007 | 166676.5 | 195.54 | 166929 | 166538.1 | 235.82 | 166757 | 166345.87 | 334.08 |
| | | 2op | 166982 | 166592.4 | 241.91 | 166859 | 166449.7 | 371.38 | 166887 | 166492.7 | 301.78 | 166982 | 166467.47 | 350.81 |
| | 50 | rnd | 167018 | 166453.27 | 298.75 | 166969 | 166528.87 | 272.19 | 167011 | 166532.1 | 328.5 | 166827 | 166509.2 | 280.11 |
| | | 2op | 167156 | 166577.43 | 277.41 | 167012 | 166585.17 | 273.61 | 167133 | 166584.3 | 253.41 | 166996 | 166322.9 | 400.68 |
| 51 | 20 | rnd | 167139 | 166617.6 | 299.45 | 166991 | 166653.13 | 260.46 | 166912 | 166608.93 | 223.16 | 167001 | 166597.77 | 329.16 |
| | | 2op | 167074 | 166631.47 | 192.77 | 167004 | 166623.1 | 249.72 | 166963 | 166571.1 | 337.02 | 166938 | 166550.4 | 249.43 |
| | 50 | rnd | 167038 | 166595.43 | 240.73 | 166967 | 166616.6 | 199.27 | 167028 | 166586.1 | 227.66 | 167010 | 166545.27 | 265.72 |
| | | 2op | 166855 | 166618.43 | 253.68 | 166918 | 166577.93 | 245.86 | 166825 | 166568.27 | 242.83 | 166836 | 166468.8 | 314.78 |

Table A.2719: *acin*3: transRRGA – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167046 | 166473.37 | 304.01 | 166854 | 166461 | 335.34 | 167066 | 166307.2 | 426.98 | 166966 | 166487.7 | 266.32 |
| | | 2op | 166948 | 166480.87 | 362.31 | 166760 | 166377.97 | 252.06 | 166703 | 166262.7 | 314.15 | 166992 | 166503.83 | 308.55 |
| | 50 | rnd | 166987 | 166585.23 | 205.69 | 167031 | 166457.6 | 346.91 | 166934 | 166415.73 | 340.67 | 166973 | 166453.63 | 296.48 |
| | | 2op | 166868 | 166582.77 | 235.18 | 166896 | 166448.07 | 392.99 | 167014 | 166517.93 | 264.72 | 166799 | 166307.57 | 493.89 |
| 51 | 20 | rnd | 167290 | 166714.03 | 308.74 | 167287 | 166642 | 294.37 | 167106 | 166531.1 | 431.24 | 166984 | 166548.53 | 275.15 |
| | | 2op | 166977 | 166572.27 | 344.58 | 166903 | 166558.87 | 242.27 | 167039 | 166553.53 | 294.15 | 166867 | 166289.13 | 439.23 |
| | 50 | rnd | 167292 | 166660.73 | 297.24 | 167186 | 166715.07 | 286.29 | 166962 | 166579.5 | 243.25 | 166924 | 166482.6 | 431.92 |
| | | 2op | 166954 | 166574.7 | 234.96 | 166840 | 166609.9 | 170.2 | 167061 | 166544.7 | 249.07 | 167087 | 166349.27 | 439.33 |

Table A.2720: *acin*3: basicRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167012 | 166620.33 | 302.38 | 166943 | 166502.77 | 287.46 | 166979 | 166531.67 | 277.15 | 166956 | 166399.77 | 428.18 |
| | | 2op | 166899 | 166435.63 | 281.4 | 166970 | 166508.93 | 305.71 | 167039 | 166533.53 | 347.25 | 167051 | 166487.63 | 296.42 |
| | 50 | rnd | 167195 | 166520.77 | 357.54 | 167039 | 166539.43 | 271.71 | 166851 | 166534.07 | 220.45 | 167000 | 166491.23 | 385.25 |
| | | 2op | 166964 | 166557.5 | 296.93 | 166992 | 166466.53 | 356.73 | 166905 | 166513.9 | 294.26 | 166967 | 166430.03 | 332.61 |
| 51 | 20 | rnd | 166994 | 166624.17 | 222.97 | 167073 | 166591.9 | 235.2 | 167031 | 166614.37 | 304.31 | 167204 | 166558.7 | 309.08 |
| | | 2op | 167073 | 166628.07 | 285.18 | 167217 | 166571.4 | 299.07 | 167060 | 166593.97 | 272.65 | 167034 | 166495.37 | 405.62 |
| | 50 | rnd | 167008 | 166644.17 | 322.85 | 167001 | 166629.17 | 200.24 | 166905 | 166623.43 | 186.6 | 167036 | 166470.03 | 339.29 |
| | | 2op | 167064 | 166638.9 | 279.05 | 166895 | 166630.6 | 234.42 | 166915 | 166590.73 | 264.97 | 167038 | 166540.5 | 340.02 |

Table A.2721: *acin*3: transRRGA+RS – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 167093 | 166612.83 | 333.5 | 166921 | 166365.57 | 305.2 | 166910 | 166254.97 | 475.32 | 166864 | 166196.53 | 443.06 |
| | | 2op | 167036 | 166491.2 | 310.77 | 167007 | 166368.4 | 348.01 | 166925 | 166177.97 | 447.06 | 166944 | 166232.57 | 449.8 |
| | 50 | rnd | 167117 | 166608.37 | 241.38 | 166921 | 166422.8 | 345.24 | 166836 | 166194.77 | 514.58 | 167064 | 166308.2 | 420.74 |
| | | 2op | 167064 | 166502.53 | 266.32 | 166937 | 166388.23 | 291.95 | 166893 | 166304.73 | 419.99 | 166894 | 166320.2 | 384.66 |
| 51 | 20 | rnd | 167123 | 166832.83 | 192.33 | 167337 | 166752.3 | 323.54 | 166787 | 166225.1 | 466.95 | 166938 | 166436.9 | 340.34 |
| | | 2op | 167077 | 166709.77 | 138.36 | 167028 | 166522.83 | 287.1 | 166923 | 166318.8 | 370.86 | 166928 | 166222.47 | 393.09 |
| | 50 | rnd | 167158 | 166711.43 | 310.53 | 167229 | 166740.2 | 283.69 | 167057 | 166154.03 | 470.6 | 166982 | 166435.57 | 343.52 |
| | | 2op | 166978 | 166644.57 | 206.98 | 167008 | 166596.57 | 433.81 | 166958 | 166251.57 | 444.02 | 166742 | 166284.87 | 462.45 |

Table A.2722: *acin*3: basicRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 166955 | 166640.93 | 270.76 | 166872 | 166195.27 | 401.16 | 166898 | 166383.67 | 373.21 | 166825 | 166154.4 | 507.6 |
| | | 2op | 166972 | 166593.1 | 264.22 | 166941 | 166392.57 | 349.48 | 166934 | 166289.37 | 494.84 | 167033 | 166220.6 | 459.48 |
| | 50 | rnd | 167048 | 166691.6 | 245.71 | 166946 | 166257.17 | 361.29 | 166840 | 166335.03 | 343.64 | 167170 | 166291.73 | 399.99 |
| | | 2op | 167198 | 166641.53 | 249.7 | 167034 | 166422.37 | 335.88 | 167117 | 166305.2 | 433.49 | 166794 | 166332.77 | 361.94 |
| 51 | 20 | rnd | 167160 | 166809.6 | 176.4 | 166957 | 166444.87 | 343.04 | 166960 | 166213.8 | 479.94 | 166802 | 166342.17 | 332.09 |
| | | 2op | 167101 | 166648.17 | 202.75 | 166960 | 166343.93 | 401.39 | 166955 | 166390.77 | 395.03 | 166867 | 166293 | 442.26 |
| | 50 | rnd | 167060 | 166758.47 | 190.52 | 167268 | 166471.1 | 309.28 | 166742 | 166212.63 | 447.54 | 166965 | 166259.9 | 442.15 |
| | | 2op | 167014 | 166674.9 | 209.15 | 167147 | 166366.27 | 414.61 | 166945 | 166341.63 | 423.08 | 166773 | 166332.5 | 327.98 |

Table A.2723: *acin*3: transRRGA+IM – Suspected Optimal is 167877

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163150 | 162987.93 | 106.25 | 163110 | 162948.8 | 95.84 | 163064 | 162934.53 | 118.51 | 163159 | 162979.7 | 139.23 |
| | | 2op | 163150 | 162985.03 | 57.48 | 163163 | 162944.53 | 106.65 | 163149 | 162948.63 | 111.99 | 163138 | 162980.3 | 97.06 |
| | 50 | rnd | 163098 | 162963.1 | 99.18 | 163138 | 162933.8 | 111.72 | 163057 | 162936.03 | 90.25 | 163137 | 162954.87 | 97.69 |
| | | 2op | 163137 | 162955.9 | 93.08 | 163098 | 162972.17 | 72.71 | 163077 | 162929.23 | 110.94 | 163075 | 162953.03 | 93.48 |
| 51 | 20 | rnd | 163138 | 162962.67 | 101.48 | 163203 | 163004.87 | 75.54 | 163103 | 162972.57 | 75.06 | 163127 | 162975.33 | 84.42 |
| | | 2op | 163141 | 162987.13 | 93.73 | 163204 | 162975.5 | 111.51 | 163155 | 162998.2 | 75.33 | 163142 | 162996.03 | 73.14 |
| | 50 | rnd | 163134 | 162996.83 | 101.95 | 163178 | 162963.03 | 124.1 | 163094 | 162961.83 | 104.78 | 163135 | 162961.8 | 98.99 |
| | | 2op | 163142 | 162974.3 | 80.1 | 163170 | 162991.1 | 69.93 | 163133 | 162948.77 | 111.34 | 163068 | 162960.03 | 68.11 |

Table A.2724: *acin*5: basicRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163156 | 163060.83 | 69.65 | 163251 | 163077.37 | 77.57 | 163241 | 163083.87 | 70.83 | 163199 | 163022.53 | 84.69 |
| | | 2op | 163175 | 163083.8 | 72.75 | 163238 | 163041.43 | 89.89 | 163238 | 163101.8 | 79.1 | 163326 | 163048.87 | 115.5 |
| | 50 | rnd | 163204 | 163051.03 | 96.38 | 163280 | 163077.13 | 65.02 | 163198 | 163060.2 | 98.07 | 163183 | 163042.13 | 70.8 |
| | | 2op | 163180 | 163032.8 | 90.11 | 163261 | 163052.17 | 92.49 | 163201 | 163073.67 | 72.18 | 163225 | 163087.23 | 68.57 |
| 51 | 20 | rnd | 163169 | 163073.37 | 57.31 | 163287 | 163088.33 | 88.97 | 163234 | 163078.43 | 77.88 | 163215 | 163094.37 | 73.02 |
| | | 2op | 163202 | 163075.8 | 60.24 | 163198 | 163084.5 | 70.29 | 163278 | 163097.7 | 68.15 | 163185 | 163084.07 | 63.47 |
| | 50 | rnd | 163191 | 163069.9 | 82.37 | 163192 | 163066.8 | 79.4 | 163256 | 163074.6 | 81.78 | 163183 | 163061.7 | 72.12 |
| | | 2op | 163233 | 163067.9 | 85.08 | 163211 | 163084.43 | 68.98 | 163228 | 163054.1 | 83.32 | 163192 | 163079.27 | 89.96 |

Table A.2725: *acin*5: transRRGA – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163159 | 162997 | 98.28 | 163215 | 162988.6 | 108.02 | 163106 | 162952.07 | 84.2 | 163170 | 163016.1 | 74.64 |
| | | 2op | 163094 | 162944.23 | 91.77 | 163137 | 162964.43 | 93.7 | 163108 | 162948.4 | 107.99 | 163140 | 163013.37 | 81.84 |
| | 50 | rnd | 163132 | 162925.8 | 106.88 | 163157 | 162970.2 | 75.62 | 163122 | 162957.27 | 68.47 | 163188 | 162958.83 | 90.02 |
| | | 2op | 163126 | 162981.07 | 91 | 163136 | 162937.63 | 99.02 | 163098 | 162951.03 | 111.64 | 163117 | 162978.53 | 96.48 |
| 51 | 20 | rnd | 163119 | 162976.57 | 98.65 | 163108 | 162972 | 71.96 | 163078 | 162940.7 | 102.15 | 163148 | 162977.63 | 98.12 |
| | | 2op | 163140 | 162996.47 | 71.65 | 163260 | 162987.8 | 95.6 | 163139 | 162968.17 | 101 | 163193 | 162983.93 | 86.7 |
| | 50 | rnd | 163130 | 162974.87 | 93.26 | 163133 | 162967.17 | 115.29 | 163171 | 162962.17 | 123.89 | 163156 | 162950.73 | 120.33 |
| | | 2op | 163143 | 162985 | 98.82 | 163132 | 163007.1 | 79.98 | 163113 | 162930.73 | 98.37 | 163152 | 162993.13 | 85.14 |

Table A.2726: *acin*5: basicRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163163 | 163028.7 | 84.55 | 163190 | 163040.97 | 93.48 | 163214 | 163067.9 | 103.14 | 163124 | 163017 | 87.96 |
| | | 2op | 163269 | 163086.5 | 99.88 | 163233 | 163078.53 | 77.98 | 163252 | 163094.23 | 101.59 | 163245 | 163046.33 | 109.17 |
| | 50 | rnd | 163247 | 163059.13 | 60.78 | 163262 | 163047.93 | 95.04 | 163246 | 163059.77 | 105.21 | 163160 | 163035.53 | 75.55 |
| | | 2op | 163215 | 163047.73 | 67.18 | 163193 | 163069.1 | 79.08 | 163181 | 163061.17 | 89.76 | 163262 | 163070.23 | 72.42 |
| 51 | 20 | rnd | 163188 | 163051.9 | 66.18 | 163167 | 163048.2 | 68.07 | 163290 | 163077.67 | 68.35 | 163207 | 163078.43 | 63.83 |
| | | 2op | 163254 | 163093.07 | 85.44 | 163181 | 163060 | 80.5 | 163180 | 163069.7 | 63.83 | 163205 | 163060.07 | 85.27 |
| | 50 | rnd | 163185 | 163042.47 | 107.73 | 163242 | 163077.03 | 76.4 | 163215 | 163067.33 | 92.51 | 163160 | 163047.33 | 54.65 |
| | | 2op | 163186 | 163063.7 | 61.88 | 163195 | 163071.8 | 74.38 | 163190 | 163067.37 | 78.33 | 163285 | 163103.23 | 71.22 |

Table A.2727: *acin*5: transRRGA+RS – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163115 | 162941.73 | 111.83 | 163101 | 162923.53 | 139.22 | 163112 | 162950.6 | 88.87 | 163149 | 162962.33 | 131.22 |
| | | 2op | 163107 | 162979.87 | 82.47 | 163107 | 162951.27 | 80.89 | 163108 | 162948.67 | 94.29 | 163119 | 162950.1 | 100.38 |
| | 50 | rnd | 163122 | 162939.33 | 96.99 | 163128 | 162962.93 | 86.77 | 163102 | 162941.07 | 106.93 | 163095 | 162963.57 | 72.13 |
| | | 2op | 163145 | 162941.23 | 97.77 | 163076 | 162913.2 | 101.83 | 163100 | 162960.37 | 67.59 | 163119 | 162952.87 | 120.4 |
| 51 | 20 | rnd | 163166 | 162993.7 | 74.44 | 163173 | 162966.67 | 123.46 | 163107 | 162963.83 | 88.25 | 163084 | 162942.27 | 92.61 |
| | | 2op | 163185 | 163015.53 | 91.23 | 163186 | 162963.17 | 124.91 | 163106 | 162947.33 | 101.47 | 163141 | 162936.17 | 136.95 |
| | 50 | rnd | 163112 | 163001.7 | 67.57 | 163206 | 162987.77 | 86.32 | 163096 | 162940.43 | 106.5 | 163071 | 162946.7 | 127.18 |
| | | 2op | 163215 | 162981.97 | 96.37 | 163105 | 162985.23 | 53.08 | 163135 | 162946.67 | 85.26 | 163120 | 162943.6 | 125.06 |

Table A.2728: *acin*5: basicRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 163109 | 163015.53 | 88.87 | 163141 | 162961.43 | 105.31 | 163112 | 162976.9 | 78.18 | 163091 | 162953.87 | 89.59 |
| | | 2op | 163246 | 163060.13 | 85.34 | 163124 | 162977.33 | 80.66 | 163161 | 162956.6 | 119.49 | 163135 | 162962.67 | 100.64 |
| | 50 | rnd | 163160 | 163041.9 | 67.75 | 163084 | 162955.03 | 95.95 | 163110 | 162970.07 | 65.9 | 163083 | 162941.7 | 107.88 |
| | | 2op | 163170 | 163043.17 | 91.36 | 163160 | 162939.13 | 116.1 | 163089 | 162961.47 | 81.8 | 163115 | 162976.7 | 76.63 |
| 51 | 20 | rnd | 163206 | 163017.2 | 72.81 | 163168 | 162990.03 | 87.66 | 163140 | 162981.5 | 89.68 | 163096 | 162988.77 | 61.5 |
| | | 2op | 163212 | 163074.33 | 68.69 | 163251 | 162974.67 | 79.73 | 163129 | 163002.37 | 69.12 | 163109 | 162941.53 | 104.13 |
| | 50 | rnd | 163219 | 163051.77 | 72.56 | 163096 | 162961.63 | 65.53 | 163088 | 162971.57 | 126.31 | 163185 | 162986.1 | 82.09 |
| | | 2op | 163176 | 163049.3 | 65.35 | 163124 | 162980.53 | 76.52 | 163098 | 162973.27 | 79.94 | 163095 | 162972.43 | 117.01 |

Table A.2729: *acin*5: transRRGA+IM – Suspected Optimal is 163906

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179841 | 179712.73 | 93.33 | 179822 | 179697.97 | 73.85 | 179916 | 179705.17 | 77.13 | 179982 | 179743.7 | 102.45 |
| | | 2op | 179893 | 179721.47 | 75.3 | 179877 | 179747.43 | 82.28 | 179914 | 179738.73 | 87.71 | 179964 | 179761.6 | 88.93 |
| | 50 | rnd | 179921 | 179715.2 | 100.54 | 179838 | 179737.77 | 60.24 | 179927 | 179695.6 | 88.74 | 179923 | 179742.7 | 80.65 |
| | | 2op | 179940 | 179747.2 | 90.73 | 179894 | 179742.3 | 79.64 | 179871 | 179688.93 | 71.85 | 179933 | 179748.03 | 97.52 |
| 51 | 20 | rnd | 179970 | 179771.23 | 88.43 | 179878 | 179746.33 | 78.89 | 179910 | 179726.77 | 88.25 | 179886 | 179735.67 | 90.72 |
| | | 2op | 179908 | 179758.67 | 66.62 | 180021 | 179747.8 | 103.29 | 179874 | 179725.5 | 69.87 | 180017 | 179779.53 | 92.45 |
| | 50 | rnd | 179925 | 179751.23 | 102.25 | 179960 | 179796.23 | 80.87 | 179885 | 179698.53 | 77.79 | 179880 | 179683.87 | 106.01 |
| | | 2op | 179914 | 179767.83 | 74.32 | 179963 | 179758.5 | 79.84 | 179857 | 179736.83 | 73.88 | 179940 | 179729 | 93.81 |

Table A.2730: *acin*7: basicRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179948 | 179804.3 | 88.44 | 180034 | 179832.4 | 79.82 | 179987 | 179853.6 | 88.58 | 179959 | 179809.3 | 78.33 |
| | | 2op | 180018 | 179861.03 | 82.27 | 180022 | 179863 | 73.8 | 180104 | 179874.9 | 85.66 | 179974 | 179816.53 | 96.76 |
| | 50 | rnd | 179919 | 179804.43 | 76.22 | 180020 | 179812 | 107.97 | 180028 | 179830.83 | 87.43 | 179998 | 179848.8 | 62.54 |
| | | 2op | 180045 | 179841.87 | 84.84 | 180001 | 179837 | 75.82 | 179982 | 179871.07 | 70.66 | 179961 | 179858.1 | 75.61 |
| 51 | 20 | rnd | 179985 | 179838.93 | 88.41 | 179984 | 179850.27 | 75.96 | 179978 | 179853.57 | 80.44 | 180016 | 179872.93 | 70.61 |
| | | 2op | 180035 | 179871.13 | 87.61 | 180005 | 179867.2 | 79.86 | 180120 | 179896.23 | 87.22 | 180013 | 179879.13 | 95.52 |
| | 50 | rnd | 179972 | 179825.93 | 66.24 | 180016 | 179808.67 | 96.41 | 179985 | 179831.83 | 79.8 | 180035 | 179872.7 | 88.94 |
| | | 2op | 179998 | 179838.5 | 99.67 | 180085 | 179894.73 | 92.52 | 180044 | 179872.73 | 102.93 | 180039 | 179880.83 | 99.1 |

Table A.2731: *acin*7: transRRGA – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179963 | 179710.2 | 104.75 | 179904 | 179705.4 | 92.32 | 179906 | 179703.03 | 90.82 | 179959 | 179727.4 | 113.11 |
| | | 2op | 179874 | 179706.3 | 81.58 | 179897 | 179709.5 | 110.71 | 179926 | 179722.93 | 109.13 | 180020 | 179773.1 | 87.83 |
| | 50 | rnd | 179928 | 179718.97 | 91.08 | 179859 | 179700.47 | 91.04 | 179948 | 179691.13 | 98.32 | 179846 | 179717.47 | 85.82 |
| | | 2op | 179888 | 179725.43 | 82.69 | 179842 | 179702.1 | 75.37 | 179846 | 179684.87 | 81.32 | 179883 | 179746 | 85.68 |
| 51 | 20 | rnd | 179878 | 179743.27 | 72.35 | 179864 | 179748.43 | 70.66 | 179889 | 179726.4 | 74.46 | 179900 | 179746.37 | 84.79 |
| | | 2op | 179984 | 179753.33 | 100.83 | 179877 | 179741.67 | 78.61 | 179924 | 179753.5 | 91.04 | 179911 | 179736.87 | 77.22 |
| | 50 | rnd | 179867 | 179715.67 | 94.64 | 179988 | 179742.7 | 86.05 | 179878 | 179706.1 | 84.91 | 179865 | 179723.83 | 72.45 |
| | | 2op | 179858 | 179754.53 | 80.23 | 180006 | 179772.8 | 109.21 | 179960 | 179724.8 | 111.99 | 179909 | 179744.43 | 91.23 |

Table A.2732: *acin*7: basicRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179940 | 179828.6 | 63.02 | 179979 | 179844 | 76.49 | 179998 | 179852.67 | 73.01 | 179978 | 179825.7 | 81.65 |
| | | 2op | 180011 | 179848.27 | 81.29 | 179979 | 179844.23 | 64.66 | 179993 | 179851.07 | 71.03 | 179919 | 179813.97 | 73.16 |
| | 50 | rnd | 179991 | 179827.8 | 77.67 | 179993 | 179830.77 | 78.21 | 180017 | 179852.5 | 74.21 | 180028 | 179871.87 | 72.65 |
| | | 2op | 180054 | 179804 | 90.83 | 180033 | 179872.63 | 75.6 | 179996 | 179859.53 | 73.83 | 179997 | 179864.07 | 71.35 |
| 51 | 20 | rnd | 180027 | 179833.03 | 101.61 | 179982 | 179825.5 | 82.53 | 180002 | 179850.53 | 81.96 | 180021 | 179868.87 | 84.47 |
| | | 2op | 179990 | 179877.8 | 60.05 | 180073 | 179888.07 | 86.45 | 180041 | 179919.1 | 76.12 | 180014 | 179886.3 | 51.86 |
| | 50 | rnd | 179907 | 179783.53 | 86.64 | 179996 | 179834.9 | 83.25 | 179986 | 179842.77 | 73.22 | 180025 | 179877.3 | 80.32 |
| | | 2op | 179985 | 179844.27 | 82.64 | 180006 | 179857.43 | 83.64 | 179987 | 179863.73 | 72.19 | 180085 | 179881.53 | 91.55 |

Table A.2733: *acin*7: transRRGA+RS – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179829 | 179704.6 | 71.93 | 179826 | 179702.53 | 77.87 | 179870 | 179690.33 | 85.8 | 179902 | 179701.8 | 104.39 |
| | | 2op | 179941 | 179746.33 | 90.43 | 179816 | 179665.9 | 72.95 | 179828 | 179681.53 | 75.91 | 179857 | 179691.23 | 94.94 |
| | 50 | rnd | 179846 | 179713.4 | 89.41 | 179945 | 179683.57 | 104.52 | 179870 | 179695.37 | 73.49 | 179901 | 179704.23 | 101.86 |
| | | 2op | 179877 | 179714.83 | 90.48 | 179960 | 179704.43 | 101.84 | 179830 | 179686.77 | 92.03 | 179914 | 179720.1 | 92.48 |
| 51 | 20 | rnd | 179882 | 179739.83 | 90.68 | 180028 | 179783.43 | 83.87 | 179858 | 179685.27 | 85.87 | 179843 | 179691.47 | 98.26 |
| | | 2op | 179924 | 179754 | 89.52 | 179912 | 179752.03 | 69.61 | 179850 | 179653.8 | 94.01 | 179893 | 179732 | 77.84 |
| | 50 | rnd | 179934 | 179731 | 92.15 | 179964 | 179749.5 | 100.69 | 179880 | 179701.5 | 92.5 | 179904 | 179696.47 | 97.99 |
| | | 2op | 180000 | 179758.73 | 82.93 | 179861 | 179745.57 | 72.74 | 179885 | 179717.23 | 70.24 | 179936 | 179703.53 | 104.6 |

Table A.2734: *acin*7: basicRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 179936 | 179824.6 | 61.77 | 179847 | 179712.97 | 86.17 | 179927 | 179737 | 94.54 | 179902 | 179701.43 | 83.22 |
| | | 2op | 180017 | 179876.77 | 75.79 | 179966 | 179749.93 | 93.27 | 179887 | 179720.1 | 99.24 | 179979 | 179711.03 | 122.07 |
| | 50 | rnd | 179942 | 179789.73 | 95.45 | 179867 | 179736.33 | 73.38 | 179876 | 179705.9 | 71.55 | 179909 | 179731.97 | 72.98 |
| | | 2op | 179967 | 179807.57 | 101.59 | 179918 | 179724.03 | 90.3 | 179933 | 179739.17 | 81.94 | 179948 | 179723.8 | 101.16 |
| 51 | 20 | rnd | 179947 | 179815.87 | 80.17 | 179873 | 179726.6 | 68.92 | 179926 | 179711.13 | 86.52 | 179804 | 179709.77 | 69.26 |
| | | 2op | 179973 | 179849.8 | 76.85 | 179915 | 179747.97 | 89.4 | 179916 | 179733.8 | 76.85 | 179909 | 179730.9 | 81.78 |
| | 50 | rnd | 179970 | 179824.83 | 80.35 | 179868 | 179733.1 | 84.69 | 179842 | 179703.77 | 68.39 | 179818 | 179700.93 | 75.65 |
| | | 2op | 180033 | 179858.07 | 96.68 | 179971 | 179752.77 | 88.9 | 179884 | 179726.27 | 90.37 | 179926 | 179705.7 | 104.54 |

Table A.2735: *acin*7: transRRGA+IM – Suspected Optimal is 180966

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343127 | 342649.87 | 414.04 | 343022 | 342485.87 | 397.29 | 342960 | 342118.17 | 614.82 | 342970 | 342254 | 558.91 |
| | | 2op | 343103 | 342625.2 | 339.88 | 343059 | 342502.93 | 401.92 | 343121 | 342297.23 | 645.82 | 342942 | 342252.6 | 494.49 |
| | 50 | rnd | 343157 | 342567.97 | 452.33 | 343071 | 342397.1 | 603.75 | 343060 | 342415.17 | 468.38 | 343018 | 342312.83 | 405.53 |
| | | 2op | 343098 | 342462.83 | 519.54 | 343075 | 342441.27 | 493.81 | 343084 | 342282.73 | 572.09 | 343028 | 342407.83 | 435.13 |
| 51 | 20 | rnd | 343087 | 342643.37 | 416.05 | 343134 | 342634.67 | 407.4 | 343194 | 342429.57 | 538.54 | 343205 | 342240.37 | 617.9 |
| | | 2op | 343123 | 342693.83 | 338.61 | 343138 | 342694.53 | 349.65 | 343145 | 342470.33 | 518.19 | 343270 | 342414.63 | 724.91 |
| | 50 | rnd | 343122 | 342605.53 | 616.13 | 343135 | 342692.53 | 416.16 | 343032 | 342542.07 | 360.49 | 343060 | 342238.23 | 528.2 |
| | | 2op | 343162 | 342727 | 357.2 | 343156 | 342627.83 | 503.44 | 343038 | 342462.57 | 439.52 | 343022 | 342330.13 | 570.24 |

Table A.2736: *acin*9: basicRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343276 | 342980.73 | 273.14 | 343255 | 342906.6 | 345.84 | 343180 | 342610.13 | 348.39 | 343170 | 342604.4 | 450.37 |
| | | 2op | 343273 | 342887.63 | 325.41 | 343201 | 342787.87 | 332.41 | 343199 | 342802.8 | 389.39 | 343238 | 342609.93 | 456.52 |
| | 50 | rnd | 343207 | 342912.47 | 245.16 | 343203 | 342783.37 | 375.71 | 343213 | 342726.33 | 469.79 | 343174 | 342543.03 | 381.41 |
| | | 2op | 343290 | 342843.97 | 335.88 | 343256 | 342908.1 | 270.04 | 343205 | 342878.6 | 376.81 | 343192 | 342425.93 | 540.79 |
| 51 | 20 | rnd | 343186 | 342927.87 | 272.14 | 343160 | 342831.03 | 271.25 | 343308 | 342887.93 | 305.41 | 343167 | 342667.2 | 405.37 |
| | | 2op | 343267 | 342969.27 | 246.49 | 343254 | 342983.37 | 236.72 | 343212 | 342856.23 | 363.72 | 343198 | 342699.1 | 347.4 |
| | 50 | rnd | 343198 | 342887.83 | 222.5 | 343269 | 342869.07 | 315.77 | 343239 | 342877.93 | 313.62 | 343191 | 342629.23 | 592.52 |
| | | 2op | 343217 | 342899.6 | 268.69 | 343225 | 342944.33 | 263.34 | 343172 | 342842.37 | 287.03 | 343177 | 342644.37 | 425.97 |

Table A.2737: *acin*9: transRRGA – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343043 | 342565 | 342.35 | 343048 | 342373.2 | 551.3 | 343167 | 342376.63 | 464.15 | 343114 | 342169.47 | 594.07 |
| | | 2op | 343173 | 342530.5 | 545.42 | 343125 | 342486.57 | 459.21 | 343006 | 342342.77 | 574.67 | 343157 | 342314.5 | 545.11 |
| | 50 | rnd | 343084 | 342521.4 | 449.61 | 343082 | 342318.2 | 484.8 | 343100 | 342234.6 | 597.61 | 343022 | 342261.3 | 607.48 |
| | | 2op | 343096 | 342528.7 | 511.84 | 343057 | 342501.07 | 604.44 | 343051 | 342342.43 | 435.38 | 343077 | 342334.17 | 407.78 |
| 51 | 20 | rnd | 343087 | 342611.8 | 380.93 | 343082 | 342583.3 | 433.46 | 343070 | 342552.9 | 405.59 | 343120 | 342315.33 | 562.81 |
| | | 2op | 343139 | 342557.5 | 555.05 | 343085 | 342571.13 | 375.1 | 343081 | 342319.03 | 482.49 | 343013 | 342288.1 | 530.95 |
| | 50 | rnd | 343112 | 342576.93 | 428.75 | 343068 | 342587.33 | 379.11 | 343134 | 342496.2 | 470.57 | 343045 | 342410.33 | 544.98 |
| | | 2op | 343147 | 342677.07 | 388.52 | 343135 | 342731.47 | 332.62 | 343096 | 342293.5 | 533.33 | 343079 | 342429.47 | 505.07 |

Table A.2738: *acin*9: basicRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343252 | 342916.1 | 326.6 | 343285 | 342728.43 | 353.84 | 343247 | 342786.73 | 420.79 | 343176 | 342523.17 | 570.45 |
| | | 2op | 343270 | 342920.8 | 281.67 | 343304 | 342839.17 | 351.19 | 343255 | 342751.43 | 393.67 | 343122 | 342376.13 | 570.44 |
| | 50 | rnd | 343201 | 342901.33 | 264.35 | 343232 | 342856.67 | 340.43 | 343273 | 342809.93 | 428.98 | 343160 | 342474.07 | 579.59 |
| | | 2op | 343245 | 342800.73 | 325.62 | 343196 | 342743.3 | 355.22 | 343141 | 342773.63 | 468.27 | 343216 | 342762.3 | 322.27 |
| 51 | 20 | rnd | 343216 | 342851 | 332.93 | 343191 | 342845.63 | 242.83 | 343258 | 342793.83 | 381.8 | 343257 | 342855.47 | 427.7 |
| | | 2op | 343235 | 342896.1 | 302.91 | 343305 | 342896.13 | 328.94 | 343238 | 342650.8 | 476.67 | 343227 | 342617.6 | 531.35 |
| | 50 | rnd | 343285 | 342975.53 | 212.38 | 343206 | 342952.03 | 216.89 | 343211 | 342941.27 | 276.3 | 343290 | 342622.2 | 406.76 |
| | | 2op | 343231 | 342939.1 | 338.28 | 343241 | 342785.07 | 424.62 | 343256 | 342947.97 | 312.13 | 343224 | 342773.93 | 412.56 |

Table A.2739: *acin*9: transRRGA+RS – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343164 | 342750.87 | 414.39 | 343123 | 342655.1 | 362.11 | 342972 | 342282.23 | 460.18 | 343038 | 342259.77 | 567.66 |
| | | 2op | 343084 | 342704.1 | 341.35 | 343157 | 342581.57 | 498.44 | 343002 | 342230.5 | 611.98 | 342948 | 342355.23 | 522 |
| | 50 | rnd | 343035 | 342605.9 | 407.02 | 343157 | 342568.13 | 448.54 | 343124 | 342251.63 | 554.79 | 343021 | 342205.6 | 537.51 |
| | | 2op | 343160 | 342696.9 | 429.4 | 343105 | 342488.23 | 601.62 | 342929 | 342262.97 | 429.53 | 343078 | 342101.3 | 657.39 |
| 51 | 20 | rnd | 343131 | 342749.17 | 381.53 | 343060 | 342714.27 | 390.04 | 343080 | 342277.53 | 573.33 | 343108 | 342274.17 | 609.54 |
| | | 2op | 343138 | 342802.63 | 314.3 | 343137 | 342879.4 | 228.78 | 342916 | 341992.63 | 659.84 | 342972 | 342221.57 | 500.45 |
| | 50 | rnd | 343090 | 342732.93 | 315.49 | 343169 | 342701.73 | 407.99 | 342990 | 342317.47 | 475.35 | 343018 | 342080.03 | 562.72 |
| | | 2op | 343149 | 342724.33 | 356.43 | 343104 | 342819.9 | 270.01 | 342984 | 342127.37 | 529.33 | 343021 | 342074.8 | 723.85 |

Table A.2740: *acin*9: basicRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 343314 | 342952.67 | 258.01 | 343052 | 342150.87 | 575.99 | 343138 | 342407.07 | 520.06 | 343115 | 342342.1 | 617.51 |
| | | 2op | 343251 | 342911.9 | 373.02 | 343075 | 342195.2 | 576.63 | 343102 | 342276.27 | 621.57 | 343027 | 342283.8 | 579.8 |
| | 50 | rnd | 343136 | 342809.33 | 321.53 | 343071 | 342263.63 | 533.51 | 343083 | 342138.03 | 485.12 | 343154 | 342385.63 | 551.17 |
| | | 2op | 343236 | 342977.67 | 257.34 | 343075 | 342274.13 | 563.94 | 343072 | 342399.93 | 518.12 | 343096 | 342334.73 | 484.35 |
| 51 | 20 | rnd | 343176 | 342987.7 | 184.44 | 342984 | 342241.97 | 593.54 | 343088 | 342169.67 | 611.17 | 343174 | 342280.97 | 590.28 |
| | | 2op | 343258 | 342939.2 | 296.63 | 343075 | 342221.33 | 528.71 | 343059 | 342235.07 | 565.46 | 343070 | 342432.97 | 562.22 |
| | 50 | rnd | 343203 | 342960.37 | 200.61 | 343059 | 342289.53 | 635.02 | 343099 | 342203.77 | 583.33 | 343107 | 342170.97 | 653.6 |
| | | 2op | 343295 | 342890.37 | 258.69 | 343213 | 342321.3 | 588.19 | 343129 | 342363.67 | 439.96 | 342989 | 342297.57 | 495 |

Table A.2741: *acin*9: transRRGA+IM – Suspected Optimal is 344107

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226735 | 225699.1 | 582 | 226955 | 225756.7 | 602.39 | 226718 | 225669.23 | 767.44 | 226742 | 225660.6 | 767.27 |
| | | 2op | 227011 | 225975.4 | 557.47 | 226724 | 225847.77 | 630.27 | 227216 | 226008.93 | 589.55 | 226938 | 225956.5 | 658.9 |
| | 50 | rnd | 226530 | 225548.8 | 799.09 | 226939 | 225717.5 | 615.37 | 227023 | 225643.7 | 734.35 | 227187 | 225947.63 | 699.44 |
| | | 2op | 227231 | 225927.93 | 601.19 | 227063 | 225994.7 | 542.94 | 226820 | 225810.73 | 679.24 | 227056 | 225883.13 | 551.75 |
| 51 | 20 | rnd | 226925 | 225549.3 | 653.97 | 226686 | 225711.77 | 591.41 | 226819 | 225736.43 | 574.59 | 226764 | 225880.47 | 500.4 |
| | | 2op | 227487 | 226243.9 | 413.57 | 227202 | 226008.77 | 613.49 | 226959 | 225917.57 | 689.89 | 227018 | 226067.23 | 606 |
| | 50 | rnd | 226901 | 225736.93 | 757.26 | 226797 | 225941.5 | 493.9 | 227158 | 225649.07 | 778.47 | 227132 | 225849.27 | 665.48 |
| | | 2op | 227109 | 226126.8 | 492.72 | 227083 | 226315.77 | 442.52 | 227111 | 226208 | 470.41 | 226901 | 226014.4 | 615.52 |

Table A.2742: *bx*842596_4: basicRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 227306 | 225949.7 | 743.65 | 226987 | 225907.93 | 700.71 | 227064 | 225935.9 | 690.05 | 227417 | 225886.43 | 627.59 |
| | | 2op | 227060 | 226379.77 | 460.84 | 227107 | 226195.1 | 544.77 | 227226 | 226291.73 | 504.82 | 227026 | 226339.23 | 467.75 |
| | 50 | rnd | 227332 | 225816.5 | 645.91 | 227571 | 225863.37 | 562.72 | 226833 | 225797.03 | 624.2 | 227337 | 226114.57 | 648.28 |
| | | 2op | 227046 | 226256.63 | 529.88 | 227314 | 226369.87 | 509.99 | 227168 | 226442.93 | 441.03 | 227265 | 226207.17 | 644.48 |
| 51 | 20 | rnd | 226941 | 226168.03 | 437.81 | 227481 | 226200.83 | 530.71 | 226868 | 225831.13 | 644.89 | 227057 | 225773.03 | 633.58 |
| | | 2op | 227190 | 226436.33 | 501.59 | 227204 | 226455.9 | 395.29 | 227040 | 226470.53 | 394.45 | 227400 | 226481.9 | 443.32 |
| | 50 | rnd | 226941 | 225862.97 | 537.83 | 227128 | 226187.33 | 623.98 | 226906 | 225915.6 | 549.93 | 227088 | 225908.1 | 772.44 |
| | | 2op | 227107 | 226030.2 | 538.8 | 227168 | 226316.37 | 454.59 | 227098 | 226275.73 | 485.12 | 227507 | 226431.17 | 445.35 |

Table A.2743: *bx*842596_4: transRRGA – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226966 | 225645.5 | 747.25 | 226371 | 225546.87 | 638.44 | 226882 | 225656.33 | 583.4 | 226865 | 225553.27 | 660.28 |
| | | 2op | 227034 | 225906.43 | 597.55 | 227123 | 226027.37 | 623.03 | 226932 | 225998.37 | 545.72 | 227135 | 226034.03 | 540.71 |
| | 50 | rnd | 227020 | 225603.3 | 662.99 | 226873 | 225676.93 | 683.15 | 226834 | 225673.83 | 707.44 | 227270 | 225672.3 | 739.6 |
| | | 2op | 227037 | 225903.83 | 541.54 | 226947 | 225937.13 | 629.12 | 226970 | 225887.97 | 499.53 | 226942 | 225937 | 716.69 |
| 51 | 20 | rnd | 227027 | 225878.03 | 639.75 | 226997 | 225826.97 | 580.57 | 226811 | 225716.03 | 764.62 | 226728 | 225757.33 | 574.84 |
| | | 2op | 227101 | 225951.73 | 697.26 | 227239 | 226111.67 | 664.03 | 227096 | 226025.47 | 555.84 | 227124 | 225925.07 | 621.78 |
| | 50 | rnd | 226749 | 225734.2 | 605.02 | 227362 | 225873.1 | 603.14 | 226773 | 225738.9 | 595.25 | 226823 | 225832.87 | 579.88 |
| | | 2op | 226815 | 226081.73 | 462.51 | 227402 | 226156.27 | 581.91 | 226866 | 225921.07 | 552.28 | 226996 | 225737.53 | 655.2 |

Table A.2744: *bx*842596_4: basicRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226817 | 226044.37 | 618.4 | 227064 | 225988.9 | 608.21 | 227321 | 226094.07 | 593.44 | 226863 | 225979.33 | 483.44 |
| | | 2op | 226826 | 226057.73 | 460.8 | 227174 | 226109.13 | 593.11 | 227037 | 226286.43 | 415.73 | 227348 | 226269.83 | 508.17 |
| | 50 | rnd | 227185 | 225859.8 | 692.99 | 226964 | 225828.47 | 793.13 | 227492 | 225901.93 | 814.99 | 227245 | 225767.8 | 729.69 |
| | | 2op | 227268 | 226296.2 | 492.39 | 227267 | 226369.83 | 519.63 | 227283 | 226249.73 | 531.05 | 227001 | 226198.83 | 448.15 |
| 51 | 20 | rnd | 226995 | 225939.33 | 655.85 | 226938 | 226126.2 | 638.74 | 227316 | 225877.77 | 644.71 | 226921 | 225545.67 | 742.17 |
| | | 2op | 227121 | 226311.53 | 388.85 | 227074 | 226368 | 348.72 | 227119 | 226129.7 | 671.38 | 227406 | 226304.43 | 492.52 |
| | 50 | rnd | 227188 | 225894.53 | 802.82 | 227309 | 226371.9 | 418.76 | 227057 | 225812.33 | 636.58 | 227163 | 225991.33 | 685 |
| | | 2op | 227055 | 226089.37 | 559.98 | 227230 | 226309.43 | 611.58 | 227007 | 226134.87 | 505.01 | 227151 | 226321.33 | 489.58 |

Table A.2745: *bx*842596_4: transRRGA+RS – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226889 | 225837.77 | 624.48 | 226914 | 225276 | 935.79 | 226735 | 225402.57 | 663.34 | 226715 | 225084.17 | 1154.26 |
| | | 2op | 227118 | 226310.07 | 355.16 | 226671 | 225449.4 | 656.73 | 226512 | 225437.23 | 636.05 | 226485 | 225372.93 | 727.91 |
| | 50 | rnd | 226635 | 225698.4 | 574.05 | 226944 | 225389.7 | 699.67 | 226551 | 225250.03 | 764.32 | 226837 | 225365.87 | 689.77 |
| | | 2op | 227003 | 226153.4 | 543 | 226680 | 225073.13 | 1001.11 | 226288 | 225327.07 | 688.94 | 226648 | 225117.5 | 987.66 |
| 51 | 20 | rnd | 227180 | 226006.17 | 574.93 | 226688 | 225080.47 | 953.62 | 227021 | 225457.8 | 796.03 | 226835 | 225303.77 | 743.26 |
| | | 2op | 227055 | 226314.4 | 435.56 | 226823 | 225304.53 | 775.75 | 226708 | 225431.33 | 723.17 | 227072 | 225525.93 | 770.69 |
| | 50 | rnd | 227271 | 226132.13 | 519.89 | 226894 | 225174.13 | 983.83 | 226602 | 225423.67 | 661.44 | 226931 | 225403.57 | 800.58 |
| | | 2op | 226901 | 226240.97 | 327.01 | 226808 | 225314.43 | 738.16 | 226580 | 225219.2 | 622.77 | 226663 | 225388.57 | 749.06 |

Table A.2746: *bx*842596_4: basicRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 226722 | 226074.07 | 507.29 | 226567 | 225312.73 | 901.37 | 226661 | 225328.53 | 836.7 | 226841 | 225421.73 | 700.94 |
| | | 2op | 227284 | 226255.5 | 514.05 | 227275 | 225677.57 | 718.89 | 226538 | 225279.1 | 759.38 | 226509 | 225426.07 | 747.93 |
| | 50 | rnd | 227396 | 225989.1 | 631.93 | 226742 | 225753.4 | 514.23 | 226810 | 225600.37 | 749.96 | 226580 | 225169 | 880.84 |
| | | 2op | 227259 | 226446.9 | 468.53 | 227092 | 225668.13 | 726.8 | 226918 | 225163.3 | 806.52 | 226063 | 225064.5 | 679.23 |
| 51 | 20 | rnd | 227245 | 226029.4 | 586.59 | 226971 | 225384.9 | 851.91 | 226746 | 225351.17 | 849.11 | 226635 | 225095.17 | 1005.67 |
| | | 2op | 226907 | 226293.4 | 362.29 | 226462 | 225550.43 | 656.77 | 226497 | 225390.13 | 821 | 226765 | 225546.6 | 606.46 |
| | 50 | rnd | 227521 | 226158.47 | 648.17 | 226956 | 225823.83 | 706.23 | 227590 | 225414.27 | 822.59 | 226572 | 225212.47 | 820.86 |
| | | 2op | 227192 | 226402.57 | 389.41 | 226992 | 225867.03 | 675.74 | 226416 | 225168.47 | 712.67 | 227297 | 225534.37 | 828.75 |

Table A.2747: *bx*842596_4: transRRGA+IM – Suspected Optimal is 227920

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441999 | 440196.57 | 1117.15 | 442215 | 440213.77 | 895.63 | 442726 | 440303.4 | 994.63 | 442017 | 440195.73 | 1133.22 |
| | | 2op | 441696 | 439660.3 | 923.66 | 441557 | 439885.97 | 952.78 | 441510 | 439875.2 | 963.1 | 442395 | 440315.5 | 1277.13 |
| | 50 | rnd | 441693 | 440090.9 | 828.82 | 441410 | 439736.43 | 1139.83 | 442093 | 440266.27 | 947.27 | 442183 | 440277.4 | 1141.01 |
| | | 2op | 442273 | 439812.27 | 1021.6 | 441971 | 439522.5 | 1392.65 | 441629 | 439724.27 | 998.77 | 442630 | 440237.3 | 1105.68 |
| 51 | 20 | rnd | 441678 | 439887.53 | 1157.35 | 442571 | 439854.03 | 978.64 | 443280 | 440318.7 | 1308.94 | 441857 | 440328.73 | 1070.96 |
| | | 2op | 441347 | 439394.1 | 940.55 | 440950 | 439481.17 | 822.58 | 441238 | 439694.7 | 838.65 | 441915 | 440386.03 | 825.18 |
| | 50 | rnd | 442095 | 440214.83 | 1160.18 | 442273 | 440138.03 | 955.87 | 443080 | 440289.83 | 1146.99 | 442577 | 440483.83 | 769.7 |
| | | 2op | 441655 | 439466.57 | 1122.24 | 442635 | 439710.2 | 901.9 | 441703 | 439925.77 | 933.67 | 441291 | 439890.9 | 805.17 |

Table A.2748: *bx*842596_7: basicRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441680 | 439496.6 | 1187.19 | 441125 | 439463.1 | 890.8 | 440991 | 439361.5 | 1040.35 | 442303 | 440073.77 | 1450.72 |
| | | 2op | 441921 | 439952.57 | 1022.57 | 442524 | 440417.9 | 1032.58 | 442401 | 440596.6 | 980.58 | 442239 | 440924.77 | 858.63 |
| | 50 | rnd | 442903 | 439995.17 | 1272.48 | 440912 | 439333.43 | 944.63 | 441183 | 439381.33 | 1167.91 | 441458 | 439770.73 | 946.71 |
| | | 2op | 441149 | 439982.13 | 682.79 | 441876 | 440195.27 | 970.89 | 441497 | 440181.03 | 792.88 | 442837 | 440941.93 | 956.46 |
| 51 | 20 | rnd | 441278 | 439177.9 | 1191.55 | 441913 | 439454.53 | 1070.34 | 441358 | 439094.8 | 902.53 | 441286 | 439412.57 | 944.57 |
| | | 2op | 442225 | 439792.6 | 1069.1 | 442055 | 440211.4 | 974.55 | 441931 | 440522.6 | 1022.01 | 442222 | 440811.43 | 990.2 |
| | 50 | rnd | 441176 | 439318.4 | 1011.49 | 442548 | 440009.2 | 1052.53 | 441507 | 439557.23 | 1122.54 | 440883 | 439362.43 | 772.46 |
| | | 2op | 441225 | 439477.9 | 809.48 | 440671 | 439639.1 | 727.83 | 441852 | 440144.33 | 900.15 | 441942 | 440494.37 | 887.14 |

Table A.2749: *bx*842596_7: transRRGA – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441439 | 440091.83 | 780.33 | 442347 | 440320.87 | 1264.27 | 441963 | 440002.67 | 1083 | 441979 | 440230.27 | 922.3 |
| | | 2op | 441900 | 439477.1 | 1237.8 | 441893 | 439818.2 | 1073.84 | 442099 | 440264.63 | 1039.65 | 442206 | 440521.83 | 865.45 |
| | 50 | rnd | 441973 | 439906.93 | 776.98 | 442480 | 439791.6 | 1176.72 | 442431 | 440281.57 | 973.82 | 442429 | 439979.4 | 1309.2 |
| | | 2op | 441568 | 439642.13 | 1097.86 | 440972 | 439408.4 | 1045.25 | 441755 | 439884.9 | 1014.78 | 442065 | 440115.67 | 927.24 |
| 51 | 20 | rnd | 442427 | 440015.87 | 1177.89 | 442412 | 440489.07 | 1070.34 | 442006 | 439912.4 | 1040.89 | 441856 | 440305.97 | 942.87 |
| | | 2op | 441219 | 439514.03 | 961.56 | 440948 | 439438.03 | 887.47 | 442278 | 440155.93 | 909.04 | 442544 | 440207.07 | 1323.81 |
| | 50 | rnd | 442248 | 440200.43 | 1111.43 | 441957 | 440013.13 | 1121.6 | 441697 | 440175.6 | 961.81 | 441892 | 440289.17 | 1066.75 |
| | | 2op | 441672 | 439414.87 | 936.5 | 441348 | 439474.17 | 826.67 | 441321 | 439624.43 | 796.87 | 442964 | 440064.6 | 1085.51 |

Table A.2750: *bx*842596_7: basicRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441987 | 439710.87 | 1202.97 | 441258 | 439474.77 | 1260.09 | 442549 | 439603.07 | 1386.19 | 442114 | 440001.77 | 1219.27 |
| | | 2op | 443197 | 440095.77 | 1089.1 | 443002 | 440256.33 | 1235.11 | 441639 | 440452.2 | 752.59 | 442207 | 440652.9 | 961.35 |
| | 50 | rnd | 441798 | 439307.57 | 1207.68 | 441799 | 439525.1 | 976.17 | 442229 | 439623.03 | 1184.41 | 441331 | 439887.63 | 861.29 |
| | | 2op | 441212 | 439696.97 | 913.39 | 441792 | 440148.37 | 921.86 | 441820 | 440340.63 | 850.48 | 441783 | 440570.03 | 885.54 |
| 51 | 20 | rnd | 441417 | 439777.63 | 978.33 | 441353 | 439496.57 | 1272.24 | 441541 | 439542.93 | 1185.92 | 441704 | 439562.37 | 1403.2 |
| | | 2op | 441564 | 439727.23 | 749.54 | 441488 | 439911.67 | 1008.18 | 443195 | 440495.27 | 1110.13 | 442183 | 440844.83 | 844.27 |
| | 50 | rnd | 442246 | 439866.7 | 1158.21 | 441668 | 440130.7 | 1055.36 | 441285 | 439418.03 | 1195.01 | 441618 | 439559.07 | 970.18 |
| | | 2op | 442248 | 439948.2 | 960.78 | 441659 | 439942.67 | 866.17 | 442467 | 440209.87 | 927.56 | 443018 | 440624.77 | 1089.78 |

Table A.2751: *bx*842596_7: transRRGA+RS – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441938 | 439911.3 | 1081.43 | 441811 | 438984.43 | 1138.02 | 441368 | 438627.6 | 1200.83 | 441708 | 438664.43 | 1355.53 |
| | | 2op | 440671 | 439569.33 | 561.21 | 440862 | 438595.63 | 1397.13 | 441025 | 438933.97 | 1173.04 | 440770 | 438802.33 | 1109.99 |
| | 50 | rnd | 441989 | 440157.77 | 985.74 | 442648 | 438935.23 | 1385.6 | 440303 | 438694.93 | 982.25 | 440927 | 438834.1 | 1054.66 |
| | | 2op | 441009 | 439054.53 | 839.32 | 440525 | 438300.5 | 1212.9 | 441786 | 438868.87 | 1087.14 | 440570 | 438493.03 | 1326.7 |
| 51 | 20 | rnd | 441557 | 439806.97 | 1269.17 | 441820 | 439547.07 | 1541.98 | 441139 | 439181.07 | 989.96 | 440984 | 438806.57 | 1075.15 |
| | | 2op | 440362 | 439037.73 | 644.65 | 440362 | 438652.83 | 1096.12 | 440559 | 438553.87 | 1147.71 | 441103 | 438877.5 | 1213.15 |
| | 50 | rnd | 441796 | 440121.13 | 1135.96 | 441060 | 438711.13 | 1442.66 | 440810 | 439179.9 | 1124.91 | 440545 | 438820.87 | 1224.63 |
| | | 2op | 440231 | 439104.13 | 606.22 | 441295 | 438680.5 | 1645.54 | 440932 | 438730.23 | 1199.27 | 441702 | 438601.37 | 1192.12 |

Table A.2752: *bx*842596_7: basicRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 441571 | 439602.33 | 1208.45 | 441226 | 438701.57 | 1204.29 | 441261 | 439015.73 | 1163.9 | 440699 | 439027.43 | 979.64 |
| | | 2op | 441292 | 439530.2 | 811.11 | 442035 | 439340.73 | 1316.7 | 441974 | 438761.47 | 1341.36 | 440773 | 438949.87 | 1197.18 |
| | 50 | rnd | 441976 | 439580.4 | 1026.67 | 440659 | 439000.47 | 1134.13 | 441027 | 438815.57 | 1422.84 | 440903 | 438423.1 | 1537.08 |
| | | 2op | 440923 | 439595.77 | 661.25 | 441536 | 439845.1 | 918.62 | 441480 | 439319.13 | 1271.29 | 441001 | 438831.87 | 1367.01 |
| 51 | 20 | rnd | 442452 | 439973.33 | 1094.71 | 440494 | 438920.63 | 1104.06 | 441752 | 438989.57 | 1150.69 | 440713 | 439312.4 | 943.47 |
| | | 2op | 439912 | 438898.07 | 617.39 | 440900 | 438897.23 | 1037.83 | 440916 | 438824.97 | 1240.31 | 441377 | 438812.07 | 1185.82 |
| | 50 | rnd | 441900 | 439560.17 | 1184.06 | 442289 | 440109.17 | 1161.4 | 441703 | 439128.87 | 1168.34 | 440753 | 438980.97 | 998.4 |
| | | 2op | 440814 | 439503.1 | 659.02 | 442188 | 440130.2 | 1074.05 | 441044 | 438968.43 | 1330.22 | 440815 | 438792.7 | 1259.69 |

Table A.2753: *bx*842596_7: transRRGA+IM – Suspected Optimal is 445422

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115989 | 115377.4 | 353.92 | 116512 | 115379 | 439.46 | 116334 | 115275.9 | 489.21 | 115798 | 115180.1 | 381.4 |
| | | 2op | 116226 | 115612.17 | 351.51 | 116385 | 115595.4 | 350.6 | 116326 | 115504.63 | 509.66 | 116313 | 115675.17 | 342.98 |
| | 50 | rnd | 116218 | 115339.53 | 445.42 | 116282 | 115247.97 | 512.98 | 116300 | 115300.1 | 571.95 | 116383 | 115478 | 424.45 |
| | | 2op | 116127 | 115541.9 | 317.42 | 116267 | 115678 | 332.56 | 116053 | 115454.37 | 400.21 | 116252 | 115522.3 | 324.14 |
| 51 | 20 | rnd | 116264 | 115295.5 | 526.71 | 116213 | 115347.43 | 436.21 | 115906 | 115299.63 | 420.44 | 116435 | 115467.7 | 507.15 |
| | | 2op | 116115 | 115686.63 | 300.53 | 116356 | 115742.83 | 375.09 | 116150 | 115618.87 | 331.67 | 116305 | 115699.97 | 326.08 |
| | 50 | rnd | 116051 | 115319.07 | 407.91 | 116314 | 115438.07 | 384.23 | 116347 | 115333.73 | 454.09 | 116370 | 115281.43 | 523.58 |
| | | 2op | 116317 | 115621.33 | 426.37 | 116485 | 115701.7 | 347.27 | 116396 | 115660.67 | 360.31 | 116151 | 115600.87 | 344.3 |

Table A.2754: *j02459_7*: basicRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115847 | 115188.17 | 432.87 | 116031 | 115120.9 | 443.35 | 116022 | 115165.2 | 508.02 | 116385 | 115347.87 | 549.49 |
| | | 2op | 116400 | 115761.47 | 356.54 | 116491 | 115712.97 | 364.24 | 116261 | 115440.9 | 342.63 | 116362 | 115770.6 | 354.26 |
| | 50 | rnd | 116082 | 115253.13 | 489.21 | 116255 | 115542.77 | 472.43 | 116225 | 115181.8 | 561.98 | 116137 | 115209.87 | 410.31 |
| | | 2op | 116212 | 115493.1 | 329.96 | 116340 | 115612.57 | 403.19 | 116228 | 115562 | 328.85 | 116295 | 115762.2 | 266.75 |
| 51 | 20 | rnd | 115893 | 115109.77 | 506.32 | 116373 | 115514.8 | 405.73 | 115957 | 115175.83 | 474.02 | 115937 | 115280.17 | 408.32 |
| | | 2op | 116173 | 115660.6 | 293.36 | 116414 | 115850.67 | 249.69 | 116325 | 115670.57 | 332.74 | 116278 | 115626.47 | 296.51 |
| | 50 | rnd | 116164 | 115130.73 | 542.21 | 116516 | 115672.4 | 475.65 | 116084 | 115121.17 | 443.77 | 115846 | 115085.03 | 441.16 |
| | | 2op | 116445 | 115727.53 | 349.67 | 116483 | 115987.07 | 343.74 | 116394 | 115738.9 | 331.74 | 116290 | 115523.57 | 343.3 |

Table A.2755: *j02459_7*: transRRGA – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 116247 | 115354.7 | 463.64 | 116126 | 115400.57 | 396.36 | 116000 | 115364.4 | 361.06 | 116160 | 115395 | 369.31 |
| | | 2op | 116060 | 115443.8 | 310.96 | 116123 | 115479.93 | 425.12 | 116286 | 115499.4 | 423.51 | 116246 | 115458.73 | 380.34 |
| | 50 | rnd | 115955 | 115286 | 408.92 | 116480 | 115261.73 | 536.6 | 116081 | 115392 | 389.53 | 116141 | 115338.87 | 461.66 |
| | | 2op | 116182 | 115612.67 | 335.49 | 116152 | 115499.73 | 386.31 | 116425 | 115406.33 | 447.5 | 116185 | 115542.77 | 437.18 |
| 51 | 20 | rnd | 116375 | 115407.1 | 423.42 | 116014 | 115349.93 | 387.29 | 116137 | 115414.17 | 317.09 | 116180 | 115397.83 | 523.08 |
| | | 2op | 116224 | 115692.03 | 243.2 | 116174 | 115734.1 | 281.84 | 116456 | 115685.3 | 353.4 | 116069 | 115636.77 | 230.4 |
| | 50 | rnd | 116250 | 115263.63 | 559.38 | 115979 | 115359.83 | 311.8 | 116318 | 115385.87 | 450.31 | 116268 | 115428.6 | 480.95 |
| | | 2op | 116334 | 115613.83 | 309.79 | 116253 | 115751.73 | 271.46 | 116379 | 115695.43 | 275.87 | 116354 | 115605.2 | 389.6 |

Table A.2756: *j02459_7*: basicRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 115961 | 115251.93 | 467.26 | 116014 | 115062.33 | 554.45 | 116243 | 115203.87 | 446.79 | 116316 | 115389.3 | 437.1 |
| | | 2op | 116305 | 115619.13 | 354.4 | 116408 | 115557.1 | 470.04 | 116159 | 115556.93 | 318.32 | 116267 | 115627.27 | 353.89 |
| | 50 | rnd | 116064 | 115351.17 | 422.01 | 115937 | 115190.33 | 448.58 | 116119 | 115076.63 | 482.19 | 116148 | 115177.57 | 549.7 |
| | | 2op | 116220 | 115590.37 | 350.56 | 116057 | 115534.97 | 363.14 | 116305 | 115586.7 | 404.86 | 116237 | 115652.8 | 372.49 |
| 51 | 20 | rnd | 116155 | 115325.87 | 492.7 | 116033 | 115459.27 | 433.57 | 116306 | 115273.73 | 611.34 | 116122 | 115101.7 | 416.03 |
| | | 2op | 116423 | 115713.67 | 370.37 | 116482 | 115864.53 | 331.75 | 116113 | 115532.77 | 299.45 | 116238 | 115637.5 | 323.06 |
| | 50 | rnd | 116188 | 115256.63 | 504.92 | 116551 | 115676.93 | 422.18 | 116143 | 115273.2 | 373.29 | 116413 | 115149.87 | 472.73 |
| | | 2op | 116402 | 115673.27 | 333.69 | 116498 | 115964.5 | 302.17 | 116229 | 115683.5 | 315.02 | 116061 | 115669.97 | 272.25 |

Table A.2757: *j02459_7*: transRRGA+RS – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 116485 | 115465.8 | 407.46 | 115758 | 114621.67 | 498.63 | 115660 | 114803.03 | 523.69 | 115776 | 114926.13 | 480.14 |
| | | 2op | 116483 | 115741.5 | 339.36 | 115624 | 114830.77 | 454.89 | 115783 | 115070.5 | 435.16 | 116037 | 114900.87 | 568.81 |
| | 50 | rnd | 116070 | 115302.73 | 400.38 | 115630 | 114642.33 | 555.28 | 115986 | 114851.3 | 489.9 | 115857 | 114659.77 | 512.84 |
| | | 2op | 116085 | 115681.83 | 291.63 | 115838 | 114975.3 | 534.17 | 115770 | 114911.1 | 355.42 | 116154 | 114888.17 | 661.9 |
| 51 | 20 | rnd | 116113 | 115326.43 | 394.16 | 115778 | 114836.87 | 483.09 | 115980 | 114716.77 | 488.92 | 115709 | 115012.2 | 587.91 |
| | | 2op | 116089 | 115721.17 | 219.3 | 116039 | 114859.93 | 500.63 | 116276 | 115186.27 | 501.77 | 115814 | 114933.47 | 436.22 |
| | 50 | rnd | 116175 | 115399.87 | 536.11 | 115705 | 114913.3 | 430.37 | 116167 | 115074.97 | 426.52 | 116009 | 114857.87 | 587.37 |
| | | 2op | 116176 | 115857.7 | 217.74 | 116105 | 114929.5 | 541.19 | 115846 | 114950.9 | 548.4 | 115957 | 114997.03 | 536.42 |

Table A.2758: *j02459_7*: basicRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 116122 | 115109.1 | 454.99 | 116298 | 115179.53 | 427.86 | 115974 | 114830.07 | 591.94 | 115545 | 114915.3 | 389.57 |
| | | 2op | 116502 | 115757.77 | 297.81 | 115833 | 115092.47 | 494.88 | 115810 | 114892.27 | 493.65 | 115444 | 114709.57 | 384.3 |
| | 50 | rnd | 116051 | 115201.73 | 390.46 | 116273 | 115176.8 | 488.82 | 115920 | 114723.4 | 578.89 | 116019 | 114892.53 | 585.56 |
| | | 2op | 116236 | 115750.8 | 285.5 | 116191 | 115357.17 | 508.99 | 115911 | 114991.43 | 551.84 | 115757 | 115010.53 | 433.27 |
| 51 | 20 | rnd | 116075 | 115404.23 | 395.19 | 116092 | 115132.2 | 441.3 | 115816 | 115078.73 | 403.56 | 115767 | 114889.4 | 513.86 |
| | | 2op | 116460 | 115746.83 | 279.08 | 116187 | 115181.83 | 497.55 | 116209 | 115153.63 | 633.26 | 116085 | 115091.8 | 559.26 |
| | 50 | rnd | 116141 | 115389.13 | 344.09 | 116418 | 115434.93 | 563.9 | 116268 | 115198.67 | 490.95 | 115642 | 114915.5 | 445.37 |
| | | 2op | 116471 | 115949.13 | 306.61 | 116401 | 115831.3 | 285.34 | 116314 | 115139.97 | 632.93 | 116109 | 115125.53 | 510.08 |

Table A.2759: *j02459_7*: transRRGA+IM – Suspected Optimal is 116700

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38595 | 38303.23 | 220.72 | 38542 | 38284.97 | 199.61 | 38536 | 38288.6 | 158.99 | 38650 | 38189.6 | 196.46 |
| | | 2op | 38529 | 38350.23 | 119.29 | 38647 | 38328.83 | 141.49 | 38569 | 38326.93 | 124.16 | 38505 | 38254.57 | 170.93 |
| | 50 | rnd | 38685 | 38344.53 | 160.13 | 38668 | 38312.87 | 193.23 | 38605 | 38262.97 | 214.08 | 38551 | 38270.97 | 196.93 |
| | | 2op | 38541 | 38355.3 | 112.31 | 38493 | 38292.13 | 133.8 | 38587 | 38349.87 | 127.08 | 38561 | 38285.97 | 157.51 |
| 51 | 20 | rnd | 38678 | 38391.87 | 184.63 | 38608 | 38360.27 | 175.42 | 38615 | 38344.37 | 165.85 | 38650 | 38264.63 | 223.5 |
| | | 2op | 38487 | 38361.8 | 69.62 | 38437 | 38360.13 | 71.03 | 38550 | 38352.83 | 101.76 | 38575 | 38367.27 | 138.49 |
| | 50 | rnd | 38693 | 38383.8 | 156.77 | 38635 | 38410.77 | 166.01 | 38638 | 38327.47 | 156.04 | 38643 | 38419.27 | 127.28 |
| | | 2op | 38531 | 38367.23 | 65.21 | 38554 | 38379.23 | 74.47 | 38512 | 38314.27 | 132.08 | 38577 | 38353.9 | 153.61 |

Table A.2760: $m15421\_5$: basicRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38650 | 38381 | 128.51 | 38683 | 38359.17 | 126.96 | 38586 | 38306.6 | 160.09 | 38637 | 38346.93 | 145.77 |
| | | 2op | 38555 | 38375 | 134.94 | 38573 | 38425.6 | 86.01 | 38579 | 38373.5 | 120.77 | 38565 | 38357.33 | 165.42 |
| | 50 | rnd | 38585 | 38357.7 | 151 | 38657 | 38431 | 143.86 | 38660 | 38362.3 | 150.15 | 38662 | 38310.53 | 187.92 |
| | | 2op | 38469 | 38331.6 | 108.44 | 38596 | 38446.8 | 82.43 | 38550 | 38370.73 | 124.71 | 38552 | 38380.77 | 126.62 |
| 51 | 20 | rnd | 38572 | 38271.1 | 193.79 | 38648 | 38424.73 | 118.52 | 38642 | 38423.3 | 163.07 | 38546 | 38370.33 | 141.98 |
| | | 2op | 38557 | 38391.57 | 81.97 | 38557 | 38426.43 | 40.38 | 38566 | 38422.67 | 103.05 | 38557 | 38426.3 | 97.98 |
| | 50 | rnd | 38579 | 38335.13 | 161.93 | 38634 | 38405.97 | 154.94 | 38667 | 38425.07 | 150.7 | 38694 | 38347.53 | 160.19 |
| | | 2op | 38557 | 38391.53 | 73.44 | 38592 | 38441.63 | 53.39 | 38526 | 38407.73 | 65.59 | 38557 | 38408.67 | 81.17 |

Table A.2761: $m15421\_5$: transRRGA – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38624 | 38362.33 | 142.58 | 38691 | 38324 | 186.43 | 38602 | 38278.17 | 220.46 | 38627 | 38262.8 | 218.01 |
| | | 2op | 38557 | 38336.7 | 146.11 | 38580 | 38346.33 | 136.19 | 38572 | 38329.77 | 129.64 | 38579 | 38246.77 | 176.92 |
| | 50 | rnd | 38549 | 38295.87 | 203.91 | 38667 | 38333.63 | 163.65 | 38679 | 38291 | 181.33 | 38595 | 38282.77 | 222.61 |
| | | 2op | 38554 | 38299 | 122.83 | 38490 | 38291.13 | 123.13 | 38448 | 38281.23 | 136.63 | 38505 | 38234.77 | 169.89 |
| 51 | 20 | rnd | 38652 | 38379.3 | 154.81 | 38559 | 38361.37 | 155.81 | 38589 | 38308.57 | 157.44 | 38659 | 38400.97 | 135.61 |
| | | 2op | 38466 | 38345.47 | 88.34 | 38573 | 38368.67 | 80.6 | 38484 | 38367.77 | 81.34 | 38526 | 38291.2 | 163.07 |
| | 50 | rnd | 38646 | 38405.63 | 140.6 | 38628 | 38364.23 | 165.87 | 38608 | 38316.23 | 168.9 | 38604 | 38307.1 | 165.97 |
| | | 2op | 38475 | 38369.43 | 56.74 | 38556 | 38356.57 | 90.84 | 38534 | 38343.27 | 125.94 | 38536 | 38309.53 | 161.09 |

Table A.2762: $m15421\_5$: basicRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38662 | 38340.3 | 178.39 | 38637 | 38420.37 | 158.58 | 38662 | 38284.4 | 196.62 | 38635 | 38322.73 | 200.43 |
| | | 2op | 38580 | 38333.9 | 155.04 | 38569 | 38405.67 | 121.72 | 38624 | 38366.17 | 124.99 | 38619 | 38328.8 | 150.84 |
| | 50 | rnd | 38569 | 38264.57 | 182.51 | 38664 | 38441.33 | 130.12 | 38598 | 38369.3 | 146.26 | 38681 | 38320.17 | 182.68 |
| | | 2op | 38538 | 38362.67 | 112 | 38564 | 38432.13 | 87.16 | 38584 | 38336.8 | 134.48 | 38619 | 38390.93 | 145.17 |
| 51 | 20 | rnd | 38612 | 38326.13 | 180.13 | 38586 | 38424.33 | 117.55 | 38594 | 38352.23 | 189.61 | 38650 | 38241.3 | 270.62 |
| | | 2op | 38499 | 38395.37 | 73.86 | 38536 | 38442.5 | 34.86 | 38589 | 38414.43 | 79.51 | 38562 | 38400.47 | 116.16 |
| | 50 | rnd | 38572 | 38334.33 | 143.74 | 38666 | 38410.43 | 131.38 | 38600 | 38369.93 | 126.2 | 38566 | 38296.8 | 156.48 |
| | | 2op | 38566 | 38398.83 | 87.02 | 38578 | 38449.27 | 38.39 | 38586 | 38412.8 | 86.46 | 38589 | 38361.7 | 149.9 |

Table A.2763: $m15421\_5$: transRRGA+RS – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38647 | 38393.37 | 166.89 | 38542 | 38185.37 | 178.69 | 38640 | 38179.37 | 274.77 | 38590 | 38251.6 | 241.05 |
| | | 2op | 38505 | 38403.63 | 38.82 | 38516 | 38185.4 | 206.01 | 38413 | 38100 | 181 | 38603 | 38206.1 | 214.41 |
| | 50 | rnd | 38690 | 38386.47 | 150.77 | 38528 | 38274.77 | 199.81 | 38571 | 38191.47 | 241.98 | 38642 | 38240.3 | 210.89 |
| | | 2op | 38504 | 38384.07 | 61.07 | 38548 | 38122 | 219.32 | 38475 | 38192.37 | 181.52 | 38622 | 38228.2 | 164.24 |
| 51 | 20 | rnd | 38641 | 38379.23 | 141.47 | 38718 | 38225.3 | 255.77 | 38626 | 38214.23 | 237.99 | 38564 | 38211.37 | 162.42 |
| | | 2op | 38442 | 38419.63 | 15.22 | 38536 | 38196.93 | 218.02 | 38507 | 38175.27 | 238.77 | 38584 | 38187.87 | 214.57 |
| | 50 | rnd | 38663 | 38469.47 | 121.64 | 38672 | 38262.77 | 183.18 | 38597 | 38230.2 | 299.5 | 38546 | 38194.17 | 202.72 |
| | | 2op | 38442 | 38428.23 | 13.99 | 38506 | 38159.73 | 186.16 | 38646 | 38093.13 | 245.19 | 38462 | 38139.83 | 179.6 |

Table A.2764: $m15421\_5$: basicRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 38690 | 38388.83 | 169.57 | 38560 | 38222.53 | 211.74 | 38506 | 38217.2 | 201.13 | 38629 | 38175.17 | 263.12 |
| | | 2op | 38538 | 38417.9 | 34.82 | 38524 | 38240.6 | 205.11 | 38536 | 38153.1 | 243.68 | 38677 | 38239.47 | 226.27 |
| | 50 | rnd | 38638 | 38393.47 | 172.91 | 38681 | 38333.1 | 177.44 | 38559 | 38276.97 | 195.16 | 38536 | 38233.53 | 182.48 |
| | | 2op | 38442 | 38403.37 | 42.53 | 38568 | 38271.93 | 197.05 | 38555 | 38201.63 | 176.73 | 38575 | 38135.07 | 248.76 |
| 51 | 20 | rnd | 38589 | 38325.97 | 163.55 | 38606 | 38239.07 | 233.28 | 38596 | 38278.63 | 139.62 | 38606 | 38232.77 | 248.01 |
| | | 2op | 38442 | 38422.27 | 14.72 | 38638 | 38250.03 | 208.92 | 38677 | 38262.57 | 180.85 | 38538 | 38170.93 | 246.75 |
| | 50 | rnd | 38567 | 38346.97 | 178.75 | 38630 | 38364.17 | 200.28 | 38625 | 38244.6 | 198.63 | 38541 | 38202.73 | 259.55 |
| | | 2op | 38442 | 38430.13 | 12.49 | 38550 | 38388.3 | 126.76 | 38565 | 38213.1 | 218.4 | 38552 | 38152.37 | 232.52 |

Table A.2765: $m15421\_5$: transRRGA+IM – Suspected Optimal is 38746

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47993 | 47639.47 | 197.53 | 48046 | 47673.23 | 209.21 | 47948 | 47687.57 | 183.05 | 47940 | 47594.73 | 195.05 |
| | | 2op | 47814 | 47692.23 | 82.89 | 47803 | 47685.03 | 95 | 47917 | 47644.8 | 119.75 | 47960 | 47538.83 | 255.73 |
| | 50 | rnd | 47916 | 47659.83 | 178.42 | 47956 | 47586.4 | 245.67 | 47977 | 47647.1 | 209.18 | 48022 | 47640.97 | 206.65 |
| | | 2op | 47810 | 47645.3 | 106.59 | 47803 | 47641.4 | 116.36 | 47825 | 47624.77 | 174.75 | 47814 | 47645.37 | 149.8 |
| 51 | 20 | rnd | 48032 | 47635.43 | 252.75 | 48046 | 47683.4 | 199.86 | 47989 | 47679.27 | 239.48 | 47977 | 47668 | 199.76 |
| | | 2op | 47830 | 47679.17 | 114.32 | 47758 | 47688.67 | 76.99 | 47848 | 47701.97 | 81.15 | 47814 | 47642.8 | 117.05 |
| | 50 | rnd | 48032 | 47638.7 | 190.86 | 47923 | 47626.8 | 188.34 | 47978 | 47662.67 | 194.96 | 48016 | 47563.7 | 227.58 |
| | | 2op | 47758 | 47644 | 132.23 | 47776 | 47701.93 | 82.94 | 47830 | 47708.07 | 94.19 | 47836 | 47661.3 | 135.47 |

Table A.2766: $m15421\_6$: basicRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47944 | 47616.87 | 234.22 | 47961 | 47624.23 | 196.9 | 47976 | 47663.87 | 203.98 | 47977 | 47700.33 | 186.63 |
| | | 2op | 47821 | 47622.8 | 131.2 | 47830 | 47683 | 110.32 | 47848 | 47632.87 | 153.64 | 47819 | 47644.2 | 122.66 |
| | 50 | rnd | 48034 | 47654.3 | 260.21 | 48050 | 47647.13 | 212.16 | 48030 | 47606.97 | 229.17 | 48027 | 47658.83 | 190.67 |
| | | 2op | 47862 | 47620.3 | 165.61 | 47830 | 47665.27 | 137.77 | 47870 | 47678.4 | 144.13 | 47794 | 47643.67 | 118.59 |
| 51 | 20 | rnd | 47969 | 47598.97 | 232.72 | 48052 | 47638 | 275.14 | 47972 | 47647.63 | 168.53 | 48041 | 47612.43 | 203.07 |
| | | 2op | 47830 | 47651.67 | 177.02 | 47830 | 47704.93 | 133.02 | 47830 | 47678.83 | 173.83 | 47830 | 47667.23 | 166.12 |
| | 50 | rnd | 47978 | 47661.03 | 185.08 | 48050 | 47713.63 | 199.58 | 48050 | 47605.3 | 234.1 | 47960 | 47597.47 | 245.27 |
| | | 2op | 47830 | 47616.63 | 190.4 | 47830 | 47727.53 | 93.52 | 47830 | 47657.2 | 157.81 | 47830 | 47640.97 | 160.06 |

Table A.2767: $m15421\_6$: transRRGA – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47903 | 47651.23 | 143.74 | 47958 | 47699.43 | 198.17 | 47995 | 47694.3 | 191.47 | 47971 | 47607.23 | 190.6 |
| | | 2op | 47758 | 47640.83 | 160.81 | 47830 | 47658.23 | 118.42 | 47977 | 47640.6 | 142.18 | 47956 | 47642.83 | 188.39 |
| | 50 | rnd | 48043 | 47623.77 | 202.38 | 47943 | 47625.37 | 209.62 | 47976 | 47710.33 | 180.52 | 47986 | 47697.2 | 189.78 |
| | | 2op | 47821 | 47643.27 | 136.62 | 47830 | 47670.47 | 130.22 | 47960 | 47667.27 | 153.46 | 47819 | 47606.2 | 170.93 |
| 51 | 20 | rnd | 48032 | 47660.4 | 204.75 | 47978 | 47662.47 | 177.73 | 47957 | 47671.47 | 202.73 | 47952 | 47663.5 | 165.16 |
| | | 2op | 47760 | 47638.83 | 153.73 | 47758 | 47719.9 | 71.01 | 47758 | 47651.47 | 130.7 | 47758 | 47601.37 | 173.04 |
| | 50 | rnd | 47977 | 47576.8 | 231.26 | 47957 | 47614.47 | 241.54 | 48030 | 47688.2 | 188.75 | 47927 | 47699.03 | 149.82 |
| | | 2op | 47821 | 47632.63 | 144.28 | 47758 | 47693.1 | 71.95 | 47814 | 47696.13 | 81.12 | 47830 | 47667.7 | 125.23 |

Table A.2768: $m15421\_6$: basicRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48050 | 47670.17 | 187.13 | 48052 | 47715.17 | 223.75 | 47957 | 47648.3 | 259.52 | 47915 | 47694.93 | 173.63 |
| | | 2op | 47830 | 47684.43 | 122.81 | 47944 | 47675.67 | 139.35 | 47830 | 47623.33 | 185.72 | 47830 | 47629.67 | 125.88 |
| | 50 | rnd | 47910 | 47571.03 | 258 | 48050 | 47746.23 | 169.75 | 48050 | 47653.33 | 244.17 | 48028 | 47654.63 | 173.2 |
| | | 2op | 47830 | 47601.37 | 199.49 | 47830 | 47630.43 | 200.18 | 47830 | 47658.77 | 128.21 | 47830 | 47706.23 | 95.79 |
| 51 | 20 | rnd | 47933 | 47573.63 | 247.13 | 48050 | 47670.27 | 187.5 | 47976 | 47667.43 | 251.68 | 47977 | 47632.2 | 181.88 |
| | | 2op | 47830 | 47666.73 | 172.17 | 47830 | 47754.43 | 80.69 | 47819 | 47695 | 93.58 | 47830 | 47625.33 | 171.49 |
| | 50 | rnd | 48043 | 47684.4 | 223.81 | 47897 | 47658.4 | 213.57 | 47954 | 47623.77 | 231.46 | 48039 | 47566.83 | 271.17 |
| | | 2op | 47805 | 47644.8 | 120.86 | 47830 | 47706.57 | 87.67 | 47830 | 47711.8 | 94.13 | 47814 | 47671.83 | 126.13 |

Table A.2769: $m15421\_6$: transRRGA+RS – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48036 | 47608.8 | 247.94 | 48002 | 47479.67 | 228.85 | 47872 | 47531.1 | 223.24 | 47920 | 47562.37 | 216.34 |
| | | 2op | 47758 | 47659.5 | 129.8 | 47962 | 47553.73 | 234.3 | 47852 | 47573.73 | 209.42 | 47883 | 47471.87 | 214.76 |
| | 50 | rnd | 47964 | 47694.5 | 182.88 | 47977 | 47592.77 | 259.13 | 48032 | 47630.47 | 249.17 | 47975 | 47541.57 | 216.08 |
| | | 2op | 47758 | 47699.67 | 102.76 | 47950 | 47538.97 | 244.62 | 47822 | 47513.17 | 183.37 | 47841 | 47526.37 | 241.08 |
| 51 | 20 | rnd | 48025 | 47713.53 | 189.3 | 48036 | 47594.5 | 230.17 | 47941 | 47569.4 | 263.3 | 47757 | 47479.9 | 203.64 |
| | | 2op | 47758 | 47746.87 | 17.68 | 47916 | 47616.87 | 180.94 | 47827 | 47529.73 | 203.99 | 47830 | 47564.57 | 209.56 |
| | 50 | rnd | 48052 | 47722.07 | 161.79 | 48052 | 47675.63 | 196.32 | 47918 | 47604.23 | 197.92 | 47844 | 47530 | 221.78 |
| | | 2op | 47758 | 47754.33 | 7.46 | 47832 | 47580.07 | 231.12 | 47892 | 47501.87 | 251.16 | 47842 | 47519.23 | 240.11 |

Table A.2770: $m15421\_6$: basicRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47961 | 47667.7 | 170.93 | 48048 | 47666.3 | 198.15 | 48048 | 47548.6 | 237.12 | 48023 | 47484.17 | 297.47 |
| | | 2op | 47830 | 47700 | 115.05 | 47949 | 47541.53 | 243.23 | 47959 | 47500.03 | 309.14 | 47922 | 47470.97 | 268.51 |
| | 50 | rnd | 48034 | 47689 | 221.39 | 47977 | 47661.7 | 218.12 | 47978 | 47603.33 | 244.49 | 47974 | 47649.87 | 262.22 |
| | | 2op | 47830 | 47721.33 | 85.03 | 47926 | 47637.97 | 196.84 | 47805 | 47523.33 | 225.95 | 47852 | 47551.23 | 212.01 |
| 51 | 20 | rnd | 47918 | 47537.83 | 262.81 | 48030 | 47615.27 | 196.08 | 47959 | 47556.7 | 208.44 | 47977 | 47621.83 | 212.43 |
| | | 2op | 47758 | 47750.9 | 8.92 | 47839 | 47596.03 | 220.67 | 47949 | 47596.67 | 195.28 | 47908 | 47583.3 | 205.79 |
| | 50 | rnd | 47875 | 47608.03 | 203.47 | 47937 | 47649.43 | 156.02 | 48030 | 47635.8 | 204.15 | 47975 | 47541.1 | 251.31 |
| | | 2op | 47758 | 47743.6 | 61.81 | 48052 | 47711.27 | 108.25 | 47922 | 47615.7 | 209.7 | 47977 | 47566.4 | 217.27 |

Table A.2771: $m15421\_6$: transRRGA+IM – Suspected Optimal is 48052

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54963 | 54539.77 | 260.99 | 54979 | 54515.13 | 316.53 | 55068 | 54569.33 | 272.54 | 55057 | 54594.3 | 295.42 |
| | | 2op | 54912 | 54596.17 | 184.54 | 55130 | 54602.73 | 229.35 | 54990 | 54620.9 | 203.16 | 54966 | 54569.1 | 263.93 |
| | 50 | rnd | 55144 | 54613.1 | 295.09 | 54928 | 54521 | 271.54 | 54936 | 54534.93 | 313.24 | 55103 | 54547.53 | 277.68 |
| | | 2op | 54893 | 54589.43 | 158.09 | 54877 | 54654.33 | 188.77 | 54910 | 54561.97 | 251.18 | 54991 | 54632.33 | 196.73 |
| 51 | 20 | rnd | 54975 | 54567.2 | 316.63 | 54945 | 54553.73 | 287.65 | 55086 | 54583.5 | 267.59 | 54962 | 54621.1 | 274.11 |
| | | 2op | 54938 | 54634.07 | 162.2 | 54949 | 54663.17 | 130.25 | 54875 | 54620.83 | 176.29 | 54956 | 54648.93 | 195.11 |
| | 50 | rnd | 54992 | 54639.03 | 220.36 | 55082 | 54603.27 | 251.38 | 55012 | 54563 | 272.39 | 54966 | 54609.17 | 231.56 |
| | | 2op | 54753 | 54590.3 | 131.11 | 54923 | 54665.2 | 113.03 | 54911 | 54672.43 | 156.57 | 55084 | 54684.2 | 217.84 |

Table A.2772: $m15421\_7$: basicRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 54985 | 54505.27 | 301.2 | 55128 | 54525.77 | 322.39 | 54975 | 54541.77 | 299.27 | 54987 | 54552.37 | 298.95 |
| | | 2op | 54948 | 54678.9 | 145.92 | 55157 | 54761.37 | 131.45 | 54877 | 54633.03 | 143.62 | 54934 | 54679.83 | 139.36 |
| | 50 | rnd | 54939 | 54482.57 | 268.82 | 55161 | 54772.77 | 231.14 | 54967 | 54502.33 | 266.4 | 55166 | 54521.83 | 314.56 |
| | | 2op | 54971 | 54670.37 | 200.85 | 55021 | 54743.53 | 200.06 | 54931 | 54688.47 | 172.15 | 54913 | 54706.2 | 151.57 |
| 51 | 20 | rnd | 55025 | 54414 | 373.47 | 55169 | 54656.37 | 234.24 | 54986 | 54497.77 | 320.26 | 54974 | 54532.1 | 269.29 |
| | | 2op | 54951 | 54673.2 | 126.04 | 55016 | 54746.7 | 97.02 | 55061 | 54720.87 | 140.41 | 54975 | 54714.7 | 158.73 |
| | 50 | rnd | 55121 | 54465.33 | 294.57 | 55155 | 54796.53 | 232.8 | 54986 | 54587.7 | 322.62 | 55108 | 54495.27 | 272.61 |
| | | 2op | 54935 | 54674.27 | 128.06 | 54953 | 54758.93 | 62.93 | 54921 | 54705.4 | 117.74 | 55129 | 54750.13 | 170.21 |

Table A.2773: $m15421\_7$: transRRGA – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55098 | 54578.4 | 284.68 | 54991 | 54487.77 | 297.66 | 55002 | 54557.63 | 225.51 | 55068 | 54474.2 | 292.64 |
| | | 2op | 54875 | 54569.87 | 167.64 | 55090 | 54609.03 | 198.5 | 54970 | 54634.7 | 190.18 | 54885 | 54603.9 | 208.09 |
| | 50 | rnd | 54944 | 54624.07 | 303.96 | 54981 | 54536.07 | 348.98 | 55078 | 54560.9 | 252.05 | 55041 | 54539.73 | 247.26 |
| | | 2op | 54950 | 54557.17 | 249.14 | 54950 | 54614 | 170.84 | 55034 | 54705.8 | 148.23 | 55019 | 54593.07 | 264.88 |
| 51 | 20 | rnd | 54947 | 54555.23 | 236.22 | 54960 | 54526.3 | 306.9 | 55090 | 54594.33 | 230.18 | 54972 | 54570.1 | 220.84 |
| | | 2op | 54935 | 54663.87 | 127.31 | 54904 | 54631.03 | 170.86 | 54928 | 54670.37 | 167.22 | 54917 | 54717.77 | 128.74 |
| | 50 | rnd | 55067 | 54640.57 | 228.1 | 55030 | 54590.1 | 355.16 | 54992 | 54580.37 | 274.79 | 55141 | 54654.33 | 239.7 |
| | | 2op | 54957 | 54643 | 112.24 | 54923 | 54632.37 | 119.84 | 54931 | 54644.07 | 169.86 | 54929 | 54690.43 | 157.58 |

Table A.2774: $m15421\_7$: basicRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55146 | 54607.9 | 299.41 | 55107 | 54574.83 | 337.96 | 55061 | 54555 | 352.54 | 55122 | 54542.6 | 249.47 |
| | | 2op | 54930 | 54638.33 | 152.18 | 54926 | 54685 | 108.66 | 54930 | 54596.67 | 201.05 | 54905 | 54672.93 | 184.15 |
| | 50 | rnd | 54880 | 54502.8 | 299.6 | 55050 | 54627.53 | 261.27 | 55081 | 54562.57 | 322.19 | 55087 | 54521.13 | 326.63 |
| | | 2op | 54966 | 54638.63 | 183.94 | 54965 | 54734.87 | 119.63 | 55094 | 54719.57 | 216.78 | 55031 | 54690.23 | 144.21 |
| 51 | 20 | rnd | 55168 | 54548.93 | 286.84 | 54995 | 54644.23 | 207.5 | 55100 | 54484.73 | 311.87 | 54899 | 54470.7 | 256.01 |
| | | 2op | 54950 | 54660.03 | 131.43 | 54966 | 54750.17 | 128.34 | 54974 | 54722 | 127.22 | 54967 | 54695.97 | 136.31 |
| | 50 | rnd | 54951 | 54567.8 | 221.83 | 55170 | 54783.73 | 240.04 | 55050 | 54565.03 | 282.49 | 55141 | 54638.8 | 276.59 |
| | | 2op | 54961 | 54705.23 | 127.92 | 55033 | 54765.13 | 114.39 | 54970 | 54692.83 | 141.21 | 54934 | 54759.4 | 115.29 |

Table A.2775: $m15421\_7$: transRRGA+RS – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55168 | 54591.13 | 327.46 | 54910 | 54317.1 | 330.58 | 54881 | 54442.37 | 316.15 | 54873 | 54318.17 | 363.81 |
| | | 2op | 54745 | 54651.67 | 116.94 | 54938 | 54364.27 | 368.12 | 54857 | 54456.83 | 250.89 | 54929 | 54370.07 | 350.78 |
| | 50 | rnd | 55087 | 54678.03 | 209.87 | 54882 | 54389.5 | 316.87 | 54855 | 54319.5 | 340.88 | 54862 | 54363.1 | 324.64 |
| | | 2op | 54943 | 54692.97 | 114.09 | 54850 | 54443.67 | 298.85 | 54783 | 54299.73 | 299.73 | 54849 | 54441.23 | 303.25 |
| 51 | 20 | rnd | 55065 | 54574.7 | 254.8 | 54977 | 54409.03 | 315.86 | 55058 | 54399.97 | 354.5 | 54902 | 54415.47 | 325.23 |
| | | 2op | 54757 | 54734.6 | 19.64 | 54848 | 54379.37 | 373.13 | 54794 | 54284.9 | 411.92 | 54952 | 54463.63 | 315.59 |
| | 50 | rnd | 55002 | 54647.07 | 227.93 | 54957 | 54356.63 | 311.32 | 55027 | 54355.73 | 328.69 | 54953 | 54363.83 | 380.47 |
| | | 2op | 54769 | 54743.9 | 14.65 | 55057 | 54528.43 | 230.52 | 54847 | 54423.57 | 311.51 | 54896 | 54372.3 | 303.55 |

Table A.2776: $m15421\_7$: basicRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 55048 | 54589.87 | 296.28 | 55050 | 54452.53 | 308.34 | 54878 | 54430.2 | 293.57 | 55122 | 54406.4 | 277.94 |
| | | 2op | 54947 | 54728.13 | 79.68 | 55060 | 54596.7 | 305.87 | 54883 | 54462.17 | 319.99 | 55072 | 54432.53 | 304.82 |
| | 50 | rnd | 55135 | 54593.13 | 331.15 | 54964 | 54514.67 | 257.83 | 54906 | 54433.47 | 313.19 | 55074 | 54387.23 | 365.62 |
| | | 2op | 54868 | 54715.37 | 54.88 | 54997 | 54573.47 | 225.81 | 54976 | 54489.3 | 319.24 | 54945 | 54435.13 | 334 |
| 51 | 20 | rnd | 54978 | 54590.43 | 301.87 | 55123 | 54567.33 | 288.91 | 55079 | 54457.1 | 283.05 | 54870 | 54395 | 313.78 |
| | | 2op | 54754 | 54745.03 | 11.22 | 54913 | 54485.9 | 217.15 | 55002 | 54482.07 | 334.62 | 54752 | 54366.1 | 302.57 |
| | 50 | rnd | 55168 | 54664.23 | 273.76 | 55132 | 54650.47 | 305.45 | 55019 | 54563.6 | 340.98 | 54940 | 54427.27 | 324.84 |
| | | 2op | 54754 | 54748.33 | 4.87 | 54978 | 54686.83 | 235.08 | 54853 | 54528.8 | 276.33 | 55095 | 54457.27 | 354.55 |

Table A.2777: $m15421\_7$: transRRGA+IM – Suspected Optimal is 55171

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11218.47 | 117.35 | 11478 | 11300.6 | 107.21 | 11478 | 11272.33 | 129.28 | 11413 | 11245.6 | 149.29 |
| | | 2op | 11285 | 11094.73 | 92.84 | 11373 | 11246.27 | 81.51 | 11346 | 11148.3 | 125.41 | 11372 | 11216.43 | 111.46 |
| | 50 | rnd | 11394 | 11235.6 | 98.18 | 11478 | 11304.3 | 106.58 | 11478 | 11261.27 | 149.76 | 11411 | 11200.7 | 136.13 |
| | | 2op | 11346 | 11100.9 | 110.74 | 11411 | 11267.47 | 74.33 | 11346 | 11170.07 | 98.39 | 11394 | 11187.7 | 145.9 |
| 51 | 20 | rnd | 11411 | 11200.77 | 164.36 | 11478 | 11332.3 | 99.06 | 11478 | 11286.77 | 145.57 | 11478 | 11270.97 | 133.67 |
| | | 2op | 11285 | 11056.33 | 72.46 | 11285 | 11124.67 | 48.01 | 11305 | 11187.7 | 92.53 | 11305 | 11116.93 | 51.38 |
| | 50 | rnd | 11411 | 11196.4 | 138.07 | 11478 | 11324.03 | 105.54 | 11478 | 11267 | 136.32 | 11478 | 11288.47 | 117.88 |
| | | 2op | 11195 | 11084.13 | 50.22 | 11373 | 11201.03 | 98.46 | 11305 | 11253.83 | 64.01 | 11305 | 11131.37 | 69.43 |

Table A.2778: $x60189\_4$: basicRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11238.77 | 134.18 | 11478 | 11272.97 | 124.1 | 11413 | 11249.3 | 124.97 | 11478 | 11279.23 | 105.37 |
| | | 2op | 11305 | 11092.3 | 100.22 | 11394 | 11265.23 | 70.88 | 11478 | 11193.97 | 111.02 | 11411 | 11216 | 106.91 |
| | 50 | rnd | 11478 | 11236.77 | 175.32 | 11478 | 11289.37 | 119.6 | 11478 | 11301.13 | 132.08 | 11478 | 11263.67 | 106.83 |
| | | 2op | 11348 | 11133.4 | 104.64 | 11373 | 11278.67 | 66 | 11346 | 11197.63 | 99.32 | 11346 | 11191.2 | 117.82 |
| 51 | 20 | rnd | 11478 | 11176.1 | 163.29 | 11478 | 11252.97 | 151.64 | 11478 | 11241.13 | 129.5 | 11478 | 11211.97 | 154.45 |
| | | 2op | 11346 | 11070.37 | 89.04 | 11305 | 11126.3 | 53.18 | 11373 | 11205.63 | 89.18 | 11346 | 11122.5 | 55.53 |
| | 50 | rnd | 11478 | 11196.13 | 146.3 | 11478 | 11305.87 | 115.65 | 11478 | 11288.83 | 141.04 | 11478 | 11235.83 | 167.37 |
| | | 2op | 11153 | 11082.8 | 44.47 | 11411 | 11201.57 | 94.54 | 11394 | 11277.87 | 60.17 | 11346 | 11119.93 | 55.12 |

Table A.2779: $x60189\_4$: transRRGA – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11411 | 11269.97 | 112.24 | 11478 | 11290.8 | 113.25 | 11478 | 11278.2 | 130.8 | 11413 | 11220.17 | 145.61 |
| | | 2op | 11346 | 11127.83 | 117.96 | 11394 | 11229.33 | 99.46 | 11346 | 11147.07 | 117.99 | 11346 | 11154.97 | 192.27 |
| | 50 | rnd | 11413 | 11238.4 | 149.91 | 11478 | 11329.07 | 92.39 | 11411 | 11250.1 | 124.77 | 11478 | 11228.13 | 120.21 |
| | | 2op | 11348 | 11128.27 | 119.69 | 11373 | 11292.6 | 72.28 | 11305 | 11209.27 | 82.85 | 11346 | 11180.57 | 123.78 |
| 51 | 20 | rnd | 11411 | 11199.5 | 171.44 | 11413 | 11265 | 108.35 | 11478 | 11345 | 94.21 | 11478 | 11281.37 | 114.75 |
| | | 2op | 11109 | 11052.27 | 44.69 | 11305 | 11112.47 | 38.19 | 11305 | 11183.37 | 88.22 | 11109 | 11096.57 | 32.25 |
| | 50 | rnd | 11413 | 11267.03 | 94.05 | 11478 | 11294.07 | 119.94 | 11478 | 11353.9 | 101.55 | 11478 | 11309.97 | 122.13 |
| | | 2op | 11346 | 11083.5 | 96.6 | 11373 | 11188.77 | 97.3 | 11411 | 11277.4 | 76.49 | 11346 | 11112.57 | 114.12 |

Table A.2780: $x60189\_4$: basicRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11234.37 | 173.08 | 11478 | 11307.8 | 131.58 | 11478 | 11284 | 136.51 | 11478 | 11254.17 | 139.15 |
| | | 2op | 11346 | 11136.87 | 124.15 | 11394 | 11286.47 | 51.14 | 11346 | 11158.2 | 96.55 | 11372 | 11208.47 | 109.79 |
| | 50 | rnd | 11478 | 11216.03 | 131.76 | 11478 | 11283.83 | 141.79 | 11478 | 11276.4 | 109.16 | 11478 | 11281.07 | 134.33 |
| | | 2op | 11348 | 11138.43 | 109.31 | 11373 | 11253.5 | 69.84 | 11305 | 11205.73 | 93.3 | 11346 | 11195.6 | 94.37 |
| 51 | 20 | rnd | 11478 | 11190.83 | 134.07 | 11478 | 11219.77 | 141.83 | 11411 | 11235.27 | 93.71 | 11478 | 11222 | 161.82 |
| | | 2op | 11109 | 11046.13 | 42.68 | 11305 | 11134.47 | 66.12 | 11373 | 11165.47 | 89.61 | 11285 | 11111.67 | 38.55 |
| | 50 | rnd | 11478 | 11186.97 | 178.68 | 11478 | 11306.23 | 145.64 | 11478 | 11317.3 | 127.66 | 11478 | 11310.07 | 129.72 |
| | | 2op | 11305 | 11091.13 | 73.21 | 11373 | 11217.37 | 97.57 | 11373 | 11281.3 | 61.29 | 11346 | 11128.13 | 62.57 |

Table A.2781: $x60189\_4$: transRRGA+RS – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11413 | 11226.6 | 140.92 | 11365 | 11179.9 | 132.93 | 11478 | 11164.63 | 157.92 | 11478 | 11152.23 | 214.8 |
| | | 2op | 11109 | 11089.07 | 37.59 | 11478 | 11138.33 | 149.1 | 11478 | 11161.97 | 176.74 | 11411 | 11159.43 | 160.45 |
| | 50 | rnd | 11411 | 11261.1 | 101.19 | 11411 | 11168.9 | 154.69 | 11478 | 11197.37 | 153.25 | 11338 | 11113.9 | 145.99 |
| | | 2op | 11256 | 11103.47 | 54.02 | 11478 | 11168.87 | 175.46 | 11411 | 11148.53 | 168.5 | 11394 | 11163.5 | 142.74 |
| 51 | 20 | rnd | 11413 | 11261.3 | 96.26 | 11478 | 11256.4 | 132.7 | 11478 | 11198.27 | 157.2 | 11478 | 11186.3 | 184.82 |
| | | 2op | 11109 | 11093.67 | 34.87 | 11305 | 11211.07 | 74.19 | 11346 | 11153.9 | 159.07 | 11348 | 11183.8 | 154.78 |
| | 50 | rnd | 11413 | 11264.07 | 76.77 | 11478 | 11264.57 | 110.07 | 11478 | 11239.63 | 142.39 | 11394 | 11181.27 | 124 |
| | | 2op | 11109 | 11099.8 | 28.07 | 11373 | 11222.67 | 146.56 | 11373 | 11186.77 | 118.3 | 11411 | 11137.6 | 133.24 |

Table A.2782: $x60189\_4$: basicRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 11478 | 11238.53 | 148.89 | 11478 | 11206 | 199.52 | 11478 | 11153.17 | 174.88 | 11394 | 11155.47 | 145.52 |
| | | 2op | 11109 | 11092.13 | 35.18 | 11478 | 11170.6 | 172.06 | 11348 | 11124.9 | 160.31 | 11373 | 11189.47 | 135.42 |
| | 50 | rnd | 11478 | 11195.5 | 155.64 | 11478 | 11278.87 | 91.51 | 11478 | 11158.3 | 166.93 | 11394 | 11172.43 | 135.92 |
| | | 2op | 11256 | 11098.57 | 45.74 | 11394 | 11241.6 | 84.85 | 11478 | 11172.47 | 148.99 | 11411 | 11108.37 | 192.43 |
| 51 | 20 | rnd | 11478 | 11230.13 | 138.36 | 11478 | 11287.37 | 151.67 | 11478 | 11206.1 | 174.98 | 11478 | 11238.83 | 136.05 |
| | | 2op | 11109 | 11093.67 | 34.87 | 11394 | 11174.87 | 133.96 | 11346 | 11145.9 | 126.8 | 11478 | 11170.27 | 168.91 |
| | 50 | rnd | 11413 | 11222.47 | 128.87 | 11413 | 11276.07 | 112.77 | 11478 | 11258.23 | 147.75 | 11411 | 11177 | 155.64 |
| | | 2op | 11305 | 11103.27 | 49.58 | 11305 | 11140.83 | 106.31 | 11478 | 11163.07 | 118.56 | 11478 | 11135.6 | 180.48 |

Table A.2783: $x60189\_4$: transRRGA+IM – Suspected Optimal is 11478

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13925.73 | 144.29 | 14161 | 14030.53 | 112.51 | 14157 | 13924.47 | 158.62 | 14161 | 13885.43 | 173.01 |
| | | 2op | 13995 | 13851.13 | 88.18 | 14157 | 14006.03 | 82.03 | 14038 | 13916.87 | 74 | 14097 | 13866.07 | 167.72 |
| | 50 | rnd | 14161 | 13909.23 | 186.56 | 14161 | 14006.03 | 107.21 | 14139 | 13942.77 | 122.84 | 14125 | 13895.93 | 135.92 |
| | | 2op | 14038 | 13900.07 | 103.56 | 14157 | 14055.5 | 62.69 | 14038 | 13967.07 | 46.86 | 14008 | 13846.2 | 115.78 |
| 51 | 20 | rnd | 14161 | 13918.63 | 140.15 | 14161 | 13994.6 | 129.22 | 14161 | 13985 | 127.85 | 14161 | 13926 | 138.63 |
| | | 2op | 14038 | 13882.73 | 70.93 | 14064 | 14008.03 | 35.84 | 14038 | 13980.07 | 31.93 | 14002 | 13902.87 | 96.52 |
| | 50 | rnd | 14161 | 13926.4 | 153.9 | 14161 | 14008.03 | 111.53 | 14161 | 14005.93 | 120.77 | 14157 | 13865.37 | 175.41 |
| | | 2op | 14018 | 13904.43 | 78.16 | 14157 | 14017.4 | 61.01 | 14157 | 14023.4 | 46.07 | 14038 | 13916 | 88.1 |

Table A.2784: $x60189\_5$: basicRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14119 | 13860.73 | 121.57 | 14161 | 13957.4 | 115.12 | 14133 | 13929.57 | 102.11 | 14157 | 13930.27 | 128.64 |
| | | 2op | 14038 | 13906.37 | 92.36 | 14157 | 14012.43 | 58.34 | 14157 | 13927.2 | 118.33 | 14103 | 13899.67 | 122.94 |
| | 50 | rnd | 14157 | 13842.83 | 196.63 | 14137 | 13960.9 | 109.08 | 14161 | 13984.77 | 121.54 | 14161 | 13905.93 | 177.32 |
| | | 2op | 14133 | 13912.27 | 113.39 | 14157 | 14038.97 | 69.04 | 14133 | 13971.37 | 71.41 | 14157 | 13926.6 | 102.28 |
| 51 | 20 | rnd | 14157 | 13886.73 | 171.96 | 14137 | 13910.4 | 107.18 | 14161 | 13944.67 | 139.14 | 14139 | 13941.73 | 123.38 |
| | | 2op | 14038 | 13872.27 | 85.09 | 14157 | 14012.53 | 60.44 | 14038 | 13989.47 | 30.88 | 14038 | 13965.83 | 75.35 |
| | 50 | rnd | 14071 | 13816.93 | 190.23 | 14161 | 13950.93 | 128.14 | 14139 | 13965.5 | 128.34 | 14161 | 13872.67 | 163.77 |
| | | 2op | 13995 | 13911.57 | 72.29 | 14157 | 14035.53 | 65.66 | 14157 | 14013.97 | 51.44 | 14038 | 13933.3 | 83.79 |

Table A.2785: $x60189\_5$: transRRGA – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13919.57 | 144.13 | 14161 | 14024.87 | 125.5 | 14139 | 13914.83 | 119.34 | 14097 | 13852.03 | 136.3 |
| | | 2op | 14018 | 13881.9 | 108.1 | 14157 | 13996.8 | 58.02 | 14038 | 13894.03 | 132.43 | 14018 | 13873.27 | 136.12 |
| | 50 | rnd | 14161 | 13911.37 | 150.72 | 14161 | 14023.77 | 109.06 | 14137 | 13918.83 | 114.15 | 14137 | 13859 | 145.63 |
| | | 2op | 14038 | 13907.37 | 88.72 | 14157 | 14026.57 | 51.7 | 14119 | 13939.53 | 60.53 | 14018 | 13873.13 | 121.6 |
| 51 | 20 | rnd | 14161 | 13956.33 | 116.39 | 14161 | 13999.83 | 128.37 | 14157 | 13965.57 | 131.73 | 14133 | 13948.1 | 129.7 |
| | | 2op | 14038 | 13859.1 | 84.56 | 14157 | 14025.33 | 51.24 | 14038 | 13992.7 | 38.54 | 14038 | 13905.13 | 81.7 |
| | 50 | rnd | 14161 | 13968.6 | 137.55 | 14161 | 14001.1 | 115.48 | 14161 | 14030.57 | 110.29 | 14157 | 13921.1 | 155.01 |
| | | 2op | 14038 | 13876.5 | 93.35 | 14157 | 14015.83 | 53.88 | 14157 | 14026.9 | 43.14 | 14038 | 13854.13 | 86.16 |

Table A.2786: $x60189\_5$: basicRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14133 | 13838.97 | 188.83 | 14161 | 13962.2 | 142.96 | 14161 | 13957.07 | 133.31 | 14127 | 13873.17 | 164.59 |
| | | 2op | 14038 | 13911.53 | 99.79 | 14157 | 14028.93 | 66.39 | 14157 | 13933.53 | 87.52 | 14157 | 13916.1 | 118.25 |
| | 50 | rnd | 14128 | 13860.97 | 127.11 | 14157 | 13977.5 | 155.4 | 14157 | 13973.6 | 99.59 | 14161 | 13907.73 | 181.52 |
| | | 2op | 14038 | 13944.2 | 77.79 | 14157 | 14048.37 | 68.43 | 14157 | 13965 | 92.85 | 14157 | 13923.43 | 123.74 |
| 51 | 20 | rnd | 14137 | 13853.67 | 152.6 | 14161 | 13905.17 | 128.03 | 14161 | 13917.37 | 153.73 | 14161 | 13955.53 | 169.15 |
| | | 2op | 14038 | 13885.17 | 87.86 | 14157 | 13996.8 | 47.69 | 14133 | 13997.57 | 36.35 | 14038 | 13941.47 | 90.4 |
| | 50 | rnd | 14139 | 13875.47 | 170.55 | 14161 | 13989.87 | 107.16 | 14161 | 13983.37 | 137.01 | 14161 | 13837.03 | 182.24 |
| | | 2op | 14038 | 13898.97 | 103.43 | 14133 | 13992.63 | 40.84 | 14157 | 14027.1 | 67.48 | 14038 | 13933.43 | 100.36 |

Table A.2787: $x60189\_5$: transRRGA+RS – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13950.23 | 147.59 | 14157 | 13862.33 | 203.15 | 14139 | 13783.3 | 177.72 | 14062 | 13759.77 | 162.87 |
| | | 2op | 13995 | 13882.63 | 58.24 | 14103 | 13808.43 | 186.76 | 14121 | 13896.87 | 127.18 | 14121 | 13803.77 | 195.99 |
| | 50 | rnd | 14139 | 13998.23 | 118.05 | 14157 | 13816.87 | 213.58 | 14127 | 13810.63 | 191.86 | 14094 | 13823.13 | 160.03 |
| | | 2op | 13995 | 13895.57 | 72.36 | 14157 | 13883.03 | 146.59 | 14133 | 13838.07 | 197.61 | 14103 | 13837.97 | 158.95 |
| 51 | 20 | rnd | 14161 | 13954.07 | 153.2 | 14161 | 13961.53 | 130.85 | 14137 | 13906.2 | 143.94 | 14125 | 13890.57 | 157.19 |
| | | 2op | 13995 | 13901.3 | 76.42 | 14119 | 13926.9 | 110.17 | 14100 | 13885.17 | 154.73 | 14133 | 13847.77 | 189.18 |
| | 50 | rnd | 14139 | 13992.17 | 123.23 | 14161 | 13966.13 | 116.89 | 14157 | 13864.6 | 151.24 | 14133 | 13881.1 | 170.63 |
| | | 2op | 13995 | 13923.1 | 68.96 | 14038 | 13952.23 | 69.57 | 14038 | 13830.47 | 138.55 | 14103 | 13816.53 | 172.58 |

Table A.2788: $x60189\_5$: basicRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 14161 | 13874.37 | 191.33 | 14161 | 13862.67 | 187.15 | 14102 | 13850.4 | 141.74 | 14133 | 13782.7 | 155.04 |
| | | 2op | 14038 | 13936.67 | 68.9 | 14157 | 13849.8 | 160.65 | 14157 | 13857.93 | 154.85 | 14062 | 13792.77 | 140.28 |
| | 50 | rnd | 14161 | 13845.67 | 192.96 | 14139 | 13900.67 | 158.1 | 14086 | 13847 | 130.07 | 14037 | 13776.23 | 181.52 |
| | | 2op | 14038 | 13985.13 | 43.63 | 14139 | 13961 | 120.51 | 14157 | 13906.43 | 122.23 | 14097 | 13781.33 | 174.64 |
| 51 | 20 | rnd | 14137 | 13896.13 | 141.01 | 14128 | 13881.43 | 146.59 | 14161 | 13892.33 | 179.36 | 14157 | 13846.57 | 156.89 |
| | | 2op | 14038 | 13952.57 | 62.15 | 14105 | 13937.33 | 105.84 | 14102 | 13872.47 | 167.94 | 14133 | 13819.07 | 153.58 |
| | 50 | rnd | 14137 | 13877.47 | 126.32 | 14161 | 13949.9 | 107.17 | 14161 | 13951.77 | 126.97 | 14139 | 13826.37 | 169.1 |
| | | 2op | 14038 | 13971.27 | 42.96 | 14038 | 13967.5 | 56.39 | 14038 | 13912.03 | 95.69 | 14097 | 13869.5 | 155.31 |

Table A.2789: $x60189\_5$: transRRGA+IM – Suspected Optimal is 14161

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18143 | 17961.77 | 106.11 | 18301 | 17983.37 | 154 | 18172 | 17925.83 | 137.35 | 18172 | 17885.9 | 171.65 |
| | | 2op | 18064 | 17975.37 | 94.59 | 18064 | 18000.23 | 22.95 | 18172 | 17939.7 | 126.91 | 18275 | 17975.83 | 127.22 |
| | 50 | rnd | 18156 | 17948.53 | 121.73 | 18301 | 18075.3 | 125.18 | 18301 | 17954.67 | 187.06 | 18184 | 17938.37 | 167.95 |
| | | 2op | 18017 | 17998.6 | 27.97 | 18056 | 18006.63 | 26.11 | 18142 | 17951.1 | 102.83 | 18142 | 17922.63 | 133.02 |
| 51 | 20 | rnd | 18184 | 17944.63 | 157.33 | 18301 | 18003.17 | 133.66 | 18301 | 17971.5 | 156.42 | 18171 | 17956.3 | 130.87 |
| | | 2op | 18017 | 18009.87 | 16.96 | 18017 | 18015.57 | 6.51 | 18017 | 18006.83 | 16.2 | 18017 | 17992.37 | 47.65 |
| | 50 | rnd | 18184 | 18004.3 | 151.39 | 18184 | 17988.53 | 135.13 | 18216 | 18012.03 | 144.53 | 18172 | 17941.93 | 165.66 |
| | | 2op | 18017 | 18004.03 | 22.21 | 18017 | 18017 | 0 | 18017 | 18005.8 | 16.98 | 18017 | 17974.47 | 57.67 |

Table A.2790: $x60189\_6$: basicRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18093 | 17897.27 | 142.79 | 18136 | 17997.93 | 124 | 18301 | 17986.83 | 162.45 | 18216 | 17960.23 | 150.43 |
| | | 2op | 18074 | 17979.47 | 97.95 | 18042 | 18014.63 | 11.57 | 18142 | 17955.93 | 90.44 | 18142 | 17979.43 | 88.07 |
| | 50 | rnd | 18175 | 17863.6 | 187.19 | 18184 | 18007.4 | 160.58 | 18172 | 17968.63 | 165.03 | 18301 | 17951.43 | 175.97 |
| | | 2op | 18017 | 17996.47 | 24.41 | 18142 | 18024.03 | 25.34 | 18142 | 18002.87 | 79.13 | 18142 | 17968.9 | 98.87 |
| 51 | 20 | rnd | 18184 | 17888.03 | 176.35 | 18171 | 17978 | 137.58 | 18301 | 17949.73 | 170.1 | 18176 | 17949.63 | 187.15 |
| | | 2op | 18017 | 18007.37 | 19.74 | 18017 | 18017 | 0 | 18142 | 18020.97 | 22.89 | 18017 | 18000.93 | 23.96 |
| | 50 | rnd | 18114 | 17844.6 | 182.53 | 18125 | 17924.83 | 175.74 | 18156 | 17952.87 | 124.14 | 18176 | 17907.07 | 158.28 |
| | | 2op | 18017 | 18004.13 | 20.52 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18017 | 17983.27 | 48.35 |

Table A.2791: $x60189\_6$: transRRGA – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18184 | 17948.87 | 154.8 | 18171 | 17986.5 | 113.97 | 18301 | 17968.03 | 149.44 | 18120 | 17933.9 | 106.65 |
| | | 2op | 18142 | 17990.37 | 84.26 | 18074 | 17977.17 | 63.31 | 18142 | 17965.1 | 110.12 | 18142 | 17926.97 | 127.35 |
| | 50 | rnd | 18172 | 17901.27 | 157.23 | 18275 | 18039.3 | 120.93 | 18123 | 17911.8 | 197.86 | 18301 | 17970.9 | 129.71 |
| | | 2op | 18064 | 17987.7 | 63.47 | 18101 | 18014.83 | 33.73 | 18142 | 17959.27 | 102.05 | 18142 | 17951.33 | 120.48 |
| 51 | 20 | rnd | 18175 | 17922.07 | 156.53 | 18186 | 17976.67 | 126.18 | 18301 | 17979.8 | 181.52 | 18125 | 17895.5 | 180.79 |
| | | 2op | 18142 | 18014.97 | 28.31 | 18017 | 18017 | 0 | 18017 | 18006.23 | 14.58 | 18017 | 17989.17 | 57.43 |
| | 50 | rnd | 18142 | 17938.77 | 107.43 | 18301 | 18026.53 | 110.77 | 18301 | 18018.87 | 124.19 | 18301 | 17932.07 | 178.05 |
| | | 2op | 18017 | 18006 | 22.27 | 18017 | 18017 | 0 | 18017 | 18010.13 | 13.89 | 18142 | 17978.27 | 83.57 |

Table A.2792: $x60189\_6$: basicRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17885.87 | 201.11 | 18171 | 17966.27 | 149.8 | 18207 | 18007.57 | 123.98 | 18171 | 17926.77 | 145.44 |
| | | 2op | 18142 | 17988.33 | 88.79 | 18097 | 18013.97 | 36.74 | 18142 | 17987.3 | 86.88 | 18142 | 17945.83 | 99.5 |
| | 50 | rnd | 18109 | 17897.6 | 147.39 | 18301 | 17979.6 | 160.78 | 18172 | 17963.67 | 125.28 | 18172 | 17971.13 | 147.93 |
| | | 2op | 18142 | 17995.5 | 61.85 | 18064 | 18015.03 | 23.68 | 18142 | 17990.9 | 78.22 | 18176 | 17983.5 | 121.87 |
| 51 | 20 | rnd | 18275 | 17885.73 | 164.68 | 18165 | 17990.17 | 131.92 | 18275 | 18020.87 | 118.29 | 18165 | 17892.63 | 140.29 |
| | | 2op | 18142 | 18015.63 | 28.26 | 18017 | 18017 | 0 | 18142 | 18021.17 | 22.82 | 18017 | 17998.17 | 21.62 |
| | 50 | rnd | 18301 | 17951.17 | 162.24 | 18301 | 17969.3 | 141.74 | 18301 | 17969.53 | 141.27 | 18301 | 17965.03 | 129.56 |
| | | 2op | 18017 | 17994.2 | 50.77 | 18017 | 18017 | 0 | 18017 | 18017 | 0 | 18025 | 17959.73 | 68.54 |

Table A.2793: $x60189\_6$: transRRGA+RS – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18165 | 17948.67 | 164 | 18172 | 17962.33 | 145.94 | 18111 | 17884.73 | 154.22 | 18172 | 17823.53 | 233.52 |
| | | 2op | 18017 | 18017 | 0 | 18301 | 17920.53 | 185.49 | 18156 | 17902 | 162.83 | 18145 | 17909.23 | 147.57 |
| | 50 | rnd | 18184 | 17966.47 | 122.96 | 18156 | 17873.27 | 189.2 | 18266 | 17883.07 | 189.14 | 18087 | 17793.93 | 165.8 |
| | | 2op | 18017 | 18015.63 | 7.49 | 18125 | 17857.57 | 148.68 | 18193 | 17849 | 158.18 | 18083 | 17881.77 | 140.17 |
| 51 | 20 | rnd | 18184 | 17974.67 | 150.65 | 18181 | 17969.43 | 135.96 | 18292 | 17892.53 | 206.58 | 18269 | 17862.93 | 209.14 |
| | | 2op | 18017 | 18017 | 0 | 18156 | 17950.2 | 140.29 | 18142 | 17945.03 | 128.94 | 18175 | 17876.87 | 150.61 |
| | 50 | rnd | 18142 | 17975.63 | 158.3 | 18156 | 17959.23 | 145.94 | 18152 | 17862.33 | 165.55 | 18301 | 17888.77 | 173.53 |
| | | 2op | 18017 | 18017 | 0 | 18134 | 17943.03 | 112.62 | 18142 | 17925.9 | 163.34 | 18111 | 17844.3 | 150.57 |

Table A.2794: $x60189\_6$: basicRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 18301 | 17906.07 | 216.15 | 18301 | 17979.13 | 177.36 | 18266 | 17882.87 | 187.73 | 18275 | 17839.37 | 237.59 |
| | | 2op | 18017 | 18017 | 0 | 18266 | 17939.4 | 177.38 | 18111 | 17853.27 | 229.69 | 18193 | 17787.53 | 177.01 |
| | 50 | rnd | 18084 | 17882.47 | 136 | 18301 | 17977.5 | 142.93 | 18301 | 17894 | 178.79 | 18301 | 17928.1 | 188.4 |
| | | 2op | 18017 | 18015.83 | 6.39 | 18292 | 17933.7 | 123.88 | 18275 | 17919.97 | 144.71 | 18142 | 17905.4 | 149.48 |
| 51 | 20 | rnd | 18181 | 17941.8 | 180.88 | 18165 | 17941.73 | 150.41 | 18156 | 17857.83 | 188.23 | 18172 | 17842.83 | 211.76 |
| | | 2op | 18017 | 18017 | 0 | 18292 | 17959.67 | 144.3 | 18046 | 17888.67 | 121.36 | 18196 | 17902.23 | 173.21 |
| | 50 | rnd | 18176 | 18025.6 | 98.88 | 18152 | 17962.27 | 119.48 | 18175 | 17973.2 | 149.62 | 18184 | 17915.87 | 154.58 |
| | | 2op | 18017 | 18017 | 0 | 18017 | 18003.13 | 32.18 | 18142 | 17967.9 | 99.19 | 18261 | 17861.07 | 171.91 |

Table A.2795: $x60189\_6$: transRRGA+IM – Suspected Optimal is 18301

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21193 | 20949.93 | 175.11 | 21218 | 20982.37 | 159.25 | 21142 | 20858.43 | 153.68 | 21166 | 20925.97 | 183.42 |
| | | 2op | 21154 | 20839.6 | 124.01 | 21159 | 20934.53 | 114.38 | 21153 | 20894.53 | 147.66 | 21190 | 20892.53 | 191.89 |
| | 50 | rnd | 21190 | 20963.5 | 147.71 | 21218 | 20985.53 | 156.5 | 21249 | 20961.07 | 182.82 | 21201 | 20988.6 | 183.16 |
| | | 2op | 21101 | 20844.4 | 132.52 | 21193 | 21019.83 | 98.91 | 21154 | 20896.83 | 115.76 | 21108 | 20929.2 | 103.14 |
| 51 | 20 | rnd | 21136 | 20893.63 | 166.04 | 21212 | 21009.67 | 155.08 | 21162 | 20913.83 | 173.58 | 21176 | 20987.5 | 127.07 |
| | | 2op | 21015 | 20849.97 | 64.22 | 21030 | 20894.57 | 81.17 | 21035 | 20851.87 | 64.14 | 21035 | 20915.43 | 82.27 |
| | 50 | rnd | 21210 | 20977.37 | 156.04 | 21212 | 21001.97 | 160.77 | 21271 | 20991.7 | 144.41 | 21212 | 20923.3 | 199.4 |
| | | 2op | 21025 | 20845 | 47.59 | 21193 | 20958.77 | 94.62 | 21168 | 20875.8 | 105.66 | 21096 | 20903.9 | 108.83 |

Table A.2796: $x60189\_7$: basicRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21184 | 20881.3 | 199.24 | 21178 | 20938.47 | 166.95 | 21260 | 20955.6 | 234.21 | 21196 | 20930.8 | 191.82 |
| | | 2op | 21162 | 20853.37 | 119.22 | 21193 | 20936.17 | 102.37 | 21165 | 20924.33 | 115.41 | 21193 | 21005 | 102.02 |
| | 50 | rnd | 21162 | 20832.93 | 238.36 | 21176 | 20971.33 | 135.87 | 21271 | 20942.8 | 156.33 | 21249 | 20915.67 | 219.16 |
| | | 2op | 21101 | 20876.27 | 105.75 | 21190 | 21039.67 | 80.41 | 21207 | 20956.93 | 116.14 | 21154 | 20929.7 | 129.28 |
| 51 | 20 | rnd | 21172 | 20871.27 | 166.4 | 21196 | 20941.33 | 191.78 | 21186 | 20972.2 | 158.25 | 21193 | 20910 | 195.68 |
| | | 2op | 21015 | 20850.57 | 65.45 | 21086 | 20908.93 | 89.25 | 21015 | 20862.83 | 62.07 | 21074 | 20911.83 | 92.18 |
| | 50 | rnd | 21245 | 20855.43 | 236.67 | 21186 | 20958.93 | 151.16 | 21212 | 20963.3 | 142.25 | 21180 | 20916.7 | 204.35 |
| | | 2op | 21025 | 20845 | 47.59 | 21154 | 20953.8 | 91.5 | 21166 | 20884.4 | 90.67 | 21155 | 20932.53 | 106.79 |

Table A.2797: $x60189\_7$: transRRGA – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21207 | 20876.33 | 183.82 | 21211 | 20986.17 | 131.78 | 21212 | 20962.8 | 186.19 | 21157 | 20953 | 149.4 |
| | | 2op | 21154 | 20864.97 | 115.75 | 21207 | 20896.9 | 111.41 | 21119 | 20874.7 | 130.15 | 21148 | 20922.63 | 143.13 |
| | 50 | rnd | 21218 | 21002.33 | 119.61 | 21218 | 21025.93 | 129.29 | 21184 | 20886.13 | 187.56 | 21199 | 20952.03 | 174.12 |
| | | 2op | 21077 | 20887.97 | 103.86 | 21116 | 20983.4 | 82.47 | 21159 | 20884.9 | 152.39 | 21133 | 20930.67 | 143.42 |
| 51 | 20 | rnd | 21182 | 20979.1 | 146.44 | 21238 | 20977.37 | 189.48 | 21178 | 20893 | 192.02 | 21196 | 20971.27 | 143.24 |
| | | 2op | 21052 | 20857.47 | 67.22 | 21068 | 20900.6 | 81.24 | 21038 | 20851.3 | 84.71 | 21148 | 20904.43 | 92.31 |
| | 50 | rnd | 21173 | 20968.8 | 161.9 | 21169 | 20964.57 | 170.7 | 21161 | 20954.8 | 133.94 | 21145 | 20937.7 | 178.97 |
| | | 2op | 21123 | 20856.63 | 95.2 | 21193 | 20961.2 | 101.93 | 21055 | 20870.33 | 77.92 | 21092 | 20923.2 | 85.64 |

Table A.2798: $x60189\_7$: basicRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21175 | 20885.97 | 210.97 | 21135 | 20963.6 | 132.33 | 21170 | 20860.87 | 207.23 | 21233 | 20920.63 | 206.33 |
| | | 2op | 21154 | 20870.93 | 110.53 | 21210 | 20917.83 | 96.84 | 21218 | 20921.97 | 143.83 | 21172 | 20924.1 | 150.32 |
| | 50 | rnd | 21233 | 20883.97 | 220.04 | 21212 | 20995.7 | 138.6 | 21149 | 20862.17 | 187.36 | 21161 | 20926.9 | 174.25 |
| | | 2op | 21077 | 20894.8 | 103 | 21212 | 20999.1 | 84 | 21193 | 20911.4 | 131.08 | 21162 | 20962.6 | 118.03 |
| 51 | 20 | rnd | 21172 | 20840.9 | 235.12 | 21161 | 20927.4 | 158.09 | 21203 | 20917.4 | 199.25 | 21211 | 20898.57 | 172.73 |
| | | 2op | 21052 | 20856.17 | 68.95 | 21193 | 20929.57 | 106.84 | 21115 | 20856.67 | 65.9 | 21198 | 20924.97 | 100.25 |
| | 50 | rnd | 21153 | 20883.67 | 190.26 | 21182 | 20980.17 | 159.82 | 21187 | 21010 | 108.08 | 21182 | 20945.77 | 153.44 |
| | | 2op | 21123 | 20867.77 | 91.67 | 21193 | 20990.8 | 101.31 | 21047 | 20891.37 | 81.66 | 21166 | 20917.63 | 98.85 |

Table A.2799: $x60189\_7$: transRRGA+RS – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21218 | 20983.83 | 154.89 | 21212 | 20868.17 | 196.94 | 21197 | 20828.9 | 230.68 | 21207 | 20868.77 | 164.59 |
| | | 2op | 21018 | 20839.23 | 38.41 | 21172 | 20853.87 | 222.37 | 21158 | 20883.43 | 181.01 | 21174 | 20829.6 | 216.66 |
| | 50 | rnd | 21215 | 20940.33 | 182.4 | 21155 | 20849.97 | 192.48 | 21100 | 20803.73 | 222.81 | 21158 | 20823.47 | 207.58 |
| | | 2op | 21019 | 20857.93 | 59.09 | 21207 | 20892.33 | 196.93 | 21198 | 20802.9 | 195.97 | 21179 | 20814.97 | 276.47 |
| 51 | 20 | rnd | 21203 | 20913.6 | 202.61 | 21211 | 20961.5 | 168.45 | 21187 | 20962.87 | 153.92 | 21202 | 20849.3 | 190.48 |
| | | 2op | 20889 | 20831 | 10.95 | 21211 | 20938.37 | 175.58 | 21104 | 20810.4 | 210.41 | 21199 | 20942.43 | 152.49 |
| | 50 | rnd | 21203 | 20935.13 | 142.86 | 21182 | 21011.77 | 109.22 | 21203 | 20895.2 | 193.19 | 21142 | 20848.33 | 166.36 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21199 | 20950.3 | 149.76 | 21168 | 20911.87 | 155.98 | 21199 | 20875.7 | 206.22 |

Table A.2800: $x60189\_7$: basicRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 21249 | 20889.37 | 208.74 | 21211 | 20871.03 | 145.5 | 21206 | 20932.77 | 173.6 | 21187 | 20834 | 276.03 |
| | | 2op | 21029 | 20839.6 | 40.18 | 21198 | 20868.13 | 182.57 | 21140 | 20842 | 208.07 | 21165 | 20898.13 | 190.69 |
| | 50 | rnd | 21271 | 20912.57 | 165.19 | 21199 | 20973.7 | 164.62 | 21231 | 20947.63 | 147.07 | 21101 | 20822.77 | 205.45 |
| | | 2op | 21019 | 20857.93 | 59.09 | 21192 | 20949.17 | 135.85 | 21206 | 20976.93 | 148.27 | 21149 | 20836.9 | 170.1 |
| 51 | 20 | rnd | 21203 | 20900.17 | 184.61 | 21182 | 20938.27 | 141.85 | 21178 | 20906.23 | 174.55 | 21134 | 20885.47 | 190.09 |
| | | 2op | 20889 | 20831 | 10.95 | 21108 | 20909.67 | 128.8 | 21186 | 20945.13 | 122.4 | 21165 | 20879.83 | 193.63 |
| | 50 | rnd | 21196 | 20896.97 | 185.99 | 21212 | 20942.7 | 141.37 | 21172 | 20951.47 | 190.92 | 21136 | 20869.6 | 214.9 |
| | | 2op | 21193 | 20868.4 | 106.42 | 21210 | 21004.37 | 130.25 | 21165 | 20942.4 | 88.27 | 21151 | 20866.7 | 184.3 |

Table A.2801: $x60189\_7$: transRRGA+IM – Suspected Optimal is 21271

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.2 | 3.01 | 596 | 593.37 | 2.11 | 596 | 593.3 | 1.24 | 596 | 590.1 | 3.47 |
| | | 2op | 596 | 592.07 | 2.82 | 596 | 594.23 | 1.25 | 595 | 593.8 | 1.35 | 595 | 589.67 | 2.71 |
| | 50 | rnd | 596 | 591.73 | 3.13 | 596 | 594.33 | 1.45 | 596 | 594.27 | 1.66 | 596 | 591.67 | 2.6 |
| | | 2op | 595 | 593.1 | 1.45 | 596 | 594.47 | 1.43 | 596 | 594.17 | 1.37 | 596 | 590.2 | 3.52 |
| 51 | 20 | rnd | 596 | 592.53 | 2.34 | 596 | 594.03 | 1.16 | 596 | 594.43 | 1.19 | 596 | 593.1 | 1.84 |
| | | 2op | 595 | 593 | 1.95 | 596 | 594.73 | 0.64 | 596 | 595 | 0.45 | 596 | 594.57 | 1.22 |
| | 50 | rnd | 596 | 592.4 | 2.06 | 596 | 594.4 | 0.93 | 596 | 594.73 | 1.05 | 595 | 593.5 | 1.46 |
| | | 2op | 595 | 593.07 | 2.1 | 596 | 595 | 0.79 | 596 | 595.27 | 0.58 | 596 | 594.3 | 1.6 |

Table A.2802: $f25\_305$: basicRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.6 | 2.79 | 596 | 593.53 | 1.83 | 596 | 593.33 | 2.23 | 596 | 592.13 | 2.08 |
| | | 2op | 596 | 592.47 | 2.43 | 596 | 594.37 | 1.47 | 596 | 594.17 | 1.7 | 595 | 591.83 | 2.78 |
| | 50 | rnd | 596 | 592.33 | 3.11 | 596 | 594.27 | 1.82 | 596 | 594.63 | 1.07 | 596 | 591.87 | 2.76 |
| | | 2op | 595 | 593.07 | 1.8 | 596 | 594.4 | 1.28 | 596 | 594.37 | 1.22 | 595 | 592.57 | 2.05 |
| 51 | 20 | rnd | 595 | 591.57 | 2.24 | 596 | 593.83 | 1.7 | 596 | 594.23 | 1.38 | 596 | 593.17 | 2.13 |
| | | 2op | 595 | 593.63 | 1.33 | 596 | 594.83 | 0.95 | 596 | 594.9 | 0.8 | 596 | 594.57 | 0.77 |
| | 50 | rnd | 596 | 592.83 | 1.93 | 596 | 594.6 | 1.19 | 596 | 594.83 | 0.79 | 596 | 594.03 | 1.67 |
| | | 2op | 595 | 593.07 | 2.23 | 596 | 594.83 | 1.02 | 596 | 595.23 | 0.63 | 596 | 594.3 | 1.09 |

Table A.2803: $f25\_305$: transRRGA – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 592.77 | 2.3 | 596 | 593.47 | 1.63 | 596 | 593.1 | 2.16 | 595 | 590.67 | 2.87 |
| | | 2op | 595 | 591.77 | 2.71 | 596 | 594.07 | 1.51 | 595 | 594.1 | 1.27 | 595 | 589.23 | 3.22 |
| | 50 | rnd | 596 | 591.9 | 2.32 | 596 | 594.1 | 1.32 | 596 | 593.93 | 1.6 | 595 | 590.17 | 3.39 |
| | | 2op | 596 | 592.17 | 2.68 | 596 | 594.17 | 1.32 | 596 | 593.77 | 1.36 | 595 | 590.63 | 2.79 |
| 51 | 20 | rnd | 596 | 591.8 | 3 | 596 | 593.9 | 1.47 | 596 | 594.53 | 1.33 | 596 | 593.67 | 1.63 |
| | | 2op | 595 | 593.27 | 1.53 | 596 | 594.9 | 0.48 | 596 | 594.9 | 0.55 | 595 | 594.67 | 0.61 |
| | 50 | rnd | 596 | 591.8 | 2.43 | 596 | 594.6 | 1 | 596 | 594.73 | 0.94 | 596 | 593.3 | 1.8 |
| | | 2op | 596 | 593.1 | 2.5 | 596 | 594.97 | 0.61 | 596 | 595 | 0.64 | 596 | 593.8 | 1.63 |

Table A.2804: $f25\_305$: basicRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 595 | 590.87 | 3.31 | 596 | 593.77 | 1.92 | 596 | 593.5 | 2.01 | 596 | 591.8 | 2.92 |
| | | 2op | 596 | 591.83 | 2.78 | 596 | 594.27 | 1.51 | 596 | 593.67 | 1.67 | 596 | 592.8 | 2.71 |
| | 50 | rnd | 595 | 591.13 | 2.62 | 596 | 594.63 | 1.07 | 596 | 594.57 | 1.01 | 595 | 592.33 | 2.71 |
| | | 2op | 596 | 592.73 | 2.13 | 596 | 594.8 | 1.13 | 596 | 594.23 | 1.57 | 595 | 592.33 | 1.86 |
| 51 | 20 | rnd | 596 | 591.07 | 3.23 | 596 | 593.77 | 1.65 | 596 | 594.67 | 1.18 | 596 | 593.33 | 1.56 |
| | | 2op | 595 | 593.3 | 1.37 | 596 | 594.87 | 0.63 | 596 | 594.87 | 0.86 | 596 | 594.77 | 0.94 |
| | 50 | rnd | 596 | 591.77 | 2.33 | 596 | 594.93 | 0.87 | 596 | 594.6 | 1.3 | 596 | 593.4 | 2.01 |
| | | 2op | 596 | 593.33 | 2.23 | 596 | 594.97 | 0.76 | 596 | 595.2 | 0.61 | 596 | 593.6 | 1.69 |

Table A.2805: $f25\_305$: transRRGA+RS – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 592.43 | 2.36 | 595 | 591.07 | 3.29 | 595 | 589.03 | 3.23 | 595 | 589.7 | 2.97 |
| | | 2op | 596 | 594 | 1.02 | 596 | 590.33 | 4.1 | 594 | 589.53 | 2.69 | 595 | 589.1 | 3.81 |
| | 50 | rnd | 596 | 593.1 | 1.83 | 595 | 590.53 | 3.82 | 596 | 590.5 | 2.96 | 594 | 588.93 | 3.85 |
| | | 2op | 595 | 593.7 | 1.24 | 596 | 589.83 | 4.62 | 595 | 589.1 | 4.06 | 596 | 589.8 | 2.98 |
| 51 | 20 | rnd | 596 | 591.7 | 2.64 | 596 | 590.37 | 3.8 | 595 | 589.17 | 5.27 | 595 | 588.9 | 3.65 |
| | | 2op | 595 | 593.73 | 1.26 | 596 | 589.8 | 4.82 | 596 | 590.53 | 3.35 | 594 | 590.37 | 3.3 |
| | 50 | rnd | 596 | 593.63 | 1.83 | 595 | 591.03 | 3.09 | 596 | 590.77 | 3.31 | 595 | 589.27 | 3.19 |
| | | 2op | 596 | 594.53 | 0.9 | 595 | 591.47 | 2.92 | 595 | 590.23 | 3.26 | 595 | 589.67 | 3.35 |

Table A.2806: $f25\_305$: basicRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 596 | 591.93 | 2.66 | 595 | 588.77 | 4.48 | 596 | 589.27 | 3.77 | 595 | 589.03 | 3.27 |
| | | 2op | 596 | 594.33 | 0.71 | 595 | 590.33 | 2.62 | 596 | 588.9 | 4.73 | 595 | 589 | 3.5 |
| | 50 | rnd | 595 | 591.8 | 2.06 | 596 | 590.5 | 3.1 | 596 | 589.27 | 4.71 | 595 | 588.87 | 3.23 |
| | | 2op | 596 | 593.93 | 1.41 | 595 | 589.83 | 3.33 | 596 | 588.77 | 4.92 | 594 | 588.6 | 4.34 |
| 51 | 20 | rnd | 596 | 592.9 | 1.94 | 596 | 590.17 | 4.27 | 595 | 588.67 | 4.04 | 595 | 588.47 | 3.95 |
| | | 2op | 595 | 594.13 | 0.35 | 595 | 590.07 | 3.23 | 595 | 590.3 | 3.81 | 595 | 588.63 | 3.63 |
| | 50 | rnd | 596 | 592.83 | 1.53 | 595 | 591 | 3.39 | 596 | 589.97 | 3.53 | 595 | 589.07 | 3.79 |
| | | 2op | 596 | 594.67 | 0.55 | 595 | 589.67 | 3.84 | 595 | 591.27 | 4.06 | 595 | 589.5 | 3.51 |

Table A.2807: $f25\_305$: transRRGA+IM – Suspected Optimal is 596

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.57 | 5.67 | 777 | 775.03 | 1.69 | 777 | 774.27 | 1.76 | 777 | 771.37 | 4.26 |
| | | 2op | 775 | 769.87 | 3.58 | 777 | 773.93 | 2.12 | 777 | 772.97 | 2.24 | 777 | 769.67 | 4.41 |
| | 50 | rnd | 777 | 772 | 3.25 | 777 | 775.2 | 1.06 | 777 | 775.4 | 1.33 | 777 | 770.03 | 3.25 |
| | | 2op | 776 | 771.23 | 3.09 | 777 | 774.67 | 1.65 | 777 | 775.03 | 1.69 | 775 | 769.77 | 3.54 |
| 51 | 20 | rnd | 777 | 772.43 | 2.62 | 777 | 774.1 | 2.2 | 777 | 774.3 | 1.91 | 777 | 773.87 | 1.87 |
| | | 2op | 775 | 768.33 | 3.76 | 777 | 773.3 | 2.28 | 777 | 773.7 | 1.53 | 777 | 772.17 | 2.15 |
| | 50 | rnd | 777 | 772.83 | 2.82 | 777 | 774.87 | 1.76 | 777 | 775.9 | 1.09 | 777 | 773.33 | 2.87 |
| | | 2op | 775 | 769.87 | 1.78 | 777 | 774.37 | 2.11 | 777 | 775.4 | 1.38 | 777 | 772.77 | 1.89 |

Table A.2808: $f25\_400$: basicRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.33 | 4.89 | 777 | 774.67 | 2.15 | 777 | 774.37 | 2.59 | 777 | 772.97 | 3.23 |
| | | 2op | 775 | 769.47 | 3.01 | 777 | 774.77 | 1.96 | 777 | 773.3 | 1.82 | 777 | 770.83 | 2.87 |
| | 50 | rnd | 777 | 772.03 | 5.08 | 777 | 775.33 | 1.47 | 777 | 775.23 | 1.68 | 777 | 772.37 | 2.66 |
| | | 2op | 775 | 770.43 | 4.95 | 777 | 775.5 | 1.28 | 777 | 774.93 | 1.76 | 777 | 772.97 | 2.55 |
| 51 | 20 | rnd | 777 | 771.27 | 5.36 | 777 | 773.77 | 2.22 | 777 | 774 | 2.08 | 777 | 773.17 | 2.46 |
| | | 2op | 775 | 769.2 | 2.06 | 777 | 773.33 | 1.83 | 777 | 773.4 | 1.22 | 776 | 772.2 | 1.67 |
| | 50 | rnd | 777 | 772.13 | 4.68 | 777 | 774.53 | 1.53 | 777 | 775.47 | 1.43 | 777 | 774.13 | 1.93 |
| | | 2op | 774 | 769.63 | 2.04 | 777 | 774.67 | 1.99 | 777 | 775.2 | 1.71 | 775 | 772.57 | 1.55 |

Table A.2809: $f25\_400$: transRRGA – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.4 | 3.75 | 777 | 775.1 | 1.49 | 777 | 774.23 | 1.98 | 777 | 771.67 | 3.88 |
| | | 2op | 777 | 770.4 | 3.14 | 777 | 774.37 | 1.77 | 777 | 773 | 2.85 | 776 | 768.93 | 4.81 |
| | 50 | rnd | 776 | 771.57 | 3.49 | 777 | 775.33 | 1.27 | 777 | 774.77 | 1.52 | 776 | 771.73 | 2.94 |
| | | 2op | 775 | 770.2 | 3.37 | 777 | 774.67 | 1.83 | 777 | 775.23 | 1.25 | 777 | 770.9 | 3.41 |
| 51 | 20 | rnd | 777 | 770.87 | 3.8 | 777 | 774.4 | 1.94 | 777 | 774.6 | 1.79 | 777 | 773.87 | 1.93 |
| | | 2op | 773 | 768.57 | 1.72 | 777 | 772.4 | 2.24 | 777 | 773.93 | 1.44 | 774 | 771.63 | 1.61 |
| | 50 | rnd | 777 | 771.97 | 3.11 | 777 | 775.1 | 1.4 | 777 | 774.97 | 1.63 | 777 | 774.07 | 2.07 |
| | | 2op | 776 | 770.4 | 2.08 | 777 | 774.67 | 1.9 | 777 | 775.07 | 1.89 | 777 | 772.8 | 2.07 |

Table A.2810: $f25\_400$: basicRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 777 | 771.67 | 2.78 | 777 | 774.77 | 1.85 | 777 | 774.33 | 1.86 | 777 | 770.5 | 5.86 |
| | | 2op | 777 | 771.37 | 2.27 | 777 | 774.77 | 2.01 | 777 | 773.03 | 2.03 | 775 | 771.3 | 3.11 |
| | 50 | rnd | 777 | 772.7 | 2.9 | 777 | 774.93 | 1.46 | 777 | 774.7 | 1.53 | 777 | 772.13 | 2.73 |
| | | 2op | 777 | 771.07 | 2.27 | 777 | 774.73 | 1.7 | 777 | 775.43 | 1.43 | 777 | 771.93 | 2.33 |
| 51 | 20 | rnd | 777 | 771.83 | 3.22 | 777 | 773.93 | 2.16 | 777 | 774.1 | 1.84 | 777 | 773.37 | 2.71 |
| | | 2op | 775 | 768.33 | 4.53 | 777 | 773.3 | 1.53 | 777 | 773.97 | 1.54 | 777 | 772.57 | 1.85 |
| | 50 | rnd | 777 | 773.8 | 1.83 | 777 | 774.83 | 1.8 | 777 | 775.77 | 1.04 | 777 | 773.5 | 2.8 |
| | | 2op | 775 | 770.03 | 2.5 | 777 | 774.13 | 1.53 | 777 | 775.2 | 1.71 | 777 | 773.3 | 1.93 |

Table A.2811: $f25\_400$: transRRGA+RS – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 775 | 771.27 | 3.43 | 777 | 770.43 | 7.92 | 777 | 766 | 9.22 | 775 | 766.9 | 7.35 |
| | | 2op | 774 | 769.7 | 1.66 | 777 | 771.33 | 7.03 | 775 | 767.53 | 9.48 | 777 | 765.67 | 9.86 |
| | 50 | rnd | 777 | 772.37 | 3.11 | 777 | 769.5 | 7.2 | 775 | 769.37 | 4.2 | 777 | 765.2 | 9.47 |
| | | 2op | 775 | 770.03 | 1.81 | 777 | 769.33 | 7.14 | 777 | 768.03 | 7.5 | 776 | 766.3 | 7.45 |
| 51 | 20 | rnd | 775 | 772.37 | 2.47 | 777 | 771.57 | 5.64 | 777 | 769.63 | 8.81 | 777 | 770.93 | 4.14 |
| | | 2op | 772 | 769.93 | 0.69 | 777 | 770.2 | 7.77 | 777 | 770.73 | 4.53 | 776 | 769.23 | 5.19 |
| | 50 | rnd | 777 | 772.97 | 2.06 | 776 | 772.17 | 3.46 | 776 | 770.6 | 3.38 | 776 | 766.5 | 7.98 |
| | | 2op | 774 | 770.4 | 1.16 | 777 | 772.17 | 5.06 | 777 | 771.1 | 5.47 | 776 | 766.63 | 9.02 |

Table A.2812: $f25\_400$: basicRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 776 | 770.7 | 3.26 | 775 | 769 | 5.61 | 776 | 766.6 | 10.73 | 777 | 766.77 | 9.69 |
| | | 2op | 775 | 769.9 | 1.75 | 775 | 766.63 | 7.68 | 775 | 765.7 | 8.84 | 775 | 765.83 | 9.35 |
| | 50 | rnd | 777 | 772.47 | 2.67 | 777 | 767.77 | 9.89 | 777 | 767.6 | 9.27 | 776 | 766.7 | 10.16 |
| | | 2op | 777 | 770.9 | 2.56 | 777 | 771.1 | 5.6 | 777 | 766.97 | 9.33 | 777 | 769.07 | 7.84 |
| 51 | 20 | rnd | 777 | 771.87 | 2.9 | 777 | 769.8 | 6.93 | 777 | 766.63 | 9.52 | 777 | 768.3 | 7.96 |
| | | 2op | 772 | 769.9 | 0.71 | 777 | 770 | 3.83 | 777 | 768.9 | 7.91 | 776 | 762.93 | 11.93 |
| | 50 | rnd | 777 | 773.9 | 2.01 | 777 | 771.43 | 4.38 | 777 | 768.67 | 8.17 | 777 | 768.43 | 5.65 |
| | | 2op | 775 | 770.57 | 1.77 | 777 | 769.63 | 7.25 | 776 | 768.3 | 6.47 | 776 | 765.6 | 9.6 |

Table A.2813: $f25\_400$: transRRGA+IM – Suspected Optimal is 777

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 915.6 | 3.22 | 921 | 917.17 | 2.1 | 921 | 917.17 | 2.59 | 918 | 912.5 | 3.08 |
| | | 2op | 918 | 913.53 | 3.09 | 921 | 917.47 | 2.01 | 918 | 915.93 | 1.6 | 919 | 913.4 | 3.73 |
| | 50 | rnd | 921 | 915.63 | 3.13 | 921 | 917.87 | 2.16 | 921 | 917.97 | 1.9 | 919 | 914.83 | 3.09 |
| | | 2op | 921 | 915.17 | 2.98 | 921 | 918.63 | 1.75 | 921 | 917.97 | 1.92 | 921 | 913.93 | 3.62 |
| 51 | 20 | rnd | 921 | 916.23 | 2.31 | 921 | 917.57 | 2.22 | 921 | 917.27 | 2.3 | 921 | 916.97 | 2.79 |
| | | 2op | 918 | 915.03 | 2.37 | 921 | 916.57 | 2.64 | 921 | 917.6 | 1.67 | 921 | 916.43 | 1.3 |
| | 50 | rnd | 921 | 915.97 | 2.58 | 921 | 918 | 1.6 | 921 | 917.97 | 1.97 | 921 | 916.97 | 2.55 |
| | | 2op | 918 | 914.67 | 2.72 | 921 | 917.43 | 2.14 | 921 | 918.77 | 1.77 | 921 | 916.4 | 2.3 |

Table A.2814: $f25\_500$: basicRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.07 | 3.4 | 921 | 916.83 | 3.13 | 921 | 916.23 | 2.86 | 919 | 915.23 | 2.37 |
| | | 2op | 919 | 915.27 | 2.69 | 921 | 917.83 | 1.74 | 921 | 917.47 | 1.96 | 921 | 915.13 | 2.7 |
| | 50 | rnd | 921 | 916 | 2.88 | 921 | 917.8 | 2.35 | 921 | 918.43 | 2.06 | 921 | 914.93 | 2.89 |
| | | 2op | 921 | 915.13 | 2.57 | 921 | 918.23 | 2.05 | 921 | 918.97 | 2.13 | 921 | 916 | 3.04 |
| 51 | 20 | rnd | 919 | 914.13 | 3.62 | 921 | 916.37 | 2.43 | 921 | 917.8 | 2.16 | 921 | 916.93 | 2.94 |
| | | 2op | 917 | 914.73 | 2.03 | 919 | 916.57 | 1.14 | 921 | 917.73 | 1.72 | 921 | 916.37 | 1.19 |
| | 50 | rnd | 919 | 914.1 | 3.2 | 921 | 916.7 | 2.1 | 921 | 917.23 | 2.14 | 921 | 915.53 | 3.3 |
| | | 2op | 918 | 915.5 | 1.68 | 921 | 918.6 | 2.09 | 921 | 919.17 | 1.72 | 921 | 916.87 | 1.5 |

Table A.2815: $f25\_500$: transRRGA – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 919 | 915.4 | 2.85 | 921 | 917.8 | 2.64 | 919 | 917.13 | 1.46 | 921 | 913.47 | 4.14 |
| | | 2op | 919 | 914.53 | 2.53 | 921 | 917.27 | 1.68 | 921 | 918 | 1.97 | 921 | 912.17 | 4.28 |
| | 50 | rnd | 919 | 915.17 | 2.23 | 921 | 918.03 | 2.31 | 921 | 917.77 | 1.63 | 921 | 914.47 | 3.05 |
| | | 2op | 921 | 915.2 | 3.03 | 921 | 917.57 | 2.03 | 921 | 918.73 | 1.51 | 921 | 915.23 | 2.97 |
| 51 | 20 | rnd | 921 | 915.5 | 2.83 | 921 | 916.63 | 2.82 | 921 | 917.93 | 1.72 | 921 | 916.8 | 2.94 |
| | | 2op | 918 | 915 | 2.07 | 921 | 916.73 | 2.05 | 921 | 917.43 | 1.74 | 921 | 916.37 | 1.38 |
| | 50 | rnd | 921 | 915.23 | 2.75 | 921 | 917.23 | 2.31 | 921 | 917.73 | 1.34 | 921 | 916.9 | 2.87 |
| | | 2op | 921 | 915 | 2.57 | 921 | 919.03 | 2.16 | 921 | 918.73 | 1.72 | 921 | 917 | 1.74 |

Table A.2816: $f25\_500$: basicRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 915.8 | 3.19 | 921 | 917.47 | 1.89 | 921 | 916.63 | 2.41 | 921 | 915.53 | 3.01 |
| | | 2op | 919 | 915 | 2.45 | 921 | 918.13 | 1.94 | 921 | 917.27 | 1.84 | 921 | 915.47 | 3.22 |
| | 50 | rnd | 921 | 914.2 | 3.17 | 921 | 916.93 | 2.08 | 921 | 917.83 | 2.05 | 921 | 916.23 | 2.86 |
| | | 2op | 921 | 915.7 | 2.72 | 921 | 918.43 | 1.87 | 921 | 918.67 | 2.34 | 921 | 915.93 | 3.22 |
| 51 | 20 | rnd | 919 | 914.73 | 2.33 | 919 | 915.9 | 2.06 | 921 | 916.53 | 2.3 | 921 | 916.47 | 3.32 |
| | | 2op | 919 | 915.77 | 1.89 | 921 | 916.7 | 1.82 | 921 | 918.27 | 1.98 | 921 | 916.67 | 1.71 |
| | 50 | rnd | 921 | 915.5 | 2.96 | 921 | 917 | 2 | 921 | 918.13 | 1.57 | 921 | 916.13 | 2.46 |
| | | 2op | 919 | 914.9 | 2.54 | 921 | 918.37 | 1.67 | 921 | 918.67 | 1.75 | 921 | 916.9 | 1.75 |

Table A.2817: $f25\_500$: transRRGA+RS – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.93 | 3.31 | 919 | 913.13 | 5.3 | 918 | 910.57 | 6.16 | 919 | 912.37 | 4.51 |
| | | 2op | 916 | 915.17 | 1.9 | 921 | 912.23 | 5.64 | 918 | 912.7 | 3.48 | 919 | 912.5 | 4.37 |
| | 50 | rnd | 919 | 915.67 | 2.35 | 921 | 914.03 | 3.5 | 919 | 911.07 | 7.29 | 919 | 911.43 | 6.66 |
| | | 2op | 921 | 915.87 | 1.55 | 921 | 913.53 | 5.76 | 918 | 912.03 | 5.42 | 919 | 911.47 | 4.73 |
| 51 | 20 | rnd | 921 | 916.2 | 2.62 | 919 | 913.5 | 6.5 | 921 | 914.6 | 5.48 | 921 | 914.03 | 3.79 |
| | | 2op | 916 | 916 | 0 | 921 | 913.6 | 5.96 | 919 | 913.13 | 5.75 | 919 | 913 | 4.29 |
| | 50 | rnd | 921 | 917.17 | 2.12 | 921 | 915.4 | 2.81 | 919 | 914.17 | 3.34 | 921 | 911.03 | 6.82 |
| | | 2op | 916 | 916 | 0 | 921 | 914.97 | 3.93 | 919 | 913.9 | 3.68 | 919 | 912.53 | 6.11 |

Table A.2818: $f25\_500$: basicRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 921 | 914.4 | 2.87 | 919 | 911.4 | 6.03 | 918 | 913 | 4.39 | 921 | 912.4 | 3.84 |
| | | 2op | 918 | 915.57 | 1.52 | 919 | 912.5 | 3.94 | 919 | 913.4 | 2.69 | 917 | 910.73 | 7 |
| | 50 | rnd | 919 | 915.73 | 2.53 | 921 | 915.07 | 3.63 | 919 | 913.17 | 3.98 | 919 | 913.17 | 4.44 |
| | | 2op | 918 | 914.73 | 2.36 | 921 | 913.67 | 4.18 | 921 | 913.2 | 4.62 | 919 | 910.73 | 6 |
| 51 | 20 | rnd | 921 | 916.2 | 2.48 | 921 | 914.93 | 4.9 | 919 | 913.1 | 3.29 | 919 | 912.07 | 5.34 |
| | | 2op | 916 | 915.83 | 0.91 | 921 | 914.87 | 3.13 | 919 | 913.57 | 3.93 | 919 | 913.17 | 3.94 |
| | 50 | rnd | 921 | 916.53 | 3.31 | 921 | 913.2 | 5.14 | 919 | 911.3 | 7.29 | 919 | 913.43 | 4.73 |
| | | 2op | 916 | 915.97 | 0.18 | 919 | 913.43 | 3.81 | 919 | 911.7 | 7.48 | 919 | 911.93 | 5.32 |

Table A.2819: $f25\_500$: transRRGA+IM – Suspected Optimal is 921

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1574 | 1561.13 | 8.67 | 1579 | 1561.6 | 7.89 | 1571 | 1557.57 | 8.24 | 1578 | 1557.03 | 13.33 |
| | | 2op | 1570 | 1559.7 | 8.05 | 1578 | 1559.7 | 7.13 | 1571 | 1557.23 | 8.89 | 1574 | 1557.3 | 9.41 |
| | 50 | rnd | 1574 | 1560.4 | 10.07 | 1572 | 1561.5 | 5.27 | 1573 | 1556.5 | 10.97 | 1571 | 1557.23 | 9.23 |
| | | 2op | 1573 | 1559.07 | 7.99 | 1571 | 1559.7 | 6.37 | 1575 | 1558.4 | 8.88 | 1570 | 1558.07 | 10.31 |
| 51 | 20 | rnd | 1577 | 1561 | 9.13 | 1576 | 1559.7 | 10.47 | 1575 | 1559.13 | 9.38 | 1573 | 1557.73 | 8.33 |
| | | 2op | 1574 | 1557.5 | 6.55 | 1576 | 1563.5 | 5.93 | 1572 | 1561.33 | 6.23 | 1575 | 1558.67 | 7.91 |
| | 50 | rnd | 1575 | 1564.93 | 5.68 | 1574 | 1561.77 | 7.76 | 1576 | 1562.63 | 8.65 | 1569 | 1555.93 | 8.29 |
| | | 2op | 1578 | 1560.93 | 6.24 | 1575 | 1563.43 | 5.54 | 1573 | 1562.9 | 6.32 | 1574 | 1559.53 | 6.8 |

Table A.2820: $f50\_315$: basicRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1577 | 1559.13 | 13.15 | 1572 | 1561.6 | 7.26 | 1576 | 1561.3 | 10.21 | 1574 | 1561.2 | 8.82 |
| | | 2op | 1575 | 1561.6 | 7.37 | 1578 | 1562.67 | 6.82 | 1572 | 1560.9 | 6.49 | 1575 | 1558.63 | 8.05 |
| | 50 | rnd | 1574 | 1559.97 | 9.62 | 1574 | 1561.97 | 6.26 | 1575 | 1562.53 | 6.57 | 1570 | 1559.23 | 8.56 |
| | | 2op | 1572 | 1559.53 | 8.28 | 1573 | 1563.83 | 5.77 | 1575 | 1559.97 | 7.94 | 1578 | 1563.53 | 6.21 |
| 51 | 20 | rnd | 1571 | 1559.43 | 10.79 | 1575 | 1561.8 | 7.43 | 1573 | 1561.97 | 10.17 | 1572 | 1558.43 | 8.53 |
| | | 2op | 1577 | 1558.67 | 6.93 | 1572 | 1564.43 | 4.31 | 1575 | 1562.83 | 6.5 | 1574 | 1561.53 | 5.58 |
| | 50 | rnd | 1573 | 1554.77 | 10.74 | 1581 | 1563.67 | 8.15 | 1577 | 1561.53 | 6.6 | 1575 | 1558.87 | 9.62 |
| | | 2op | 1568 | 1558.73 | 5.3 | 1573 | 1564.03 | 4.62 | 1570 | 1561.1 | 6.1 | 1574 | 1558.8 | 8.24 |

Table A.2821: $f50\_315$: transRRGA – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1573 | 1559.43 | 8.6 | 1573 | 1560.53 | 8.03 | 1573 | 1557.33 | 10.08 | 1571 | 1556.17 | 11.34 |
| | | 2op | 1572 | 1560.37 | 7.5 | 1575 | 1559.13 | 8.83 | 1571 | 1556.33 | 7.48 | 1572 | 1557.07 | 12.7 |
| | 50 | rnd | 1573 | 1562 | 4.71 | 1573 | 1557.8 | 10.04 | 1572 | 1558.3 | 9.71 | 1569 | 1557.17 | 9.75 |
| | | 2op | 1571 | 1555.87 | 11.52 | 1573 | 1560.7 | 8.01 | 1571 | 1556.77 | 9.62 | 1575 | 1557.37 | 9.88 |
| 51 | 20 | rnd | 1577 | 1562.37 | 9.64 | 1574 | 1561.67 | 8.33 | 1573 | 1561.13 | 7.99 | 1574 | 1557.07 | 9.99 |
| | | 2op | 1568 | 1558.43 | 5.98 | 1573 | 1559.8 | 7.49 | 1573 | 1560.37 | 6.81 | 1573 | 1557.43 | 8.9 |
| | 50 | rnd | 1576 | 1563.3 | 7.18 | 1574 | 1563.1 | 6.98 | 1574 | 1560.13 | 8.19 | 1574 | 1561.93 | 6.7 |
| | | 2op | 1569 | 1558.47 | 6.06 | 1573 | 1562.5 | 7 | 1574 | 1561.8 | 6.65 | 1571 | 1558.9 | 8.03 |

Table A.2822: $f50\_315$: basicRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1572 | 1557.73 | 8.09 | 1576 | 1561.63 | 7.99 | 1573 | 1562.4 | 5.77 | 1573 | 1559.8 | 7.76 |
| | | 2op | 1575 | 1558.6 | 9.04 | 1575 | 1561.37 | 7.32 | 1568 | 1557.77 | 6.78 | 1570 | 1558.93 | 7.39 |
| | 50 | rnd | 1575 | 1558.93 | 9.01 | 1576 | 1563.77 | 7.2 | 1581 | 1561.43 | 10.04 | 1577 | 1558.63 | 11.44 |
| | | 2op | 1574 | 1560.77 | 8.06 | 1581 | 1565.7 | 8.09 | 1575 | 1561.2 | 10.03 | 1575 | 1559.87 | 8.59 |
| 51 | 20 | rnd | 1577 | 1560 | 8.19 | 1580 | 1560.87 | 8.45 | 1574 | 1561.3 | 8.1 | 1572 | 1559.2 | 7.6 |
| | | 2op | 1574 | 1558.97 | 6.35 | 1574 | 1563 | 6.29 | 1573 | 1563.57 | 5.18 | 1576 | 1558.43 | 5.54 |
| | 50 | rnd | 1576 | 1560.33 | 10.16 | 1579 | 1563.4 | 8.32 | 1579 | 1562.37 | 8.9 | 1574 | 1559.33 | 10.21 |
| | | 2op | 1569 | 1558.93 | 6.56 | 1579 | 1563.93 | 7.11 | 1581 | 1565.53 | 6.89 | 1569 | 1558.9 | 4.95 |

Table A.2823: $f50\_315$: transRRGA+RS – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1575 | 1562.9 | 6.57 | 1574 | 1552.37 | 12.63 | 1576 | 1557.2 | 13.16 | 1571 | 1554.23 | 12.83 |
| | | 2op | 1567 | 1557.53 | 4.44 | 1574 | 1554.43 | 11.2 | 1576 | 1553.5 | 14.24 | 1568 | 1552.43 | 12.54 |
| | 50 | rnd | 1573 | 1561.77 | 6.82 | 1577 | 1556.77 | 9.69 | 1572 | 1556.77 | 9.27 | 1569 | 1552.1 | 10.09 |
| | | 2op | 1572 | 1559.03 | 6.16 | 1573 | 1555.6 | 11.99 | 1570 | 1553 | 13.95 | 1575 | 1553.3 | 12.22 |
| 51 | 20 | rnd | 1574 | 1561.9 | 8.57 | 1573 | 1556.3 | 12.26 | 1569 | 1554.43 | 11.62 | 1573 | 1553.8 | 13.06 |
| | | 2op | 1569 | 1557.83 | 4.04 | 1571 | 1553.93 | 11.78 | 1574 | 1557.57 | 10.76 | 1572 | 1553.93 | 13.87 |
| | 50 | rnd | 1574 | 1564.13 | 5.81 | 1574 | 1557.8 | 10.11 | 1572 | 1556.17 | 11.36 | 1575 | 1554.37 | 10.03 |
| | | 2op | 1566 | 1559.23 | 3.83 | 1572 | 1556.17 | 9.93 | 1571 | 1555.2 | 9.71 | 1568 | 1556.73 | 8.17 |

Table A.2824: $f50\_315$: basicRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1580 | 1560.03 | 8.83 | 1577 | 1557.63 | 10.6 | 1573 | 1556.2 | 10.9 | 1573 | 1554.37 | 9.79 |
| | | 2op | 1568 | 1559.13 | 4.86 | 1572 | 1557.97 | 10.12 | 1572 | 1555.4 | 10.01 | 1575 | 1554.4 | 12.39 |
| | 50 | rnd | 1574 | 1560.43 | 8.35 | 1569 | 1556.83 | 8.22 | 1572 | 1555.37 | 10.31 | 1579 | 1553.9 | 12.96 |
| | | 2op | 1571 | 1561.03 | 5.96 | 1573 | 1559 | 8.67 | 1569 | 1556.2 | 9.26 | 1575 | 1553.43 | 11.96 |
| 51 | 20 | rnd | 1578 | 1559.6 | 8.32 | 1574 | 1558.5 | 10.5 | 1567 | 1553.13 | 9.24 | 1575 | 1554.83 | 11.43 |
| | | 2op | 1564 | 1557.27 | 2.94 | 1570 | 1555.3 | 9.81 | 1570 | 1557.23 | 7.71 | 1575 | 1559.77 | 9.31 |
| | 50 | rnd | 1572 | 1559.27 | 7.11 | 1579 | 1559.83 | 9.26 | 1577 | 1558 | 12.4 | 1568 | 1551.93 | 11.06 |
| | | 2op | 1568 | 1560.2 | 4.04 | 1577 | 1561.8 | 7.79 | 1575 | 1558.67 | 9.67 | 1575 | 1553.63 | 13.93 |

Table A.2825: $f50\_315$: transRRGA+IM – Suspected Optimal is 1581

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1571 | 1554.53 | 10.27 | 1566 | 1556.33 | 8.01 | 1567 | 1548.9 | 12.77 | 1568 | 1548.6 | 13.65 |
| | | 2op | 1567 | 1549.57 | 8.92 | 1573 | 1554.37 | 7.61 | 1568 | 1551.67 | 9.87 | 1563 | 1547.33 | 13.53 |
| | 50 | rnd | 1569 | 1550.83 | 9.43 | 1568 | 1557.63 | 7.41 | 1569 | 1551.83 | 11.69 | 1566 | 1549.47 | 12.57 |
| | | 2op | 1569 | 1547.93 | 11.3 | 1569 | 1556.73 | 6.38 | 1567 | 1552.8 | 8.72 | 1566 | 1548.43 | 12.33 |
| 51 | 20 | rnd | 1569 | 1552.3 | 10.6 | 1570 | 1555.93 | 8.45 | 1568 | 1558.37 | 6 | 1568 | 1557.4 | 8.05 |
| | | 2op | 1563 | 1547.47 | 11.96 | 1568 | 1555.9 | 7.83 | 1564 | 1555.77 | 6.31 | 1566 | 1552.7 | 11.4 |
| | 50 | rnd | 1571 | 1552.13 | 11.09 | 1570 | 1558.13 | 7.69 | 1570 | 1558.17 | 8.35 | 1569 | 1554.37 | 9.71 |
| | | 2op | 1568 | 1552.13 | 10.2 | 1573 | 1556.83 | 8.49 | 1570 | 1557.63 | 8.7 | 1566 | 1551.87 | 9.16 |

Table A.2826: $f50\_412$: basicRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1556.17 | 9.87 | 1571 | 1557.6 | 7.92 | 1569 | 1553.53 | 12.01 | 1567 | 1550.57 | 11.1 |
| | | 2op | 1569 | 1551.73 | 9.63 | 1567 | 1556.37 | 5.37 | 1568 | 1554.4 | 10.35 | 1572 | 1551 | 10.02 |
| | 50 | rnd | 1571 | 1556 | 8.23 | 1570 | 1558.8 | 7.09 | 1570 | 1557.5 | 8.05 | 1567 | 1555.23 | 8 |
| | | 2op | 1569 | 1550.67 | 11.15 | 1573 | 1557.93 | 6.65 | 1569 | 1555.87 | 7.12 | 1567 | 1550.9 | 11.15 |
| 51 | 20 | rnd | 1569 | 1555.47 | 11.2 | 1571 | 1559.83 | 6.28 | 1572 | 1559.3 | 7.38 | 1570 | 1555.7 | 8.01 |
| | | 2op | 1565 | 1551.03 | 9.67 | 1573 | 1558.67 | 7.17 | 1567 | 1557 | 8.35 | 1571 | 1549.8 | 11.84 |
| | 50 | rnd | 1570 | 1554.43 | 7.41 | 1567 | 1557.27 | 7.42 | 1570 | 1560.33 | 5.7 | 1568 | 1553.57 | 12.44 |
| | | 2op | 1568 | 1553.5 | 9.8 | 1567 | 1557.53 | 7.83 | 1570 | 1559.33 | 5.2 | 1567 | 1551.9 | 8.88 |

Table A.2827: $f50\_412$: transRRGA – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1551.13 | 8.68 | 1569 | 1554.53 | 7.07 | 1571 | 1556.1 | 9.35 | 1571 | 1549.63 | 12.53 |
| | | 2op | 1563 | 1550.93 | 7.22 | 1569 | 1556.93 | 7.19 | 1568 | 1548.43 | 10.5 | 1567 | 1545.73 | 10.3 |
| | 50 | rnd | 1567 | 1551.43 | 13.58 | 1569 | 1555.67 | 7.89 | 1564 | 1552.17 | 7.78 | 1568 | 1551.87 | 10.18 |
| | | 2op | 1566 | 1549.5 | 10.47 | 1566 | 1553 | 7.78 | 1565 | 1552.13 | 9 | 1566 | 1547.33 | 11.38 |
| 51 | 20 | rnd | 1565 | 1551.8 | 7.75 | 1567 | 1556.5 | 6 | 1569 | 1557.37 | 7.28 | 1567 | 1553.77 | 9.66 |
| | | 2op | 1565 | 1547.57 | 12.65 | 1572 | 1554.1 | 9.85 | 1570 | 1555.1 | 9.91 | 1570 | 1551.03 | 11.28 |
| | 50 | rnd | 1570 | 1554.23 | 10.85 | 1571 | 1558.7 | 6.51 | 1568 | 1558.97 | 6.73 | 1568 | 1553.97 | 9.13 |
| | | 2op | 1566 | 1551 | 11.35 | 1568 | 1558.27 | 6.2 | 1570 | 1555.9 | 7.76 | 1566 | 1551.07 | 10.23 |

Table A.2828: $f50\_412$: basicRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1568 | 1554 | 10.24 | 1569 | 1558.37 | 7.42 | 1568 | 1554.7 | 7.25 | 1565 | 1551.9 | 8 |
| | | 2op | 1572 | 1554.13 | 7.66 | 1571 | 1560.13 | 6.69 | 1568 | 1555.17 | 8.82 | 1564 | 1551.03 | 11.25 |
| | 50 | rnd | 1573 | 1556.6 | 9.13 | 1570 | 1559.27 | 5.75 | 1567 | 1556.67 | 7.16 | 1570 | 1550.17 | 11.53 |
| | | 2op | 1567 | 1552.67 | 8.72 | 1567 | 1557.1 | 7.16 | 1566 | 1555.47 | 6.86 | 1565 | 1552.47 | 9.94 |
| 51 | 20 | rnd | 1565 | 1553.63 | 6.56 | 1568 | 1554 | 9.55 | 1569 | 1557.6 | 5.12 | 1564 | 1555.9 | 6.66 |
| | | 2op | 1565 | 1551 | 12.4 | 1571 | 1555.87 | 8.64 | 1569 | 1557.13 | 8.29 | 1570 | 1552.13 | 10.86 |
| | 50 | rnd | 1565 | 1554.97 | 8.61 | 1568 | 1557.37 | 8.72 | 1569 | 1560.33 | 6.04 | 1570 | 1556.93 | 12.64 |
| | | 2op | 1566 | 1552.17 | 11 | 1569 | 1559.07 | 7.93 | 1567 | 1558.77 | 5.63 | 1568 | 1551.93 | 9.92 |

Table A.2829: $f50\_412$: transRRGA+RS – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1567 | 1552.4 | 9.35 | 1566 | 1545.3 | 14.45 | 1567 | 1550.77 | 10.08 | 1562 | 1549.33 | 8.25 |
| | | 2op | 1569 | 1548.2 | 11.8 | 1568 | 1546.4 | 12.74 | 1569 | 1545.53 | 13.7 | 1565 | 1543.73 | 13.87 |
| | 50 | rnd | 1569 | 1555.37 | 9.33 | 1565 | 1550.77 | 8 | 1567 | 1548.2 | 12.77 | 1567 | 1544.13 | 16.11 |
| | | 2op | 1570 | 1552.47 | 9.5 | 1569 | 1549.73 | 13.76 | 1568 | 1546.43 | 13.97 | 1565 | 1547.7 | 11.05 |
| 51 | 20 | rnd | 1567 | 1555.93 | 8.07 | 1565 | 1547.5 | 11.73 | 1567 | 1550.13 | 10.75 | 1565 | 1544.67 | 12.92 |
| | | 2op | 1564 | 1552.63 | 7.39 | 1566 | 1546.53 | 11.78 | 1571 | 1548.43 | 10.46 | 1560 | 1547.13 | 9.39 |
| | 50 | rnd | 1566 | 1553.63 | 8.43 | 1563 | 1548.43 | 11.06 | 1568 | 1551.17 | 10.2 | 1568 | 1544.33 | 11.08 |
| | | 2op | 1565 | 1553.77 | 8.84 | 1566 | 1551.73 | 9.69 | 1562 | 1547.3 | 8.36 | 1564 | 1546.27 | 12.31 |

Table A.2830: $f50\_412$: basicRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1554.07 | 9.34 | 1565 | 1547.93 | 11.1 | 1569 | 1551.87 | 11.84 | 1564 | 1549.07 | 13.43 |
| | | 2op | 1569 | 1551.17 | 12.39 | 1563 | 1547.87 | 9.01 | 1571 | 1545.63 | 12.99 | 1564 | 1548.67 | 10.01 |
| | 50 | rnd | 1570 | 1554.13 | 8.27 | 1561 | 1547.27 | 11.88 | 1569 | 1551.3 | 10.72 | 1566 | 1547.83 | 11.65 |
| | | 2op | 1570 | 1553.83 | 9.66 | 1569 | 1551.73 | 9.09 | 1564 | 1550.6 | 9.52 | 1565 | 1544.8 | 13.15 |
| 51 | 20 | rnd | 1572 | 1557.4 | 8.33 | 1569 | 1551.63 | 10.8 | 1563 | 1545.23 | 11.85 | 1564 | 1546.8 | 8.97 |
| | | 2op | 1564 | 1554.07 | 7.32 | 1565 | 1547.37 | 11.77 | 1571 | 1548.17 | 12.86 | 1568 | 1551.57 | 10.04 |
| | 50 | rnd | 1567 | 1555.73 | 8.68 | 1568 | 1553.87 | 10.64 | 1566 | 1548.8 | 13.39 | 1568 | 1547.2 | 14.16 |
| | | 2op | 1565 | 1557.07 | 6.92 | 1567 | 1554.93 | 9.1 | 1567 | 1551.67 | 11.32 | 1571 | 1549.8 | 9.25 |

Table A.2831: $f50\_412$: transRRGA+IM – Suspected Optimal is 1573

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1548.9 | 9.59 | 1567 | 1552.17 | 8.4 | 1566 | 1547.13 | 9.92 | 1562 | 1548.53 | 9.38 |
| | | 2op | 1566 | 1549.67 | 7.59 | 1562 | 1548.67 | 7.97 | 1563 | 1548.93 | 8.22 | 1562 | 1548.37 | 5.87 |
| | 50 | rnd | 1563 | 1551.03 | 6.89 | 1563 | 1549.8 | 8.89 | 1565 | 1550.67 | 9.11 | 1563 | 1547.37 | 9.08 |
| | | 2op | 1565 | 1552.93 | 8.17 | 1565 | 1552.7 | 7.52 | 1568 | 1553.37 | 8.74 | 1565 | 1550.23 | 8.85 |
| 51 | 20 | rnd | 1562 | 1549.4 | 7.76 | 1565 | 1553.23 | 6.25 | 1567 | 1552.13 | 7.4 | 1565 | 1548.73 | 7.62 |
| | | 2op | 1563 | 1549.83 | 6.74 | 1565 | 1552.63 | 6.11 | 1570 | 1552.67 | 6.63 | 1564 | 1552.93 | 6.52 |
| | 50 | rnd | 1562 | 1550.03 | 8.13 | 1567 | 1551.5 | 8.61 | 1568 | 1550.87 | 7.04 | 1566 | 1551.83 | 8.24 |
| | | 2op | 1565 | 1550.8 | 5.65 | 1564 | 1551.83 | 6.22 | 1568 | 1555.33 | 7.73 | 1564 | 1552.63 | 7.58 |

Table A.2832: $f50\_498$: basicRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1565 | 1548.93 | 9.71 | 1567 | 1554.93 | 6.02 | 1568 | 1551.27 | 8.17 | 1566 | 1551.77 | 7.05 |
| | | 2op | 1563 | 1551.07 | 7.24 | 1568 | 1555.57 | 7.82 | 1568 | 1551.1 | 7.87 | 1563 | 1550.47 | 7.3 |
| | 50 | rnd | 1563 | 1550.3 | 8.42 | 1565 | 1552.93 | 5.75 | 1566 | 1551.03 | 8.73 | 1563 | 1550.4 | 10.19 |
| | | 2op | 1568 | 1553.6 | 8.93 | 1565 | 1554.47 | 8.17 | 1570 | 1553.6 | 7.29 | 1566 | 1553.7 | 8.33 |
| 51 | 20 | rnd | 1565 | 1553.03 | 6.31 | 1566 | 1554.5 | 6.25 | 1565 | 1553.17 | 7.48 | 1564 | 1551.43 | 9.81 |
| | | 2op | 1565 | 1550.67 | 6.21 | 1566 | 1553.17 | 6.51 | 1561 | 1552.53 | 4.49 | 1566 | 1554.8 | 6.36 |
| | 50 | rnd | 1561 | 1550.2 | 8.27 | 1564 | 1551.47 | 6.74 | 1568 | 1554.33 | 7.29 | 1564 | 1551.2 | 7.38 |
| | | 2op | 1565 | 1551.17 | 6.8 | 1566 | 1554.4 | 6.4 | 1568 | 1554.3 | 7.26 | 1566 | 1554.53 | 6.82 |

Table A.2833: $f50\_498$: transRRGA – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1566 | 1545.4 | 10.58 | 1564 | 1552.3 | 9.03 | 1568 | 1550.9 | 9.95 | 1563 | 1552.03 | 7.16 |
| | | 2op | 1566 | 1548.93 | 7.85 | 1570 | 1552.5 | 8.58 | 1565 | 1550.1 | 7.45 | 1562 | 1545.57 | 8.83 |
| | 50 | rnd | 1561 | 1549.1 | 8.3 | 1566 | 1548.27 | 8.65 | 1563 | 1551.67 | 6.79 | 1564 | 1548.17 | 9.13 |
| | | 2op | 1566 | 1552.97 | 6 | 1562 | 1549.27 | 9.59 | 1563 | 1552.1 | 7.47 | 1559 | 1547.4 | 6.46 |
| 51 | 20 | rnd | 1566 | 1550.07 | 7.94 | 1564 | 1553.2 | 7.11 | 1564 | 1553.67 | 6.5 | 1566 | 1550.13 | 9.13 |
| | | 2op | 1561 | 1550.47 | 5.31 | 1563 | 1551.4 | 5.78 | 1565 | 1551.13 | 7.4 | 1564 | 1549.63 | 8.04 |
| | 50 | rnd | 1565 | 1551.57 | 7.84 | 1561 | 1550.87 | 6.38 | 1566 | 1552.7 | 7.46 | 1563 | 1552.17 | 7.26 |
| | | 2op | 1557 | 1548.2 | 7.37 | 1563 | 1549.3 | 5.84 | 1563 | 1554.23 | 5.71 | 1562 | 1548.93 | 9.34 |

Table A.2834: $f50\_498$: basicRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1551.17 | 10.61 | 1564 | 1552.2 | 7.83 | 1565 | 1552.57 | 7.86 | 1564 | 1552 | 8.23 |
| | | 2op | 1566 | 1548.6 | 7.29 | 1570 | 1554.67 | 7.63 | 1565 | 1552.9 | 7.57 | 1568 | 1551.87 | 7.99 |
| | 50 | rnd | 1565 | 1548.67 | 9.61 | 1566 | 1552.97 | 6.65 | 1564 | 1552.9 | 6.84 | 1568 | 1553.33 | 9.47 |
| | | 2op | 1568 | 1554.47 | 6.84 | 1567 | 1552.1 | 9.87 | 1565 | 1554.37 | 7.14 | 1570 | 1551.33 | 8.36 |
| 51 | 20 | rnd | 1562 | 1549.73 | 9.64 | 1567 | 1552.7 | 8.13 | 1565 | 1548.5 | 8.06 | 1566 | 1553.67 | 6.92 |
| | | 2op | 1559 | 1549.87 | 5.75 | 1566 | 1550.5 | 6.95 | 1568 | 1550.6 | 7.05 | 1567 | 1553.53 | 6.29 |
| | 50 | rnd | 1563 | 1550.67 | 7.41 | 1568 | 1552.63 | 8.48 | 1566 | 1553.9 | 7.67 | 1564 | 1550.37 | 7.71 |
| | | 2op | 1566 | 1548.2 | 9.5 | 1564 | 1551.93 | 6.91 | 1565 | 1553.43 | 5.92 | 1561 | 1551.8 | 7.42 |

Table A.2835: $f50\_498$: transRRGA+RS – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1564 | 1552 | 7.43 | 1565 | 1549.73 | 7.8 | 1559 | 1546.63 | 10.13 | 1564 | 1545.47 | 9.92 |
| | | 2op | 1564 | 1549.33 | 6 | 1566 | 1549.3 | 9.06 | 1565 | 1546.9 | 10.94 | 1564 | 1550.57 | 10.16 |
| | 50 | rnd | 1566 | 1549.8 | 7.6 | 1559 | 1542.23 | 11.52 | 1564 | 1549.03 | 7.2 | 1565 | 1547.83 | 10.76 |
| | | 2op | 1561 | 1552.3 | 5.34 | 1568 | 1549.03 | 8.72 | 1563 | 1550.3 | 8.54 | 1563 | 1545.1 | 10.51 |
| 51 | 20 | rnd | 1561 | 1548.73 | 6.11 | 1565 | 1545.73 | 10.73 | 1565 | 1550.03 | 8.39 | 1562 | 1547.43 | 9.16 |
| | | 2op | 1548 | 1548 | 0 | 1565 | 1549.4 | 9.93 | 1562 | 1547.07 | 11.2 | 1567 | 1546.8 | 9.03 |
| | 50 | rnd | 1567 | 1551.77 | 7.67 | 1566 | 1551.23 | 9.17 | 1564 | 1549.07 | 9.01 | 1565 | 1544.43 | 8.69 |
| | | 2op | 1552 | 1548.23 | 1.28 | 1564 | 1550.5 | 8.73 | 1565 | 1550.07 | 9.6 | 1560 | 1548.1 | 7.26 |

Table A.2836: $f50\_498$: basicRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 1570 | 1553.67 | 8.95 | 1564 | 1548.6 | 9.1 | 1562 | 1544.93 | 10.63 | 1564 | 1546.63 | 10.4 |
| | | 2op | 1564 | 1550.23 | 5.94 | 1570 | 1550.03 | 8.41 | 1565 | 1549.87 | 8.02 | 1560 | 1543.77 | 11.45 |
| | 50 | rnd | 1567 | 1548.97 | 7.3 | 1563 | 1547.77 | 9.41 | 1565 | 1546.33 | 10.56 | 1565 | 1548.9 | 9.03 |
| | | 2op | 1561 | 1552.23 | 4.86 | 1565 | 1547.87 | 13.4 | 1564 | 1547.8 | 10.89 | 1561 | 1546.67 | 10.6 |
| 51 | 20 | rnd | 1565 | 1551.07 | 7.95 | 1560 | 1549.4 | 8.93 | 1570 | 1549.73 | 8.46 | 1560 | 1547.97 | 8.91 |
| | | 2op | 1550 | 1548.07 | 0.37 | 1563 | 1550.63 | 9.31 | 1563 | 1549.27 | 8.41 | 1564 | 1546.33 | 10.61 |
| | 50 | rnd | 1567 | 1550.67 | 7.83 | 1564 | 1550.7 | 7.46 | 1562 | 1548.13 | 9.82 | 1564 | 1548.23 | 9.33 |
| | | 2op | 1553 | 1548.53 | 1.68 | 1562 | 1550.07 | 6.24 | 1565 | 1548.07 | 10.09 | 1565 | 1550.07 | 9.25 |

Table A.2837: $f50\_498$: transRRGA+IM – Suspected Optimal is 1570

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2768 | 2747.83 | 11.83 | 2772 | 2744.87 | 14.83 | 2762 | 2743.93 | 13.8 | 2766 | 2739.37 | 13.17 |
| | | 2op | 2765 | 2746.77 | 12.1 | 2778 | 2750.53 | 12.78 | 2765 | 2743.4 | 10.95 | 2770 | 2746.83 | 11.04 |
| | 50 | rnd | 2776 | 2742.5 | 16.83 | 2772 | 2744.37 | 15.08 | 2764 | 2748.4 | 10.75 | 2768 | 2744.77 | 11.49 |
| | | 2op | 2765 | 2746.43 | 12.95 | 2770 | 2745.93 | 13.67 | 2772 | 2747.93 | 11.12 | 2779 | 2744.03 | 13.02 |
| 51 | 20 | rnd | 2771 | 2745 | 14.83 | 2772 | 2750.13 | 11.09 | 2769 | 2749 | 9.79 | 2778 | 2748.47 | 15.22 |
| | | 2op | 2781 | 2755.7 | 11.15 | 2776 | 2754.9 | 11.05 | 2768 | 2753.5 | 10.38 | 2768 | 2747.67 | 14.13 |
| | 50 | rnd | 2766 | 2744.97 | 15.14 | 2771 | 2754.07 | 9.18 | 2773 | 2748.67 | 12.47 | 2772 | 2743.6 | 14.52 |
| | | 2op | 2768 | 2751.73 | 12.76 | 2782 | 2754.8 | 10.77 | 2771 | 2753.47 | 11.27 | 2769 | 2751.3 | 12.21 |

Table A.2838: $f100\_307$: basicRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2772 | 2749.1 | 12.23 | 2771 | 2750.1 | 11.7 | 2777 | 2750.07 | 11.24 | 2764 | 2742.63 | 12.94 |
| | | 2op | 2771 | 2748.67 | 10.93 | 2778 | 2754.67 | 13.31 | 2778 | 2754.03 | 12.08 | 2769 | 2748.37 | 15.1 |
| | 50 | rnd | 2768 | 2746.17 | 11.72 | 2774 | 2748.03 | 13.37 | 2766 | 2746.67 | 11.79 | 2768 | 2747.07 | 11.82 |
| | | 2op | 2771 | 2751.67 | 10.12 | 2774 | 2751.37 | 9.98 | 2772 | 2751.83 | 10.06 | 2769 | 2750.3 | 11.9 |
| 51 | 20 | rnd | 2772 | 2744.43 | 11.93 | 2769 | 2749.73 | 8.99 | 2767 | 2747.23 | 12.49 | 2764 | 2745.73 | 11.66 |
| | | 2op | 2777 | 2756.5 | 11.57 | 2774 | 2757.73 | 10.46 | 2771 | 2755.87 | 10.15 | 2769 | 2752.73 | 10.29 |
| | 50 | rnd | 2773 | 2748.9 | 12.96 | 2764 | 2752.67 | 8.11 | 2774 | 2749.3 | 11.91 | 2768 | 2746.9 | 10.46 |
| | | 2op | 2778 | 2757.47 | 14.39 | 2777 | 2754.6 | 14.4 | 2771 | 2752.33 | 15.48 | 2775 | 2750.67 | 10.87 |

Table A.2839: $f100\_307$: transRRGA – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2762 | 2742.03 | 11.85 | 2767 | 2742.27 | 14.32 | 2768 | 2739.07 | 15.51 | 2763 | 2742.57 | 13.22 |
| | | 2op | 2766 | 2752.53 | 9.57 | 2776 | 2748.37 | 11.64 | 2778 | 2738.13 | 17.91 | 2765 | 2744.17 | 10.8 |
| | 50 | rnd | 2777 | 2748.23 | 13.11 | 2771 | 2749.2 | 9.94 | 2764 | 2744.67 | 11.49 | 2767 | 2743.97 | 13.95 |
| | | 2op | 2776 | 2750.93 | 12.34 | 2774 | 2748.13 | 10.09 | 2765 | 2747.37 | 11.18 | 2756 | 2740.67 | 11.18 |
| 51 | 20 | rnd | 2770 | 2750.3 | 13.23 | 2767 | 2744.57 | 12.46 | 2771 | 2746.6 | 12.15 | 2772 | 2741.1 | 14.65 |
| | | 2op | 2773 | 2751.5 | 12.32 | 2776 | 2752.4 | 11.12 | 2780 | 2751.63 | 12.4 | 2779 | 2746.87 | 12.66 |
| | 50 | rnd | 2770 | 2747.83 | 12.02 | 2771 | 2746.87 | 11.77 | 2765 | 2748.2 | 10.25 | 2762 | 2742.8 | 13.26 |
| | | 2op | 2775 | 2756.47 | 13.17 | 2775 | 2752.13 | 11.77 | 2768 | 2750.73 | 13 | 2766 | 2748.67 | 10.9 |

Table A.2840: $f100\_307$: basicRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2769 | 2748.9 | 13.02 | 2772 | 2751.5 | 10.45 | 2772 | 2745.2 | 14.98 | 2762 | 2744.4 | 13.74 |
| | | 2op | 2779 | 2753.13 | 11.59 | 2777 | 2751.87 | 12.63 | 2772 | 2752.7 | 10.65 | 2775 | 2747.6 | 14.13 |
| | 50 | rnd | 2773 | 2748.33 | 10.38 | 2769 | 2749.27 | 10.92 | 2770 | 2747.43 | 13.28 | 2777 | 2751.43 | 14.75 |
| | | 2op | 2776 | 2751.43 | 10.02 | 2773 | 2757.27 | 11.4 | 2773 | 2752.73 | 12.16 | 2773 | 2746.2 | 12.6 |
| 51 | 20 | rnd | 2771 | 2743.77 | 12.6 | 2774 | 2750.67 | 12.39 | 2770 | 2747.9 | 11.29 | 2770 | 2745.63 | 12.71 |
| | | 2op | 2775 | 2756.37 | 8.98 | 2775 | 2755.97 | 9.81 | 2780 | 2755.4 | 9.76 | 2773 | 2755.03 | 10.72 |
| | 50 | rnd | 2773 | 2745.37 | 11.48 | 2778 | 2751.07 | 12.09 | 2770 | 2749 | 9.59 | 2774 | 2749.13 | 12.59 |
| | | 2op | 2772 | 2757.4 | 9.38 | 2770 | 2755.83 | 8.69 | 2768 | 2753.67 | 10.34 | 2776 | 2754.07 | 11.37 |

Table A.2841: $f100\_307$: transRRGA+RS – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2778 | 2748.17 | 13.48 | 2768 | 2740.43 | 14.1 | 2772 | 2742.67 | 12.2 | 2772 | 2742.73 | 14.29 |
| | | 2op | 2770 | 2755.93 | 10.85 | 2761 | 2738.1 | 16.16 | 2768 | 2740.8 | 11.86 | 2769 | 2741.53 | 16.7 |
| | 50 | rnd | 2772 | 2750.67 | 12.01 | 2768 | 2739.57 | 14.95 | 2769 | 2745.83 | 12.96 | 2757 | 2737.6 | 16.6 |
| | | 2op | 2782 | 2752.43 | 9.47 | 2763 | 2742.37 | 14.11 | 2777 | 2746.23 | 16.86 | 2771 | 2740.9 | 15.27 |
| 51 | 20 | rnd | 2766 | 2747.47 | 11.6 | 2770 | 2741.47 | 15.31 | 2769 | 2736.83 | 16.02 | 2767 | 2742.13 | 13 |
| | | 2op | 2772 | 2762.73 | 4.25 | 2768 | 2741.57 | 17.08 | 2778 | 2745.6 | 16.62 | 2768 | 2742.47 | 12.84 |
| | 50 | rnd | 2773 | 2749.07 | 11.12 | 2758 | 2740.13 | 11.31 | 2766 | 2741.67 | 14.1 | 2760 | 2738.57 | 11.83 |
| | | 2op | 2777 | 2763.5 | 6.39 | 2766 | 2743.1 | 12.93 | 2765 | 2739.27 | 12.92 | 2769 | 2739.03 | 16.13 |

Table A.2842: $f100\_307$: basicRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2777 | 2750.97 | 11.48 | 2769 | 2743.63 | 14.3 | 2767 | 2738.43 | 14.79 | 2766 | 2743.37 | 14.11 |
| | | 2op | 2778 | 2756.37 | 8.39 | 2769 | 2744.83 | 11.37 | 2761 | 2744.57 | 12.43 | 2770 | 2743.37 | 13.81 |
| | 50 | rnd | 2767 | 2744.37 | 13.18 | 2761 | 2744.1 | 12.57 | 2770 | 2743.5 | 11.34 | 2759 | 2741.87 | 10 |
| | | 2op | 2777 | 2752.87 | 12.12 | 2777 | 2743.73 | 16.26 | 2770 | 2740.63 | 12.55 | 2767 | 2741.8 | 14.63 |
| 51 | 20 | rnd | 2774 | 2749.3 | 13.47 | 2764 | 2744.23 | 9.9 | 2766 | 2742.33 | 13.89 | 2768 | 2742.9 | 10.19 |
| | | 2op | 2775 | 2763.8 | 5.5 | 2768 | 2743.27 | 17.11 | 2774 | 2744.33 | 15.16 | 2766 | 2740.07 | 13.5 |
| | 50 | rnd | 2782 | 2750.33 | 12.92 | 2771 | 2745.5 | 11.67 | 2766 | 2739.1 | 13.7 | 2768 | 2738.07 | 16.49 |
| | | 2op | 2776 | 2763.23 | 7.19 | 2770 | 2750.27 | 18.03 | 2771 | 2740.37 | 18.28 | 2766 | 2744.73 | 12.54 |

Table A.2843: $f100\_307$: transRRGA+IM – Suspected Optimal is 2793

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2832 | 2813.97 | 12.89 | 2842 | 2821.17 | 12.53 | 2839 | 2817.53 | 14.8 | 2833 | 2810.73 | 13.61 |
| | | 2op | 2841 | 2815.67 | 12.83 | 2839 | 2813.2 | 13.15 | 2837 | 2814.2 | 14.9 | 2840 | 2813.13 | 14.71 |
| | 50 | rnd | 2841 | 2814.77 | 12.04 | 2849 | 2811.8 | 13.35 | 2847 | 2817.03 | 12.88 | 2839 | 2814.13 | 13.58 |
| | | 2op | 2839 | 2815.4 | 12.13 | 2833 | 2814.1 | 12.46 | 2838 | 2814.67 | 14.57 | 2843 | 2816.47 | 13.21 |
| 51 | 20 | rnd | 2849 | 2817.67 | 11.94 | 2840 | 2819.8 | 12.17 | 2840 | 2812.93 | 15.79 | 2834 | 2816.67 | 9.59 |
| | | 2op | 2844 | 2811.3 | 14.82 | 2837 | 2812.97 | 11.97 | 2838 | 2810.3 | 14.97 | 2838 | 2812.97 | 14.91 |
| | 50 | rnd | 2841 | 2818.63 | 13.23 | 2850 | 2817.03 | 15.89 | 2840 | 2813.37 | 13.98 | 2833 | 2814.77 | 10.1 |
| | | 2op | 2839 | 2814.83 | 14.08 | 2843 | 2815.37 | 12.4 | 2834 | 2813.57 | 13.63 | 2833 | 2813.37 | 12.12 |

Table A.2844: $f100\_415$: basicRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2813.9 | 15.03 | 2844 | 2820.93 | 13.69 | 2842 | 2822.97 | 13.45 | 2843 | 2815.97 | 13.37 |
| | | 2op | 2842 | 2812.9 | 14.97 | 2839 | 2819.4 | 10.86 | 2840 | 2815.53 | 9.98 | 2834 | 2814.57 | 13.88 |
| | 50 | rnd | 2837 | 2817.47 | 12.48 | 2838 | 2820.53 | 9.23 | 2841 | 2817.03 | 13.9 | 2843 | 2818.33 | 13.35 |
| | | 2op | 2844 | 2818.73 | 13.48 | 2835 | 2814.67 | 13.24 | 2843 | 2818.47 | 13.48 | 2838 | 2815.2 | 15.1 |
| 51 | 20 | rnd | 2837 | 2818.93 | 12.65 | 2835 | 2821.73 | 10.11 | 2843 | 2818.67 | 14.64 | 2838 | 2816.2 | 14.11 |
| | | 2op | 2848 | 2808.7 | 17.81 | 2833 | 2817.27 | 7.44 | 2848 | 2813.37 | 17.13 | 2833 | 2813.9 | 10.3 |
| | 50 | rnd | 2841 | 2817.7 | 10.68 | 2840 | 2818.9 | 13.16 | 2851 | 2821.47 | 11.07 | 2844 | 2823.1 | 11.85 |
| | | 2op | 2833 | 2812.57 | 12.94 | 2842 | 2815.03 | 12.2 | 2848 | 2815.5 | 13.54 | 2845 | 2818.93 | 14.59 |

Table A.2845: $f100\_415$: transRRGA – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2841 | 2815.6 | 13.55 | 2837 | 2815.57 | 13.8 | 2838 | 2814.83 | 13.44 | 2844 | 2815.2 | 12.97 |
| | | 2op | 2839 | 2813.3 | 12.56 | 2837 | 2815.5 | 12.61 | 2836 | 2812.87 | 14.63 | 2840 | 2811.47 | 14.95 |
| | 50 | rnd | 2840 | 2815.8 | 13.98 | 2841 | 2815.9 | 11.65 | 2846 | 2811.23 | 16.26 | 2845 | 2810.4 | 15.16 |
| | | 2op | 2841 | 2813.8 | 13.24 | 2837 | 2814.97 | 10.8 | 2836 | 2813.93 | 12.78 | 2835 | 2814.03 | 12.68 |
| 51 | 20 | rnd | 2842 | 2817.73 | 14.24 | 2843 | 2818.37 | 13.89 | 2835 | 2814.7 | 11.27 | 2837 | 2814.57 | 13.35 |
| | | 2op | 2832 | 2810.43 | 13.1 | 2832 | 2813.03 | 10.41 | 2833 | 2808.43 | 13.79 | 2836 | 2815.77 | 11.23 |
| | 50 | rnd | 2837 | 2816.87 | 14.41 | 2845 | 2815.5 | 13.07 | 2844 | 2820.8 | 11.3 | 2830 | 2815.53 | 9.5 |
| | | 2op | 2835 | 2811.2 | 11.97 | 2834 | 2812.73 | 11.64 | 2845 | 2816.8 | 11.03 | 2845 | 2814.03 | 11.64 |

Table A.2846: $f100\_415$: basicRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2839 | 2816.37 | 12.22 | 2838 | 2820.97 | 14.86 | 2841 | 2822.33 | 12.17 | 2835 | 2815.47 | 13.53 |
| | | 2op | 2838 | 2818.8 | 13.11 | 2842 | 2820.03 | 9.17 | 2842 | 2818.6 | 13.05 | 2839 | 2814.87 | 12.76 |
| | 50 | rnd | 2840 | 2817.97 | 12.23 | 2843 | 2820.5 | 10.13 | 2841 | 2820.23 | 13.71 | 2840 | 2817.53 | 15.34 |
| | | 2op | 2849 | 2817.43 | 14.57 | 2840 | 2817.7 | 13.21 | 2836 | 2815.67 | 15.32 | 2846 | 2815.73 | 13.44 |
| 51 | 20 | rnd | 2838 | 2818 | 10.81 | 2848 | 2825.5 | 10.62 | 2841 | 2819.7 | 13.43 | 2843 | 2820.27 | 13 |
| | | 2op | 2833 | 2810.47 | 12.19 | 2847 | 2817.37 | 13.33 | 2834 | 2813.67 | 10.8 | 2840 | 2817.67 | 14.45 |
| | 50 | rnd | 2839 | 2815.5 | 12.74 | 2838 | 2821.5 | 13.32 | 2841 | 2822.3 | 11.66 | 2838 | 2821.73 | 11.81 |
| | | 2op | 2846 | 2813.9 | 13.78 | 2841 | 2819.33 | 9.73 | 2842 | 2818.33 | 14.1 | 2844 | 2819.47 | 10.43 |

Table A.2847: $f100\_415$: transRRGA+RS – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2838 | 2817.37 | 14.93 | 2830 | 2813.77 | 11.4 | 2841 | 2809.7 | 18.07 | 2832 | 2810.5 | 13.15 |
| | | 2op | 2834 | 2811.93 | 9.95 | 2841 | 2811.37 | 13.42 | 2831 | 2805.8 | 13.64 | 2836 | 2810.17 | 13.33 |
| | 50 | rnd | 2848 | 2821.37 | 14.53 | 2836 | 2810.57 | 11.68 | 2835 | 2814.27 | 12.07 | 2842 | 2814.37 | 12.53 |
| | | 2op | 2833 | 2812.1 | 10.66 | 2840 | 2817.47 | 12.68 | 2833 | 2810.67 | 13.66 | 2835 | 2809.8 | 11.89 |
| 51 | 20 | rnd | 2845 | 2818 | 13.83 | 2836 | 2810.67 | 12.83 | 2840 | 2817.93 | 12.78 | 2838 | 2810.47 | 13.56 |
| | | 2op | 2831 | 2810.7 | 6.37 | 2836 | 2810.5 | 15.11 | 2835 | 2812.53 | 12.98 | 2824 | 2806.87 | 15.59 |
| | 50 | rnd | 2849 | 2820.33 | 9.75 | 2827 | 2810.13 | 14.55 | 2837 | 2812.9 | 12.41 | 2839 | 2814.03 | 13.07 |
| | | 2op | 2845 | 2813.8 | 10.55 | 2837 | 2808.77 | 11.63 | 2836 | 2812.93 | 12.35 | 2840 | 2812.43 | 12.96 |

Table A.2848: $f100\_415$: basicRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2843 | 2818.53 | 12.83 | 2843 | 2813.67 | 12.56 | 2827 | 2812.93 | 11.8 | 2836 | 2817.33 | 11.5 |
| | | 2op | 2841 | 2815.03 | 14.06 | 2827 | 2814.2 | 9.59 | 2842 | 2811.87 | 13.95 | 2839 | 2815.3 | 13.3 |
| | 50 | rnd | 2841 | 2816.57 | 12.71 | 2836 | 2819.3 | 11.89 | 2842 | 2810.73 | 16.62 | 2842 | 2811.2 | 13.42 |
| | | 2op | 2833 | 2815.2 | 11.82 | 2830 | 2811.73 | 11.01 | 2847 | 2816.93 | 15.01 | 2832 | 2812.93 | 12.61 |
| 51 | 20 | rnd | 2836 | 2817.2 | 11.57 | 2830 | 2811.73 | 14.43 | 2832 | 2814.33 | 12.34 | 2836 | 2812.73 | 16.98 |
| | | 2op | 2830 | 2807.93 | 8.01 | 2843 | 2814.23 | 14.7 | 2835 | 2818.17 | 14.88 | 2836 | 2812.8 | 14.01 |
| | 50 | rnd | 2842 | 2817.73 | 14.1 | 2840 | 2820.8 | 10.11 | 2840 | 2817.03 | 13.6 | 2833 | 2811.07 | 13.29 |
| | | 2op | 2845 | 2815.83 | 10.94 | 2841 | 2818.27 | 11.96 | 2825 | 2812.83 | 9.03 | 2840 | 2809.8 | 14.65 |

Table A.2849: $f100\_415$: transRRGA+IM – Suspected Optimal is 2860

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2705 | 2685.57 | 11.39 | 2709 | 2683.97 | 12.77 | 2712 | 2690.27 | 11.08 | 2705 | 2681.97 | 10.03 |
| | | 2op | 2710 | 2693.53 | 8.99 | 2718 | 2691.83 | 11.77 | 2709 | 2689.3 | 11.06 | 2710 | 2687.33 | 12.62 |
| | 50 | rnd | 2708 | 2685.83 | 11.39 | 2707 | 2689.37 | 11.27 | 2702 | 2683.83 | 12.47 | 2709 | 2692.33 | 9.98 |
| | | 2op | 2706 | 2687.37 | 11.02 | 2703 | 2684.2 | 9.24 | 2709 | 2688.9 | 12.55 | 2708 | 2690.03 | 11.34 |
| 51 | 20 | rnd | 2711 | 2686.73 | 15.75 | 2714 | 2689.47 | 11.34 | 2713 | 2693 | 12.3 | 2712 | 2689.47 | 12.88 |
| | | 2op | 2708 | 2691.7 | 10.49 | 2718 | 2692.17 | 9.65 | 2711 | 2693.8 | 11.6 | 2710 | 2687.67 | 13.17 |
| | 50 | rnd | 2708 | 2690.03 | 11.82 | 2718 | 2691.37 | 11.57 | 2711 | 2689.23 | 13.63 | 2704 | 2687.33 | 11.98 |
| | | 2op | 2706 | 2690.9 | 8.01 | 2705 | 2686.7 | 11.88 | 2714 | 2690 | 11.61 | 2709 | 2689.8 | 10.92 |

Table A.2850: $f100\_512$: basicRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2707 | 2687.37 | 11.79 | 2718 | 2693.83 | 10.54 | 2711 | 2690.27 | 11.59 | 2708 | 2689.7 | 10.84 |
| | | 2op | 2708 | 2691.87 | 12.81 | 2712 | 2690.83 | 9.59 | 2707 | 2691.3 | 10.8 | 2709 | 2692.23 | 10 |
| | 50 | rnd | 2708 | 2686.6 | 13.19 | 2709 | 2691.4 | 9.73 | 2713 | 2690.33 | 14.58 | 2718 | 2691.83 | 11.04 |
| | | 2op | 2708 | 2693.33 | 9.2 | 2711 | 2691.33 | 10.4 | 2710 | 2694.27 | 9.21 | 2708 | 2691.87 | 10.25 |
| 51 | 20 | rnd | 2709 | 2688.93 | 13.02 | 2721 | 2690.6 | 11.1 | 2710 | 2693.4 | 9.89 | 2711 | 2691.33 | 9.52 |
| | | 2op | 2710 | 2695.47 | 8.54 | 2713 | 2693.6 | 13.47 | 2716 | 2696.1 | 10.6 | 2709 | 2695.13 | 8.7 |
| | 50 | rnd | 2718 | 2691.7 | 14.18 | 2714 | 2692.27 | 11.38 | 2711 | 2691.8 | 10.61 | 2708 | 2689.43 | 9.61 |
| | | 2op | 2713 | 2692.83 | 10.54 | 2710 | 2697.17 | 7.65 | 2714 | 2697.1 | 8 | 2707 | 2694.33 | 9.79 |

Table A.2851: $f100\_512$: transRRGA – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2711 | 2685.97 | 12.92 | 2708 | 2690.43 | 14.41 | 2705 | 2683.3 | 12.86 | 2712 | 2686.6 | 13.04 |
| | | 2op | 2707 | 2689.1 | 11.19 | 2714 | 2692.43 | 12.88 | 2715 | 2692.27 | 12.97 | 2706 | 2688.7 | 11.28 |
| | 50 | rnd | 2709 | 2690.13 | 11.87 | 2708 | 2686.57 | 14.1 | 2708 | 2689.37 | 9.38 | 2714 | 2689.1 | 10.11 |
| | | 2op | 2711 | 2688.83 | 10.28 | 2714 | 2693.07 | 9.51 | 2715 | 2692.13 | 11.52 | 2713 | 2686.97 | 12.32 |
| 51 | 20 | rnd | 2707 | 2687.93 | 14.84 | 2706 | 2692 | 9.58 | 2712 | 2686.2 | 13.22 | 2699 | 2680.77 | 10.74 |
| | | 2op | 2709 | 2691 | 10.09 | 2711 | 2694.47 | 9.75 | 2715 | 2688.6 | 10.91 | 2712 | 2691.63 | 10.54 |
| | 50 | rnd | 2715 | 2690.47 | 10.72 | 2720 | 2690.73 | 13.63 | 2708 | 2687.67 | 12.64 | 2716 | 2690.1 | 15.37 |
| | | 2op | 2704 | 2690.43 | 8.18 | 2713 | 2691.1 | 9.56 | 2708 | 2690.83 | 12.87 | 2703 | 2687.9 | 10.11 |

Table A.2852: $f100\_512$: basicRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2711 | 2692.03 | 10.55 | 2716 | 2696.23 | 12.03 | 2715 | 2691.83 | 10.58 | 2713 | 2693.97 | 10.27 |
| | | 2op | 2708 | 2689.87 | 9.92 | 2713 | 2693.13 | 10.55 | 2710 | 2692.37 | 8.26 | 2710 | 2689.27 | 11.71 |
| | 50 | rnd | 2705 | 2687.9 | 11.23 | 2707 | 2696.5 | 8.6 | 2706 | 2689.43 | 9.89 | 2709 | 2692.8 | 9.71 |
| | | 2op | 2710 | 2694.3 | 10.52 | 2708 | 2692.63 | 10.84 | 2712 | 2692.4 | 9.85 | 2710 | 2690.67 | 12.24 |
| 51 | 20 | rnd | 2709 | 2693 | 9.83 | 2709 | 2688.2 | 11.31 | 2711 | 2689.57 | 12.43 | 2710 | 2690.23 | 9.45 |
| | | 2op | 2708 | 2691.63 | 10.89 | 2706 | 2693.1 | 9.56 | 2713 | 2694.83 | 9.94 | 2714 | 2696.73 | 9.43 |
| | 50 | rnd | 2708 | 2685.83 | 12.99 | 2717 | 2692.33 | 12.53 | 2708 | 2687.03 | 12.25 | 2707 | 2692.47 | 10.27 |
| | | 2op | 2708 | 2692.07 | 10.91 | 2708 | 2696.4 | 7.28 | 2708 | 2692.6 | 9.5 | 2707 | 2690.77 | 8.59 |

Table A.2853: $f100\_512$: transRRGA+RS – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2706 | 2690.9 | 10.21 | 2704 | 2681.9 | 13.92 | 2704 | 2687.97 | 9.12 | 2708 | 2683.53 | 14.26 |
| | | 2op | 2721 | 2694.27 | 10.79 | 2710 | 2686.7 | 14.29 | 2711 | 2684.73 | 12.24 | 2705 | 2684.4 | 14.18 |
| | 50 | rnd | 2709 | 2687.87 | 10.6 | 2698 | 2681.1 | 9.49 | 2711 | 2688.2 | 12.75 | 2710 | 2684.07 | 15.42 |
| | | 2op | 2710 | 2691.2 | 10.19 | 2706 | 2683.33 | 13.15 | 2706 | 2686.73 | 11.76 | 2709 | 2689.33 | 11.2 |
| 51 | 20 | rnd | 2708 | 2689.6 | 12 | 2703 | 2681.37 | 14.98 | 2705 | 2690.23 | 10.96 | 2712 | 2687.5 | 10.99 |
| | | 2op | 2705 | 2698 | 4.14 | 2709 | 2680.2 | 14.01 | 2716 | 2685.57 | 16.39 | 2703 | 2682.8 | 13.07 |
| | 50 | rnd | 2706 | 2692.9 | 8.75 | 2704 | 2684.7 | 12.92 | 2714 | 2681.53 | 13.63 | 2708 | 2683.33 | 13.39 |
| | | 2op | 2711 | 2694.83 | 7.73 | 2710 | 2689.37 | 11.26 | 2705 | 2688.07 | 11.23 | 2708 | 2685.03 | 11.79 |

Table A.2854: $f100\_512$: basicRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 2709 | 2692.2 | 9.21 | 2709 | 2688.4 | 13.28 | 2708 | 2686.6 | 11.93 | 2714 | 2690.03 | 12.14 |
| | | 2op | 2715 | 2698.3 | 10.89 | 2711 | 2684.87 | 14.63 | 2710 | 2683.37 | 12.72 | 2713 | 2685.23 | 15.24 |
| | 50 | rnd | 2711 | 2689.9 | 13.84 | 2710 | 2686.77 | 13.3 | 2713 | 2691.8 | 10.16 | 2710 | 2687.03 | 13.35 |
| | | 2op | 2708 | 2691.2 | 8.79 | 2706 | 2684.2 | 11.69 | 2704 | 2686.67 | 12.15 | 2712 | 2689.33 | 13.64 |
| 51 | 20 | rnd | 2706 | 2688.4 | 10.8 | 2705 | 2688.1 | 8.59 | 2708 | 2685.73 | 11.67 | 2714 | 2684.17 | 15.71 |
| | | 2op | 2715 | 2697.47 | 5.07 | 2716 | 2688.4 | 12.53 | 2705 | 2687.23 | 11.53 | 2714 | 2686.37 | 8.82 |
| | 50 | rnd | 2710 | 2686.17 | 15.61 | 2708 | 2686.97 | 15.13 | 2713 | 2688.93 | 9.7 | 2701 | 2683.17 | 10.57 |
| | | 2op | 2708 | 2695.83 | 7.74 | 2706 | 2688.1 | 12.32 | 2711 | 2685.67 | 12.73 | 2704 | 2686.2 | 12.25 |

Table A.2855: $f100\_512$: transRRGA+IM – Suspected Optimal is 2732

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17859 | 17811.77 | 34.2 | 17907 | 17817.9 | 36.6 | 17848 | 17792 | 35.69 | 17865 | 17800.23 | 43.21 |
| | | 2op | 17880 | 17807.17 | 34.5 | 17879 | 17808.53 | 38.43 | 17857 | 17789.9 | 43.55 | 17886 | 17808.03 | 39.61 |
| | 50 | rnd | 17896 | 17808.23 | 45.61 | 17893 | 17797.1 | 36.89 | 17887 | 17815.33 | 37.37 | 17893 | 17801.9 | 43.26 |
| | | 2op | 17850 | 17804.03 | 27.49 | 17900 | 17813.03 | 34.02 | 17860 | 17805.93 | 32.34 | 17868 | 17796.13 | 36.88 |
| 51 | 20 | rnd | 17877 | 17814.97 | 38.87 | 17911 | 17825.93 | 37.45 | 17894 | 17816.6 | 38.73 | 17860 | 17802.3 | 37.45 |
| | | 2op | 17899 | 17819.1 | 43 | 17892 | 17833.43 | 33.22 | 17867 | 17810.67 | 34.26 | 17861 | 17807.87 | 33.35 |
| | 50 | rnd | 17883 | 17807.93 | 39.47 | 17873 | 17808.63 | 37.9 | 17862 | 17809.73 | 30.91 | 17860 | 17806.17 | 39.24 |
| | | 2op | 17890 | 17820.83 | 37.68 | 17893 | 17820.13 | 35.24 | 17875 | 17821.4 | 32.11 | 17888 | 17811.17 | 36.59 |

Table A.2856: $f508\_354$: basicRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17916 | 17815.63 | 41.11 | 17895 | 17837.57 | 31.03 | 17880 | 17837.63 | 29.51 | 17896 | 17831.87 | 35.47 |
| | | 2op | 17918 | 17834.7 | 34.22 | 17906 | 17839.73 | 32.94 | 17913 | 17846.47 | 29.03 | 17886 | 17834.23 | 31.5 |
| | 50 | rnd | 17868 | 17825.73 | 30.76 | 17888 | 17837.03 | 33.09 | 17896 | 17838.63 | 30.44 | 17915 | 17829.6 | 30.69 |
| | | 2op | 17897 | 17833.03 | 32.02 | 17908 | 17841.87 | 36 | 17912 | 17851.5 | 30.06 | 17868 | 17828.3 | 27.37 |
| 51 | 20 | rnd | 17868 | 17817.3 | 36 | 17893 | 17841.7 | 34.69 | 17884 | 17824.6 | 39.03 | 17918 | 17837.27 | 33.26 |
| | | 2op | 17905 | 17845.27 | 32.68 | 17919 | 17858.7 | 31.56 | 17951 | 17835.43 | 37.45 | 17907 | 17847.1 | 33.83 |
| | 50 | rnd | 17876 | 17824.77 | 38.03 | 17884 | 17822.8 | 37.02 | 17894 | 17843.1 | 38.07 | 17878 | 17837.3 | 25.83 |
| | | 2op | 17888 | 17832.4 | 32.24 | 17928 | 17849.23 | 31.32 | 17901 | 17843.03 | 31.69 | 17910 | 17840.4 | 33.57 |

Table A.2857: $f508\_354$: transRRGA – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17872 | 17803.87 | 35.42 | 17887 | 17805.9 | 36.3 | 17852 | 17801.93 | 38.03 | 17855 | 17805.77 | 28.59 |
| | | 2op | 17896 | 17813.63 | 31.46 | 17925 | 17815.53 | 44.03 | 17887 | 17798.2 | 40.24 | 17872 | 17809 | 33.79 |
| | 50 | rnd | 17880 | 17804.47 | 32.65 | 17891 | 17811.1 | 43.95 | 17852 | 17787.1 | 35.05 | 17890 | 17792.77 | 40.3 |
| | | 2op | 17884 | 17820.53 | 37.95 | 17865 | 17810.53 | 34.05 | 17873 | 17800.93 | 45.7 | 17849 | 17799.77 | 28.57 |
| 51 | 20 | rnd | 17898 | 17815.3 | 39.06 | 17911 | 17806.17 | 46.73 | 17881 | 17793.57 | 41.93 | 17889 | 17799.33 | 44.82 |
| | | 2op | 17929 | 17833.63 | 36.21 | 17881 | 17817.37 | 35.35 | 17913 | 17820.9 | 44.48 | 17868 | 17803.83 | 32.46 |
| | 50 | rnd | 17910 | 17821.23 | 29.55 | 17894 | 17819.47 | 30.56 | 17915 | 17802.8 | 39.57 | 17892 | 17809.33 | 39.27 |
| | | 2op | 17885 | 17819.9 | 32.3 | 17853 | 17814.03 | 28.19 | 17906 | 17822.03 | 42.92 | 17862 | 17805.5 | 34.04 |

Table A.2858: $f508\_354$: basicRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17885 | 17823.47 | 25.8 | 17893 | 17840.37 | 37.3 | 17883 | 17837.1 | 28.55 | 17888 | 17819 | 31.09 |
| | | 2op | 17902 | 17850.2 | 38.64 | 17917 | 17844.87 | 40.74 | 17903 | 17839.17 | 33.19 | 17899 | 17837.17 | 30.77 |
| | 50 | rnd | 17906 | 17829.53 | 38.81 | 17906 | 17841.87 | 33.41 | 17894 | 17841.87 | 25.04 | 17908 | 17831.5 | 30.99 |
| | | 2op | 17901 | 17840 | 34.95 | 17901 | 17844.03 | 33.58 | 17900 | 17834.97 | 31.36 | 17902 | 17827.87 | 27.9 |
| 51 | 20 | rnd | 17927 | 17833.17 | 32.58 | 17883 | 17833.4 | 33.04 | 17889 | 17828.3 | 31.8 | 17886 | 17832.17 | 34.84 |
| | | 2op | 17902 | 17849 | 30.58 | 17900 | 17848.13 | 33.53 | 17917 | 17854.93 | 27.94 | 17926 | 17850.07 | 33.61 |
| | 50 | rnd | 17865 | 17817.73 | 32.71 | 17907 | 17835.77 | 34.44 | 17902 | 17848.77 | 27.65 | 17921 | 17836 | 35.31 |
| | | 2op | 17899 | 17838.1 | 33.99 | 17920 | 17847.73 | 28.65 | 17908 | 17848.5 | 30.77 | 17890 | 17844.87 | 30.08 |

Table A.2859: $f508\_354$: transRRGA+RS – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17878 | 17819.27 | 33.08 | 17839 | 17778.5 | 33.9 | 17850 | 17789.73 | 30.94 | 17865 | 17803.17 | 33.39 |
| | | 2op | 17899 | 17813.53 | 35.37 | 17856 | 17784.5 | 37.36 | 17875 | 17809.9 | 34.39 | 17872 | 17808 | 32.37 |
| | 50 | rnd | 17873 | 17805.43 | 28.73 | 17871 | 17803.97 | 34.43 | 17874 | 17784.4 | 37.8 | 17896 | 17785.6 | 53.64 |
| | | 2op | 17877 | 17822.7 | 25.69 | 17861 | 17783.93 | 33.73 | 17859 | 17805.73 | 34.68 | 17865 | 17793.9 | 44.07 |
| 51 | 20 | rnd | 17873 | 17838.5 | 21.96 | 17848 | 17796.13 | 28.1 | 17889 | 17792.67 | 36.3 | 17888 | 17800.3 | 41.11 |
| | | 2op | 17892 | 17839.3 | 30.15 | 17916 | 17806.8 | 47.45 | 17881 | 17798.47 | 41.98 | 17878 | 17804.17 | 36.29 |
| | 50 | rnd | 17881 | 17828.93 | 35.68 | 17863 | 17794.27 | 34.77 | 17855 | 17788.5 | 37.23 | 17865 | 17799.03 | 46.86 |
| | | 2op | 17872 | 17830.2 | 29.73 | 17860 | 17795.73 | 32.78 | 17881 | 17786.5 | 41.85 | 17863 | 17791.17 | 42.45 |

Table A.2860: $f508\_354$: basicRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 17883 | 17827.1 | 26.39 | 17911 | 17805.97 | 44.37 | 17888 | 17786.27 | 38.51 | 17869 | 17804.27 | 37.84 |
| | | 2op | 17892 | 17847.37 | 27.62 | 17878 | 17799.1 | 36.18 | 17884 | 17809.57 | 33.05 | 17914 | 17805.17 | 48.74 |
| | 50 | rnd | 17888 | 17824.83 | 32.82 | 17893 | 17815.73 | 43.04 | 17874 | 17815.93 | 44.74 | 17881 | 17791.7 | 42.7 |
| | | 2op | 17901 | 17839.73 | 32.97 | 17884 | 17808.37 | 38.48 | 17868 | 17809.43 | 32.78 | 17890 | 17805.63 | 37.38 |
| 51 | 20 | rnd | 17879 | 17830.43 | 29.17 | 17847 | 17806.9 | 29.88 | 17878 | 17806.83 | 34.02 | 17873 | 17797.73 | 35.78 |
| | | 2op | 17912 | 17844.63 | 28.88 | 17857 | 17797.8 | 32.32 | 17878 | 17805.53 | 42.42 | 17880 | 17806.57 | 32.69 |
| | 50 | rnd | 17921 | 17809.97 | 35.66 | 17861 | 17816.7 | 25.68 | 17883 | 17801.63 | 35.12 | 17922 | 17800.1 | 39.98 |
| | | 2op | 17907 | 17840.77 | 35.84 | 17884 | 17815.57 | 39.61 | 17868 | 17803.2 | 37.29 | 17889 | 17799.03 | 44.12 |

Table A.2861: $f508\_354$: transRRGA+IM – Suspected Optimal is 18112

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22155 | 22080.1 | 43.49 | 22169 | 22065.13 | 49.86 | 22134 | 22070.33 | 37.93 | 22174 | 22078.47 | 54.66 |
| | | 2op | 22149 | 22089.17 | 45.42 | 22163 | 22083.1 | 45.04 | 22145 | 22076.63 | 29.38 | 22183 | 22093.8 | 41.72 |
| | 50 | rnd | 22169 | 22080.63 | 46.6 | 22161 | 22079.13 | 44.43 | 22216 | 22089.43 | 54.35 | 22183 | 22080.9 | 47.37 |
| | | 2op | 22201 | 22102.8 | 36.44 | 22194 | 22089.97 | 48.24 | 22199 | 22095.03 | 46.61 | 22167 | 22081 | 37.84 |
| 51 | 20 | rnd | 22155 | 22091.7 | 36.78 | 22183 | 22084.5 | 40.38 | 22151 | 22076.77 | 42.03 | 22158 | 22080.83 | 43.82 |
| | | 2op | 22210 | 22102.1 | 51.38 | 22192 | 22092.57 | 47.3 | 22167 | 22082.2 | 41.07 | 22162 | 22084.53 | 44.36 |
| | 50 | rnd | 22192 | 22091.7 | 34.97 | 22173 | 22097.27 | 46.83 | 22181 | 22084.17 | 46.56 | 22192 | 22081.17 | 53.02 |
| | | 2op | 22208 | 22098.77 | 35.05 | 22187 | 22091.5 | 43.04 | 22143 | 22090.47 | 39.02 | 22159 | 22093.97 | 34.2 |

Table A.2862: $f635\_350$: basicRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22212 | 22112.63 | 43.44 | 22191 | 22115 | 42.36 | 22183 | 22121.67 | 37.43 | 22184 | 22096.53 | 44.17 |
| | | 2op | 22184 | 22115.8 | 42.06 | 22199 | 22130.93 | 37.47 | 22194 | 22125.8 | 34.34 | 22190 | 22108.47 | 47.05 |
| | 50 | rnd | 22212 | 22111.03 | 41.99 | 22197 | 22117.73 | 44.4 | 22238 | 22139.9 | 46.65 | 22200 | 22122.03 | 39.27 |
| | | 2op | 22175 | 22118.2 | 30.11 | 22187 | 22118.07 | 39.36 | 22232 | 22130.9 | 47.36 | 22176 | 22127.93 | 29.23 |
| 51 | 20 | rnd | 22208 | 22113.23 | 41.15 | 22183 | 22118.27 | 39.83 | 22228 | 22124.07 | 45.43 | 22197 | 22125.73 | 42.9 |
| | | 2op | 22183 | 22123.13 | 34.54 | 22195 | 22126.77 | 36.44 | 22232 | 22133.7 | 37.32 | 22192 | 22106.77 | 40.6 |
| | 50 | rnd | 22200 | 22109.77 | 46.4 | 22149 | 22096.47 | 35.87 | 22165 | 22108.43 | 38.38 | 22233 | 22123.4 | 40.63 |
| | | 2op | 22185 | 22121 | 32.01 | 22197 | 22129.4 | 34.95 | 22209 | 22129.37 | 48.77 | 22213 | 22128.33 | 42.95 |

Table A.2863: $f635\_350$: transRRGA – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22166 | 22085.3 | 38.72 | 22143 | 22073.17 | 36.45 | 22131 | 22066.53 | 38.02 | 22158 | 22070.87 | 42.73 |
| | | 2op | 22177 | 22096.33 | 44.16 | 22176 | 22096.17 | 37.5 | 22154 | 22076.83 | 40.74 | 22155 | 22100.9 | 46.39 |
| | 50 | rnd | 22178 | 22084.63 | 41.5 | 22167 | 22081.5 | 40 | 22131 | 22065.5 | 45.09 | 22173 | 22085.57 | 44.32 |
| | | 2op | 22186 | 22090.13 | 45.95 | 22143 | 22066.33 | 50.5 | 22130 | 22074.13 | 35.71 | 22168 | 22079.9 | 40.47 |
| 51 | 20 | rnd | 22219 | 22084.23 | 65.88 | 22159 | 22090.6 | 43.22 | 22185 | 22074.93 | 40.48 | 22177 | 22082.9 | 44.52 |
| | | 2op | 22185 | 22108.83 | 42.01 | 22156 | 22093.57 | 31.31 | 22165 | 22082.43 | 32.69 | 22177 | 22092.3 | 37.44 |
| | 50 | rnd | 22190 | 22096.43 | 40.72 | 22157 | 22089.03 | 38.57 | 22161 | 22092.73 | 37.24 | 22165 | 22077.17 | 45.83 |
| | | 2op | 22201 | 22107.83 | 40.32 | 22168 | 22099.23 | 34.78 | 22186 | 22097.37 | 46.94 | 22149 | 22082.63 | 39.09 |

Table A.2864: $f635\_350$: basicRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22184 | 22101.07 | 38.87 | 22199 | 22129.1 | 35.15 | 22182 | 22114.5 | 37.84 | 22185 | 22105.7 | 42.99 |
| | | 2op | 22237 | 22124.2 | 44.96 | 22200 | 22122.33 | 34.08 | 22204 | 22121.17 | 41.95 | 22205 | 22115.37 | 47.21 |
| | 50 | rnd | 22197 | 22099.9 | 50.96 | 22164 | 22107.33 | 32.12 | 22173 | 22120.27 | 32.08 | 22164 | 22112.27 | 36.33 |
| | | 2op | 22188 | 22128.57 | 35.07 | 22208 | 22138.2 | 33.49 | 22210 | 22121.9 | 39.39 | 22191 | 22127.77 | 30.55 |
| 51 | 20 | rnd | 22183 | 22108.2 | 39.12 | 22192 | 22120.23 | 38.18 | 22220 | 22111.97 | 42.24 | 22190 | 22128.87 | 45.28 |
| | | 2op | 22210 | 22134.83 | 31.13 | 22207 | 22130 | 42.06 | 22263 | 22148.6 | 39.35 | 22190 | 22124.47 | 42.87 |
| | 50 | rnd | 22157 | 22105.93 | 27.98 | 22198 | 22112.2 | 41.3 | 22177 | 22107.73 | 36.07 | 22209 | 22122.07 | 43.69 |
| | | 2op | 22212 | 22130.1 | 43.66 | 22200 | 22130.43 | 33.83 | 22185 | 22123.83 | 35.87 | 22179 | 22131.23 | 30.01 |

Table A.2865: $f635\_350$: transRRGA+RS – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22173 | 22095.23 | 35.55 | 22162 | 22075.37 | 49.88 | 22123 | 22052.73 | 47.33 | 22149 | 22070.73 | 32.78 |
| | | 2op | 22184 | 22096.97 | 32.46 | 22181 | 22064.5 | 50.75 | 22125 | 22067.67 | 38.96 | 22161 | 22074.57 | 36.98 |
| | 50 | rnd | 22173 | 22096.07 | 38.01 | 22178 | 22057.97 | 58.99 | 22142 | 22071.27 | 45.13 | 22186 | 22075.57 | 42.91 |
| | | 2op | 22184 | 22101.53 | 55.82 | 22140 | 22065.17 | 42.98 | 22168 | 22087.67 | 43.21 | 22163 | 22072.23 | 47.97 |
| 51 | 20 | rnd | 22201 | 22128.73 | 33.28 | 22206 | 22063.53 | 52.77 | 22166 | 22072.03 | 45.48 | 22175 | 22078.3 | 46.18 |
| | | 2op | 22205 | 22121.1 | 37.56 | 22172 | 22096.2 | 46.72 | 22156 | 22071.07 | 48.2 | 22125 | 22061.67 | 44.29 |
| | 50 | rnd | 22154 | 22086.7 | 40.36 | 22213 | 22099.13 | 44.14 | 22167 | 22081.43 | 38.01 | 22190 | 22080.6 | 45.72 |
| | | 2op | 22180 | 22108.8 | 36.68 | 22159 | 22091.6 | 34.35 | 22123 | 22058.6 | 41.5 | 22177 | 22062.53 | 44.8 |

Table A.2866: $f635\_350$: basicRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 22186 | 22115.87 | 45.91 | 22142 | 22059.47 | 52.66 | 22187 | 22078.03 | 38.31 | 22169 | 22082.33 | 39.56 |
| | | 2op | 22190 | 22127.83 | 40.31 | 22199 | 22080.87 | 57.95 | 22153 | 22073.3 | 45.32 | 22159 | 22078.23 | 45.98 |
| | 50 | rnd | 22189 | 22099.53 | 41.48 | 22169 | 22075.43 | 46.97 | 22170 | 22087.37 | 40.25 | 22162 | 22081.1 | 40.12 |
| | | 2op | 22204 | 22121.57 | 38.48 | 22158 | 22076.63 | 45.8 | 22150 | 22060.3 | 42 | 22152 | 22081.07 | 38.63 |
| 51 | 20 | rnd | 22211 | 22102.4 | 45.56 | 22153 | 22065.1 | 48.11 | 22170 | 22073.6 | 49.34 | 22173 | 22081.03 | 46.56 |
| | | 2op | 22220 | 22142.7 | 36.68 | 22195 | 22081.5 | 41.59 | 22147 | 22063.73 | 39.32 | 22152 | 22072.67 | 48.35 |
| | 50 | rnd | 22171 | 22103.8 | 34.41 | 22158 | 22074.2 | 44.67 | 22149 | 22063.1 | 47.23 | 22168 | 22066.27 | 40.43 |
| | | 2op | 22217 | 22125.87 | 44.98 | 22161 | 22096.6 | 39.65 | 22153 | 22080.33 | 41.54 | 22142 | 22065.83 | 43.97 |

Table A.2867: $f635\_350$: transRRGA+IM – Suspected Optimal is 22498

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24777 | 24701.6 | 44.64 | 24778 | 24687.23 | 48.44 | 24737 | 24671.23 | 46.98 | 24745 | 24674.8 | 38.75 |
| | | 2op | 24770 | 24687.33 | 51.13 | 24782 | 24691.9 | 47.91 | 24771 | 24673.67 | 43.06 | 24788 | 24692.23 | 50.63 |
| | 50 | rnd | 24782 | 24699.2 | 40.56 | 24747 | 24680.43 | 45.31 | 24792 | 24685.77 | 48.15 | 24794 | 24693.83 | 47.34 |
| | | 2op | 24801 | 24675.1 | 56.57 | 24778 | 24686.9 | 55.24 | 24777 | 24679.37 | 42.57 | 24778 | 24687.23 | 51.73 |
| 51 | 20 | rnd | 24761 | 24696.93 | 43.31 | 24761 | 24688.03 | 50.63 | 24784 | 24697.77 | 48.33 | 24759 | 24690.17 | 50.98 |
| | | 2op | 24769 | 24685.83 | 39.49 | 24760 | 24683.77 | 32.19 | 24784 | 24685.27 | 43.96 | 24754 | 24696.63 | 32.42 |
| | 50 | rnd | 24817 | 24695.77 | 55.29 | 24821 | 24696.1 | 48.98 | 24780 | 24693.17 | 40.9 | 24751 | 24669.73 | 46.64 |
| | | 2op | 24770 | 24684.13 | 48.96 | 24802 | 24689.17 | 49.26 | 24781 | 24675.93 | 60.27 | 24763 | 24673.73 | 52.01 |

Table A.2868: $f737\_355$: basicRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24790 | 24709.37 | 42.76 | 24805 | 24714.93 | 48.6 | 24863 | 24741.5 | 37.51 | 24790 | 24715.47 | 52.03 |
| | | 2op | 24835 | 24725.07 | 41.24 | 24832 | 24732.2 | 35.49 | 24850 | 24734.83 | 55.16 | 24817 | 24712.2 | 42.86 |
| | 50 | rnd | 24786 | 24719.47 | 34.78 | 24811 | 24721.23 | 46.9 | 24797 | 24740.47 | 34.22 | 24802 | 24712.83 | 44.15 |
| | | 2op | 24830 | 24724.43 | 42.98 | 24842 | 24734.23 | 50.81 | 24840 | 24726.9 | 46.89 | 24822 | 24731.6 | 42.96 |
| 51 | 20 | rnd | 24829 | 24725.8 | 47.31 | 24821 | 24732.53 | 47.31 | 24822 | 24731.57 | 49.14 | 24871 | 24723.63 | 49.66 |
| | | 2op | 24770 | 24722.13 | 28.7 | 24805 | 24739.8 | 37.18 | 24817 | 24738.7 | 43.38 | 24835 | 24733.03 | 40.67 |
| | 50 | rnd | 24791 | 24700.9 | 49.65 | 24794 | 24725.37 | 37.97 | 24793 | 24716.3 | 40.54 | 24874 | 24732.97 | 48.1 |
| | | 2op | 24799 | 24712.8 | 49.2 | 24788 | 24725.23 | 36.1 | 24813 | 24737.2 | 38.89 | 24797 | 24730.93 | 37.28 |

Table A.2869: $f737\_355$: transRRGA – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24765 | 24675.5 | 40.39 | 24762 | 24680.33 | 55.12 | 24767 | 24691.17 | 48.97 | 24760 | 24675.57 | 36.64 |
| | | 2op | 24777 | 24681.9 | 46.67 | 24765 | 24684.7 | 35.73 | 24764 | 24668.93 | 49.27 | 24822 | 24689.93 | 51.48 |
| | 50 | rnd | 24814 | 24687.37 | 48.6 | 24782 | 24670.4 | 47.4 | 24824 | 24682.77 | 65.98 | 24845 | 24665.9 | 61.43 |
| | | 2op | 24784 | 24690.67 | 55.15 | 24759 | 24667.2 | 50.93 | 24773 | 24671.47 | 45.87 | 24794 | 24670.97 | 61.02 |
| 51 | 20 | rnd | 24809 | 24705.53 | 53.04 | 24791 | 24694.47 | 44.98 | 24777 | 24698.3 | 44.24 | 24784 | 24681.97 | 45.46 |
| | | 2op | 24786 | 24694.47 | 45.69 | 24793 | 24687.8 | 41.19 | 24769 | 24689.97 | 51.23 | 24784 | 24671.3 | 53.47 |
| | 50 | rnd | 24786 | 24692.33 | 56.46 | 24789 | 24696.67 | 47.15 | 24784 | 24692.13 | 52.52 | 24761 | 24671.93 | 46.36 |
| | | 2op | 24827 | 24692.8 | 46.14 | 24795 | 24703.7 | 42.01 | 24782 | 24684.87 | 53.77 | 24751 | 24670.13 | 44.53 |

Table A.2870: $f737\_355$: basicRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24807 | 24727.23 | 37.47 | 24835 | 24731.13 | 43.2 | 24793 | 24725.17 | 38.38 | 24815 | 24706.47 | 49.52 |
| | | 2op | 24851 | 24712.73 | 46.75 | 24816 | 24730.77 | 39.04 | 24796 | 24723.8 | 39.36 | 24812 | 24731.93 | 35.39 |
| | 50 | rnd | 24812 | 24706.23 | 52.03 | 24826 | 24725.57 | 36.86 | 24791 | 24730.63 | 36.07 | 24792 | 24703.7 | 50.56 |
| | | 2op | 24824 | 24719.87 | 46.91 | 24812 | 24722.63 | 43.72 | 24818 | 24743.83 | 36.01 | 24825 | 24719 | 40.62 |
| 51 | 20 | rnd | 24804 | 24716.67 | 48.78 | 24783 | 24717.87 | 44.37 | 24809 | 24721.37 | 42.69 | 24814 | 24727.63 | 39.16 |
| | | 2op | 24798 | 24725.67 | 37.05 | 24817 | 24737.83 | 34.41 | 24811 | 24737.97 | 32.19 | 24834 | 24728.27 | 48.01 |
| | 50 | rnd | 24804 | 24718.8 | 49.84 | 24813 | 24721.47 | 39.84 | 24787 | 24743.57 | 32.51 | 24819 | 24732.7 | 40.22 |
| | | 2op | 24805 | 24712.93 | 48.92 | 24802 | 24719.33 | 50.4 | 24875 | 24733.43 | 46.22 | 24814 | 24728.9 | 43.26 |

Table A.2871: $f737\_355$: transRRGA+RS – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24810 | 24713.63 | 43.74 | 24769 | 24651.77 | 56.68 | 24766 | 24674.33 | 47.91 | 24781 | 24675.33 | 49.25 |
| | | 2op | 24768 | 24688.1 | 39.82 | 24764 | 24671.67 | 48.99 | 24751 | 24664.17 | 51.36 | 24782 | 24680.7 | 44.3 |
| | 50 | rnd | 24784 | 24673.07 | 51.61 | 24782 | 24662.27 | 48.67 | 24780 | 24681.8 | 61.98 | 24722 | 24654.43 | 37.08 |
| | | 2op | 24799 | 24698.5 | 45.38 | 24729 | 24663.6 | 51.39 | 24753 | 24672.23 | 45.64 | 24723 | 24668.53 | 42.47 |
| 51 | 20 | rnd | 24790 | 24715.07 | 39.51 | 24795 | 24714 | 48.56 | 24750 | 24668.6 | 42.81 | 24759 | 24645.13 | 53.49 |
| | | 2op | 24766 | 24707.07 | 32.2 | 24791 | 24697.43 | 42.12 | 24775 | 24670.73 | 50.89 | 24759 | 24666.03 | 45.08 |
| | 50 | rnd | 24805 | 24716.37 | 50.04 | 24804 | 24702.8 | 47.35 | 24764 | 24678.23 | 46.01 | 24766 | 24664.33 | 46.49 |
| | | 2op | 24786 | 24701.5 | 47.26 | 24772 | 24702.27 | 39.48 | 24747 | 24673.27 | 40.57 | 24795 | 24674.73 | 52.91 |

Table A.2872: $f737\_355$: basicRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 24802 | 24719.77 | 39.38 | 24749 | 24664.13 | 49.97 | 24729 | 24672.37 | 35.09 | 24770 | 24668.97 | 55.47 |
| | | 2op | 24827 | 24720.6 | 47.71 | 24743 | 24677.67 | 40.21 | 24788 | 24678.63 | 51.53 | 24782 | 24663.87 | 60.71 |
| | 50 | rnd | 24772 | 24696.87 | 47.6 | 24761 | 24670.93 | 51.87 | 24781 | 24676.63 | 48.9 | 24776 | 24679.13 | 47.24 |
| | | 2op | 24780 | 24706.1 | 35.23 | 24772 | 24679.47 | 47.96 | 24753 | 24668.8 | 42.7 | 24815 | 24681.2 | 41.19 |
| 51 | 20 | rnd | 24814 | 24713.57 | 48.41 | 24782 | 24684.27 | 50.6 | 24743 | 24675 | 40.06 | 24791 | 24672.7 | 51.03 |
| | | 2op | 24833 | 24726.87 | 42.15 | 24780 | 24670.13 | 53.29 | 24746 | 24678.73 | 36.44 | 24767 | 24674.3 | 44.81 |
| | 50 | rnd | 24796 | 24709.2 | 41.01 | 24743 | 24665.93 | 45.09 | 24793 | 24671.9 | 42.88 | 24827 | 24690.37 | 51.33 |
| | | 2op | 24770 | 24725.73 | 29.85 | 24818 | 24690.67 | 53.6 | 24763 | 24668.9 | 46.66 | 24747 | 24671.53 | 50.36 |

Table A.2873: $f737\_355$: transRRGA+IM – Suspected Optimal is 25218

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48052 | 47917.9 | 68.61 | 48085 | 47894.57 | 91.83 | 48031 | 47887 | 83.95 | 48039 | 47894.43 | 75.63 |
| | | 2op | 48045 | 47899.77 | 82.32 | 48025 | 47881.83 | 89.3 | 48087 | 47895.13 | 81.94 | 48023 | 47907.07 | 60.56 |
| | 50 | rnd | 48053 | 47886.57 | 86.71 | 48038 | 47891.47 | 78.63 | 47988 | 47880.6 | 60.8 | 48041 | 47905 | 70.82 |
| | | 2op | 48028 | 47912.53 | 66.46 | 48042 | 47884.6 | 68.92 | 48041 | 47891.43 | 81.65 | 48020 | 47910.9 | 59.67 |
| 51 | 20 | rnd | 48091 | 47899.43 | 79.52 | 48040 | 47912.47 | 67.55 | 48009 | 47896.17 | 83.3 | 48063 | 47912.13 | 76.37 |
| | | 2op | 48078 | 47901.77 | 75.03 | 48151 | 47918.8 | 80.09 | 48066 | 47886.97 | 75.74 | 48075 | 47895.33 | 89.66 |
| | 50 | rnd | 48090 | 47931.7 | 82.91 | 48058 | 47934.23 | 86.86 | 48073 | 47893.8 | 85.71 | 48096 | 47891.4 | 77.59 |
| | | 2op | 48073 | 47952.07 | 68.53 | 48094 | 47904.07 | 73.21 | 48071 | 47905.03 | 85.92 | 48049 | 47916.97 | 66.56 |

Table A.2874: $f1343\_354$: basicRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48112 | 47968.3 | 60.14 | 48122 | 47999.27 | 78.29 | 48148 | 48008.13 | 71.77 | 48122 | 47951 | 85.76 |
| | | 2op | 48129 | 47983.43 | 83.87 | 48144 | 48013.13 | 69.77 | 48207 | 48015.07 | 73.41 | 48114 | 47966.1 | 79.81 |
| | 50 | rnd | 48140 | 47980.83 | 71.96 | 48161 | 47989.67 | 70.51 | 48134 | 47998.3 | 64.17 | 48075 | 47960.93 | 66.5 |
| | | 2op | 48122 | 48014.2 | 75.34 | 48147 | 48001.83 | 70.24 | 48162 | 48010.93 | 72.71 | 48153 | 47998.67 | 74.51 |
| 51 | 20 | rnd | 48123 | 47985.13 | 65.9 | 48189 | 47991.6 | 78.63 | 48197 | 48011.97 | 77.23 | 48121 | 47989.23 | 72.05 |
| | | 2op | 48119 | 48021.27 | 60.28 | 48166 | 48015.57 | 70.88 | 48131 | 48027.1 | 66.24 | 48118 | 47996.13 | 74.61 |
| | 50 | rnd | 48147 | 47969.4 | 71.08 | 48182 | 47986.8 | 76.89 | 48121 | 47987.7 | 72.82 | 48128 | 48008.67 | 70.08 |
| | | 2op | 48157 | 48012.6 | 66.04 | 48215 | 48020.37 | 96.55 | 48084 | 47994.67 | 42.29 | 48128 | 48014.17 | 69.84 |

Table A.2875: $f1343\_354$: transRRGA – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 47991 | 47895.47 | 53.94 | 48013 | 47897 | 58.34 | 47987 | 47901.13 | 56.71 | 48027 | 47890.4 | 75.08 |
| | | 2op | 48049 | 47902.57 | 68.53 | 48068 | 47895.37 | 78.09 | 48004 | 47888.43 | 66.32 | 48126 | 47924.4 | 80.78 |
| | 50 | rnd | 48044 | 47897.97 | 86.58 | 48035 | 47903.27 | 80.93 | 48034 | 47882.27 | 77.02 | 48086 | 47903.93 | 87.42 |
| | | 2op | 48024 | 47928.63 | 62.95 | 48063 | 47892.63 | 82.78 | 48039 | 47884.2 | 67.74 | 48104 | 47902.43 | 76.43 |
| 51 | 20 | rnd | 48011 | 47915 | 62.71 | 48056 | 47926.67 | 76.34 | 48025 | 47901.6 | 67.33 | 48092 | 47898.47 | 77.86 |
| | | 2op | 48050 | 47896.7 | 59.88 | 48069 | 47907.8 | 74.83 | 48069 | 47879.1 | 79.19 | 48071 | 47921.97 | 73.2 |
| | 50 | rnd | 48100 | 47926.6 | 85.82 | 48072 | 47940.93 | 60.94 | 48017 | 47887.47 | 66.84 | 48098 | 47901.77 | 75.77 |
| | | 2op | 48134 | 47933.27 | 80.04 | 48137 | 47921.63 | 82.49 | 48002 | 47904.77 | 63.35 | 48031 | 47894.83 | 66.2 |

Table A.2876: $f1343\_354$: basicRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48100 | 47975.67 | 67.54 | 48145 | 48010.63 | 71.72 | 48202 | 48003.47 | 110.05 | 48127 | 47943.2 | 81.22 |
| | | 2op | 48159 | 48021.07 | 64.31 | 48129 | 48004.13 | 67.04 | 48154 | 48022.2 | 73.4 | 48120 | 47992.83 | 72.43 |
| | 50 | rnd | 48091 | 47963.2 | 85.27 | 48139 | 47968.6 | 69.05 | 48134 | 47989.97 | 79.83 | 48151 | 47961.67 | 84.83 |
| | | 2op | 48178 | 47991.5 | 81.8 | 48171 | 48012.73 | 84.38 | 48163 | 48022.73 | 77.5 | 48127 | 47987.8 | 74.43 |
| 51 | 20 | rnd | 48145 | 48021.37 | 69.1 | 48131 | 48006.93 | 71.48 | 48135 | 48006.5 | 51.01 | 48118 | 47990.27 | 62.76 |
| | | 2op | 48209 | 48018.47 | 73.75 | 48126 | 48009.07 | 61.4 | 48131 | 48008.9 | 66.64 | 48149 | 47999.43 | 74.11 |
| | 50 | rnd | 48122 | 47931.27 | 75.49 | 48129 | 47983.8 | 62.04 | 48121 | 47974.03 | 66.58 | 48186 | 47992.3 | 81.4 |
| | | 2op | 48154 | 48015.73 | 65.14 | 48223 | 48028.6 | 87.14 | 48131 | 47991.2 | 69.04 | 48225 | 48023.63 | 90.94 |

Table A.2877: $f1343\_354$: transRRGA+RS – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48106 | 47938.33 | 79.03 | 48073 | 47928.9 | 75.16 | 47990 | 47865.07 | 83.64 | 48113 | 47875.33 | 90.25 |
| | | 2op | 48097 | 47937.7 | 82.32 | 48068 | 47922.27 | 81.87 | 48055 | 47871.23 | 74.19 | 48004 | 47864.6 | 85.14 |
| | 50 | rnd | 48104 | 47911.5 | 88.13 | 48109 | 47915.8 | 92.24 | 48019 | 47872.27 | 77.61 | 48070 | 47856.37 | 99.48 |
| | | 2op | 48096 | 47934.1 | 90.56 | 48051 | 47922.5 | 62.79 | 48005 | 47872.73 | 77.3 | 48090 | 47861.83 | 79.51 |
| 51 | 20 | rnd | 48109 | 47963 | 66.08 | 48109 | 47963 | 66.08 | 48060 | 47855.03 | 95.19 | 47981 | 47851.1 | 68.05 |
| | | 2op | 48130 | 47956.3 | 72.11 | 48160 | 47963.93 | 90.44 | 48045 | 47855.43 | 81.87 | 48075 | 47885.3 | 76.11 |
| | 50 | rnd | 48119 | 47921.73 | 79.94 | 48068 | 47917.4 | 71.68 | 48061 | 47876.53 | 85 | 48019 | 47842.53 | 94.78 |
| | | 2op | 48080 | 47944.1 | 67.68 | 48029 | 47923.5 | 55.78 | 47987 | 47853.9 | 58.21 | 47994 | 47842.9 | 63.56 |

Table A.2878: $f1343\_354$: basicRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 48097 | 47955.93 | 60.14 | 48027 | 47893.9 | 55.87 | 48038 | 47868.93 | 87.19 | 48019 | 47877.1 | 85.7 |
| | | 2op | 48188 | 48025.67 | 73.98 | 48078 | 47855.77 | 74.82 | 47992 | 47882.4 | 59.77 | 48015 | 47877.47 | 65.65 |
| | 50 | rnd | 48113 | 47976.17 | 64.31 | 48014 | 47890 | 72.92 | 48029 | 47857.07 | 87.19 | 48005 | 47856.77 | 70.99 |
| | | 2op | 48177 | 47997.87 | 77.11 | 48068 | 47915.4 | 79.05 | 48057 | 47876.37 | 77.1 | 48007 | 47898.53 | 72.02 |
| 51 | 20 | rnd | 48141 | 47970.1 | 74.07 | 48029 | 47889.1 | 90.3 | 48022 | 47882.57 | 71.42 | 48033 | 47842.6 | 78.16 |
| | | 2op | 48138 | 48009.23 | 78.43 | 48025 | 47878.13 | 65.86 | 48006 | 47871.23 | 80.07 | 48068 | 47873.3 | 76.44 |
| | 50 | rnd | 48092 | 47956.97 | 62.98 | 48028 | 47878 | 73.58 | 48085 | 47880.57 | 105.12 | 48028 | 47869.2 | 70.61 |
| | | 2op | 48235 | 47994.8 | 78.27 | 48003 | 47891.47 | 75.85 | 48068 | 47877.47 | 80.11 | 48026 | 47877.53 | 82.67 |

Table A.2879: $f1343\_354$: transRRGA+IM – Suspected Optimal is 49042

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56145 | 55994.67 | 75.35 | 56148 | 56002.43 | 62.1 | 56118 | 55981.93 | 63.85 | 56155 | 56004 | 84.8 |
| | | 2op | 56179 | 56000.9 | 95.75 | 56134 | 55948 | 96.07 | 56132 | 55980.53 | 84.71 | 56097 | 55970.73 | 80.25 |
| | 50 | rnd | 56192 | 56031.5 | 85.02 | 56126 | 55970.77 | 76.65 | 56096 | 55946.03 | 91.09 | 56128 | 55976.9 | 83.49 |
| | | 2op | 56240 | 56024.73 | 87.91 | 56139 | 55968.77 | 100.71 | 56217 | 55969.07 | 105.51 | 56099 | 55971.03 | 84.06 |
| 51 | 20 | rnd | 56167 | 56015.33 | 75.78 | 56175 | 56012.67 | 92.33 | 56220 | 56016.37 | 91.06 | 56227 | 55995 | 81.97 |
| | | 2op | 56156 | 55985.9 | 75.46 | 56189 | 55994.43 | 102.13 | 56087 | 55994.47 | 48.76 | 56181 | 56016.77 | 77.76 |
| | 50 | rnd | 56158 | 56032.8 | 63.4 | 56156 | 56025.6 | 71.65 | 56085 | 55962.53 | 82.5 | 56242 | 56016.17 | 85.11 |
| | | 2op | 56185 | 56023.87 | 83.11 | 56171 | 56014.83 | 71.78 | 56149 | 55979.07 | 80.15 | 56173 | 55987.73 | 98.11 |

Table A.2880: $f1577\_354$: basicRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56266 | 56091.2 | 77.69 | 56263 | 56114.27 | 87.49 | 56248 | 56100.47 | 83.86 | 56216 | 56040.3 | 104.78 |
| | | 2op | 56250 | 56114.13 | 71.26 | 56234 | 56124.83 | 67.66 | 56310 | 56150.6 | 71.92 | 56227 | 56067.67 | 86.04 |
| | 50 | rnd | 56224 | 56080.53 | 74.26 | 56345 | 56106.33 | 105.87 | 56268 | 56110.17 | 85.57 | 56217 | 56088.83 | 87.03 |
| | | 2op | 56269 | 56110.67 | 81.43 | 56256 | 56127.73 | 73.45 | 56267 | 56148.1 | 63.16 | 56316 | 56101.83 | 94.75 |
| 51 | 20 | rnd | 56213 | 56067.6 | 78.93 | 56275 | 56095.07 | 74.75 | 56269 | 56099.6 | 73.37 | 56220 | 56119.47 | 52.23 |
| | | 2op | 56311 | 56123.37 | 90.6 | 56268 | 56108.23 | 97.07 | 56275 | 56144.73 | 95.21 | 56320 | 56143.5 | 80.34 |
| | 50 | rnd | 56222 | 56089.23 | 70.32 | 56303 | 56112 | 110.53 | 56227 | 56089.57 | 83.5 | 56287 | 56111.5 | 80.13 |
| | | 2op | 56281 | 56106.47 | 73.44 | 56318 | 56146.07 | 95 | 56273 | 56111.63 | 78.03 | 56310 | 56136.13 | 86.74 |

Table A.2881: $f1577\_354$: transRRGA – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56235 | 55997.57 | 95.99 | 56118 | 55974.83 | 77.75 | 56117 | 55956.23 | 71.22 | 56174 | 56013.4 | 82.79 |
| | | 2op | 56178 | 55975.67 | 90.38 | 56133 | 56001.5 | 71.87 | 56216 | 55977.83 | 82.57 | 56160 | 56016.8 | 85.47 |
| | 50 | rnd | 56103 | 56004.27 | 60.15 | 56077 | 55958.17 | 73.55 | 56140 | 55978.2 | 106.39 | 56104 | 55979.03 | 69.23 |
| | | 2op | 56145 | 55999 | 63.8 | 56185 | 55978.3 | 93.99 | 56086 | 55988.17 | 68.53 | 56123 | 56008.37 | 84.19 |
| 51 | 20 | rnd | 56194 | 56045.53 | 72.26 | 56148 | 55993.57 | 89.56 | 56133 | 55995.7 | 71.69 | 56246 | 55991.2 | 90.16 |
| | | 2op | 56134 | 55999.23 | 93.39 | 56139 | 56001.97 | 79.92 | 56115 | 55977.33 | 80.52 | 56150 | 55997.83 | 74.93 |
| | 50 | rnd | 56166 | 56021.1 | 82.09 | 56115 | 55985.13 | 88.72 | 56217 | 56019.83 | 81.97 | 56184 | 56015.9 | 76.38 |
| | | 2op | 56251 | 56023.47 | 70.49 | 56176 | 56026.23 | 93 | 56119 | 56007.27 | 72.22 | 56186 | 55998.77 | 69.11 |

Table A.2882: $f1577\_354$: basicRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56334 | 56116 | 86.38 | 56209 | 56102.17 | 65.49 | 56258 | 56101.33 | 75.9 | 56214 | 56040.97 | 84.12 |
| | | 2op | 56303 | 56132.97 | 87.61 | 56313 | 56140.4 | 78.95 | 56375 | 56146.63 | 93.26 | 56176 | 56072.17 | 65.09 |
| | 50 | rnd | 56259 | 56091.5 | 76.25 | 56263 | 56103.37 | 69.23 | 56269 | 56108.47 | 73.65 | 56334 | 56083.3 | 90.75 |
| | | 2op | 56250 | 56117.6 | 65.77 | 56215 | 56114.67 | 63.02 | 56279 | 56148.33 | 64.88 | 56207 | 56098.07 | 68.53 |
| 51 | 20 | rnd | 56259 | 56085.37 | 82.53 | 56252 | 56120.87 | 84.49 | 56363 | 56133.93 | 81.79 | 56187 | 56102.97 | 58.98 |
| | | 2op | 56336 | 56140.73 | 84 | 56327 | 56145 | 82.18 | 56220 | 56103.77 | 64.7 | 56386 | 56135.7 | 83.93 |
| | 50 | rnd | 56213 | 56053.63 | 72.58 | 56324 | 56080.7 | 96.57 | 56268 | 56084.9 | 77.13 | 56280 | 56130.77 | 68.05 |
| | | 2op | 56266 | 56113.6 | 80.94 | 56262 | 56142.87 | 61.99 | 56324 | 56128.23 | 85.09 | 56323 | 56155.67 | 67.02 |

Table A.2883: $f1577\_354$: transRRGA+RS – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56188 | 56025.3 | 80.6 | 56190 | 56016.27 | 98.83 | 56122 | 55963.3 | 86.91 | 56165 | 55975.73 | 79.25 |
| | | 2op | 56214 | 55986.93 | 110.61 | 56176 | 56008.67 | 75.33 | 56170 | 55963.23 | 87.12 | 56175 | 55966.77 | 94.64 |
| | 50 | rnd | 56205 | 56008.07 | 94.72 | 56170 | 56006.4 | 75.14 | 56179 | 55959.7 | 80.03 | 56132 | 55970.2 | 82.08 |
| | | 2op | 56198 | 56009.07 | 85.1 | 56151 | 55960.6 | 95.93 | 56076 | 55971.83 | 81.9 | 56169 | 55944.07 | 94.71 |
| 51 | 20 | rnd | 56148 | 56035.2 | 70.41 | 56148 | 56035.2 | 70.41 | 56139 | 55980.13 | 77.23 | 56212 | 55970.2 | 93.57 |
| | | 2op | 56142 | 56015.37 | 88.86 | 56206 | 56022.67 | 78.42 | 56075 | 55934.53 | 89.75 | 56142 | 55968.37 | 86.29 |
| | 50 | rnd | 56130 | 56034 | 72.03 | 56137 | 56014.47 | 76.42 | 56097 | 55923.23 | 86.36 | 56106 | 55941.77 | 104.04 |
| | | 2op | 56234 | 56030.4 | 87.37 | 56232 | 56019.5 | 81.3 | 56125 | 55947.67 | 89.56 | 56112 | 55928.67 | 77.26 |

Table A.2884: $f1577\_354$: basicRRGA+IM – Suspected Optimal is 57373

| Parameters | | | Basic | | | After 10000 | | | After 1000 | | | After 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pp | Mt | Sd | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv | Mx | Av | Dv |
| 11 | 20 | rnd | 56269 | 56082.63 | 100.88 | 56110 | 55970.07 | 71.38 | 56173 | 55951.53 | 102.15 | 56121 | 55962.13 | 80.2 |
| | | 2op | 56287 | 56123.87 | 68.07 | 56213 | 55972.47 | 99.7 | 56135 | 55972.3 | 104.87 | 56108 | 55972.37 | 68.86 |
| | 50 | rnd | 56314 | 56070.2 | 111.79 | 56102 | 55961.03 | 69.88 | 56153 | 55956.7 | 71.58 | 56123 | 55943.47 | 100.84 |
| | | 2op | 56242 | 56127.63 | 66.15 | 56144 | 55984.93 | 86.58 | 56135 | 55966.63 | 94.08 | 56124 | 55989.27 | 71.74 |
| 51 | 20 | rnd | 56266 | 56077.03 | 89.78 | 56199 | 55985.2 | 88.46 | 56137 | 55976 | 84.93 | 56097 | 55956 | 81.25 |
| | | 2op | 56306 | 56137.17 | 59.71 | 56230 | 55970.7 | 83.57 | 56137 | 55976.23 | 100.68 | 56201 | 55964.93 | 82.39 |
| | 50 | rnd | 56140 | 56030.43 | 66.56 | 56142 | 55962.73 | 91.92 | 56152 | 55979.53 | 83.96 | 56080 | 55962.17 | 78.76 |
| | | 2op | 56265 | 56115.67 | 77.72 | 56164 | 55988.3 | 74.14 | 56188 | 55956.53 | 87.38 | 56148 | 55937.1 | 91.28 |

Table A.2885: $f1577\_354$: transRRGA+IM – Suspected Optimal is 57373

# Appendix B

# Graphs

## B.1 Bin Packing Problem

### B.1.1 $u$ Instance Results

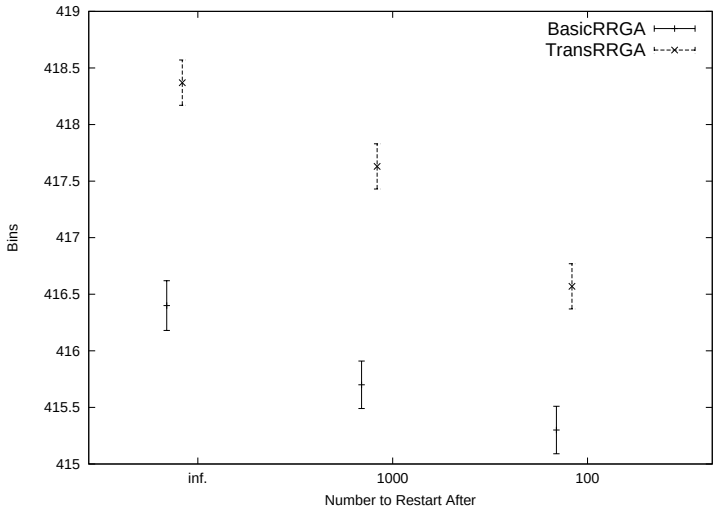



Figure B.1: Comparison of Best Results Between Representations on Problem Instance $u100000$

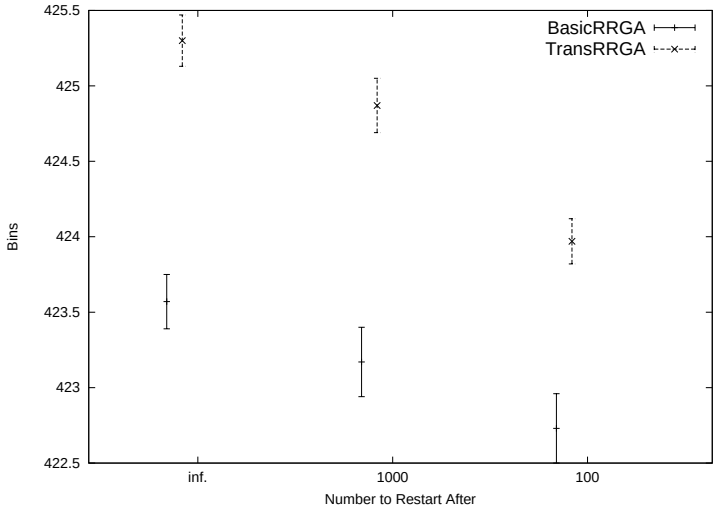



Figure B.2: Comparison of Best Results Between Representations on Problem Instance $u100001$

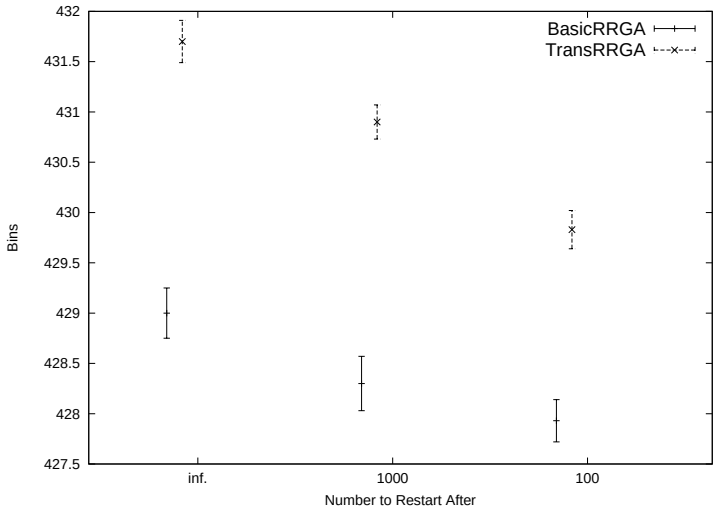



Figure B.3: Comparison of Best Results Between Representations on Problem Instance $u100002$

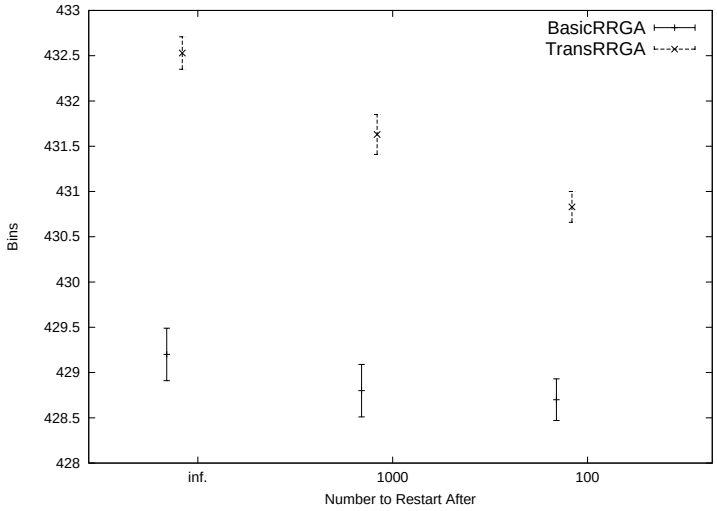



Figure B.4: Comparison of Best Results Between Representations on Problem Instance $u100003$

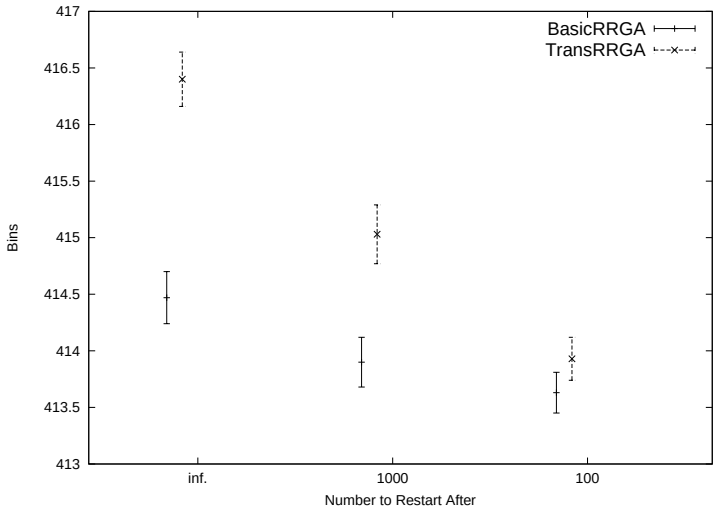



Figure B.5: Comparison of Best Results Between Representations on Problem Instance $u100004$

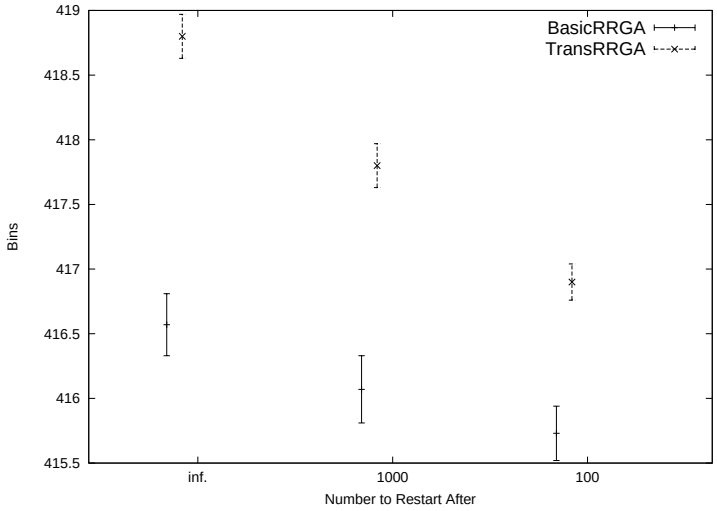



Figure B.6: Comparison of Best Results Between Representations on Problem Instance $u100005$

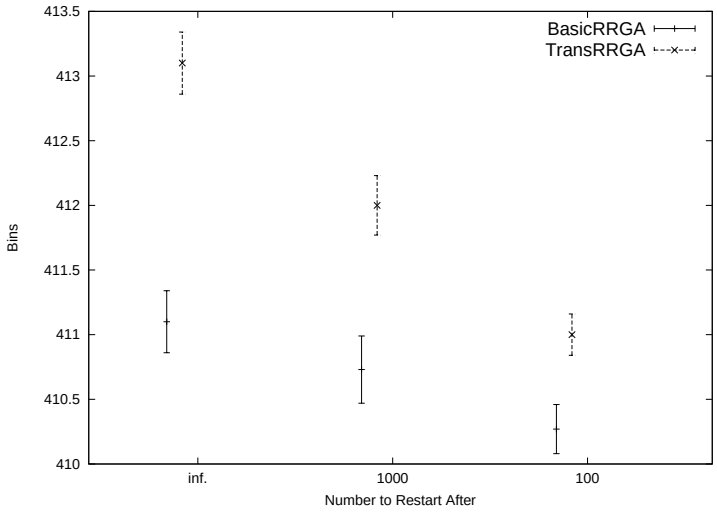



Figure B.7: Comparison of Best Results Between Representations on Problem Instance $u100006$

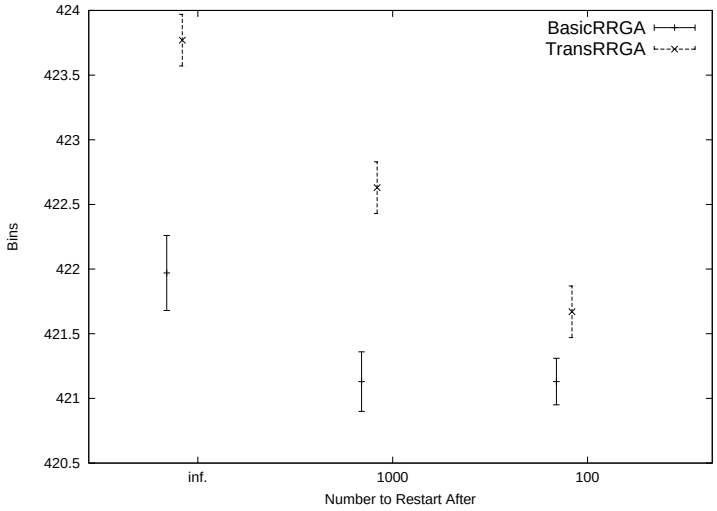



Figure B.8: Comparison of Best Results Between Representations on Problem Instance $u100007$

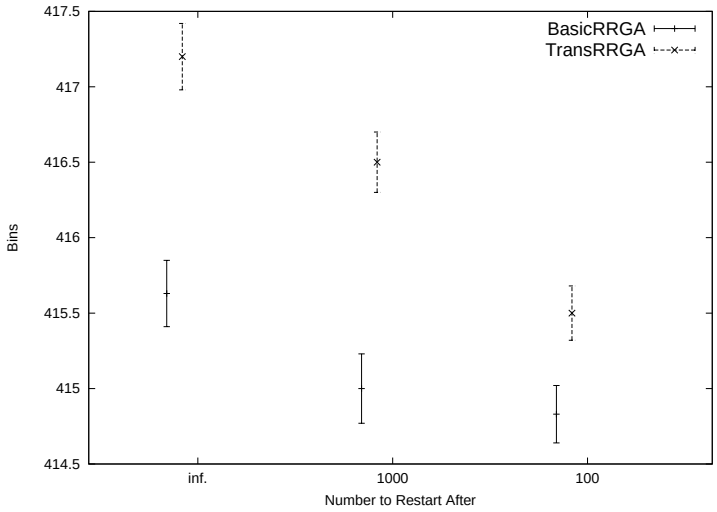



Figure B.9: Comparison of Best Results Between Representations on Problem Instance $u100008$

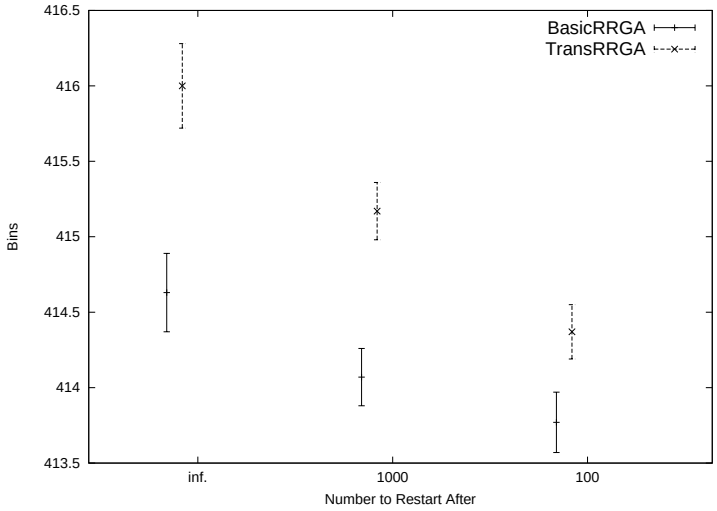



Figure B.10: Comparison of Best Results Between Representations on Problem Instance $u100009$

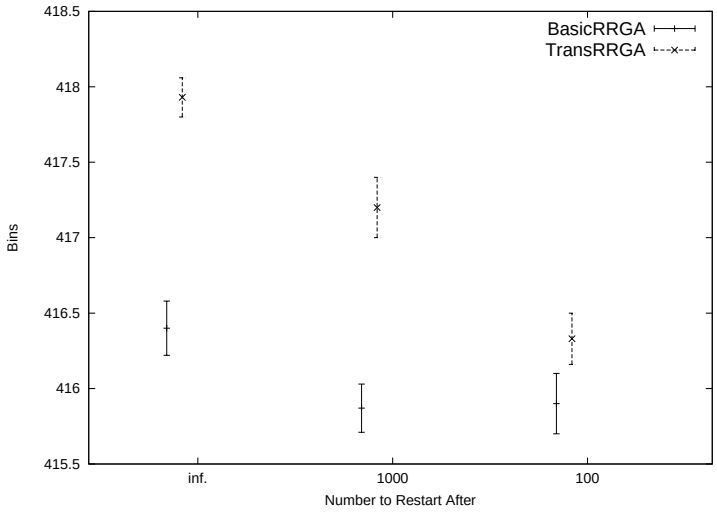



Figure B.11: Comparison of Best Results Between Representations on Problem Instance $u100010$

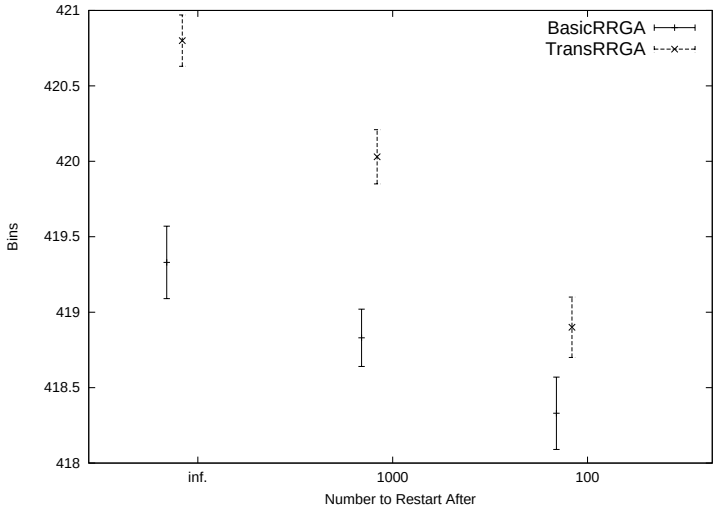



Figure B.12: Comparison of Best Results Between Representations on Problem Instance $u100011$

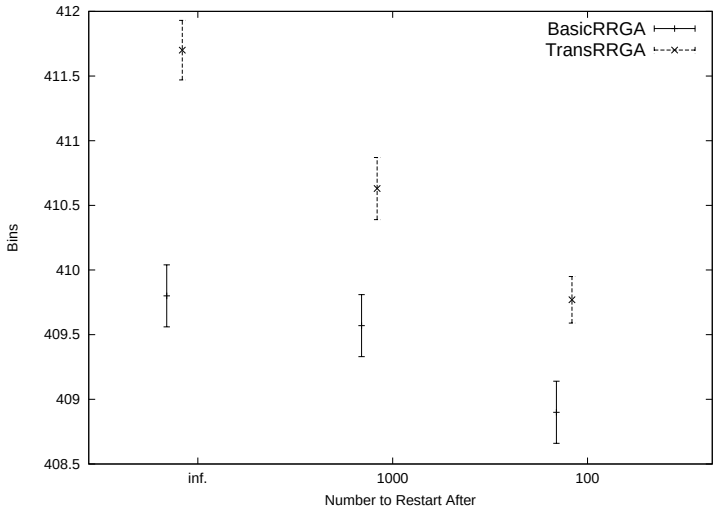



Figure B.13: Comparison of Best Results Between Representations on Problem Instance $u100012$

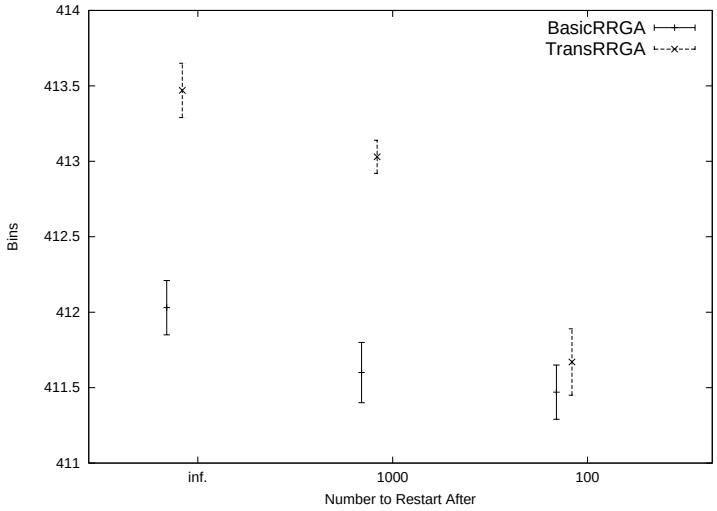



Figure B.14: Comparison of Best Results Between Representations on Problem Instance $u100013$

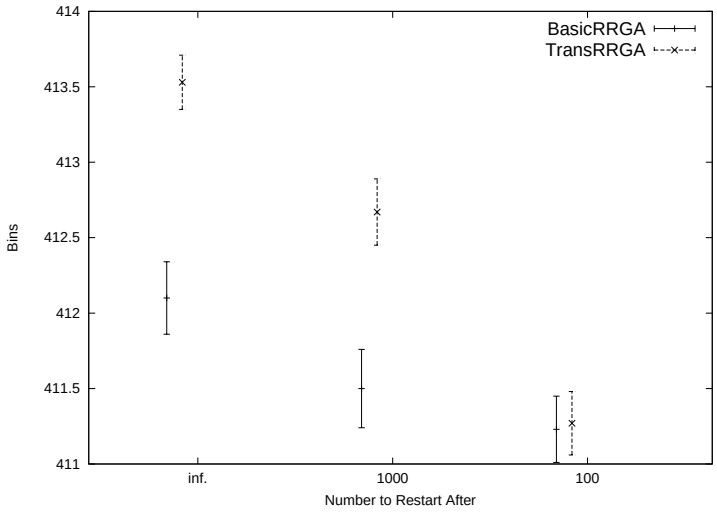



Figure B.15: Comparison of Best Results Between Representations on Problem Instance $u100014$

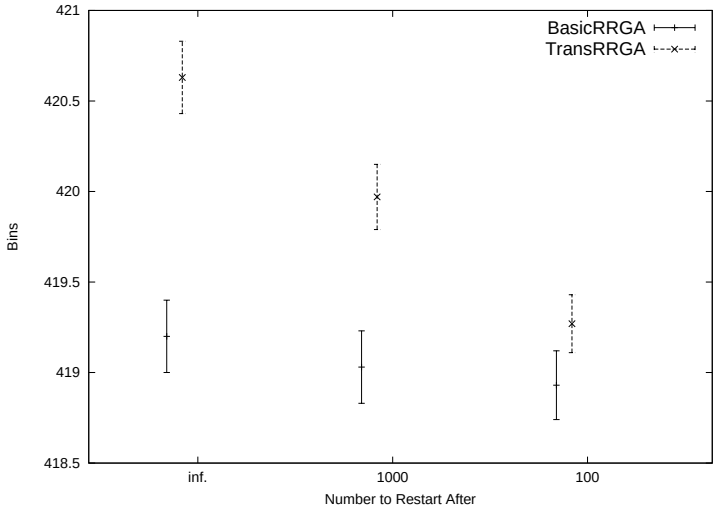



Figure B.16: Comparison of Best Results Between Representations on Problem Instance $u100015$

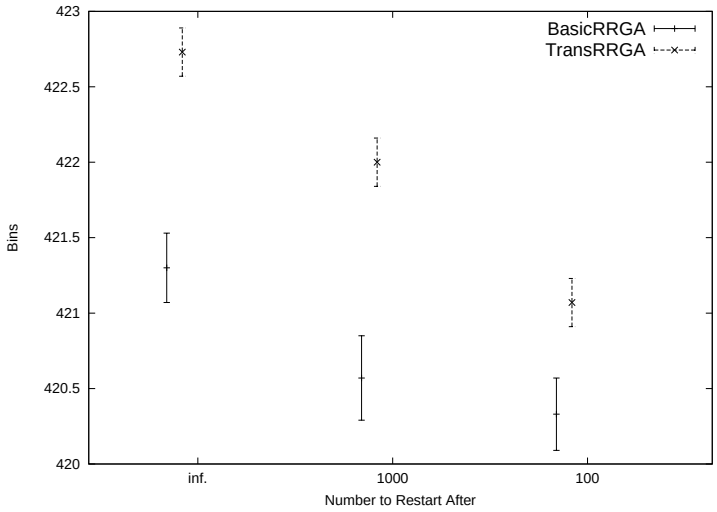



Figure B.17: Comparison of Best Results Between Representations on Problem Instance $u100016$

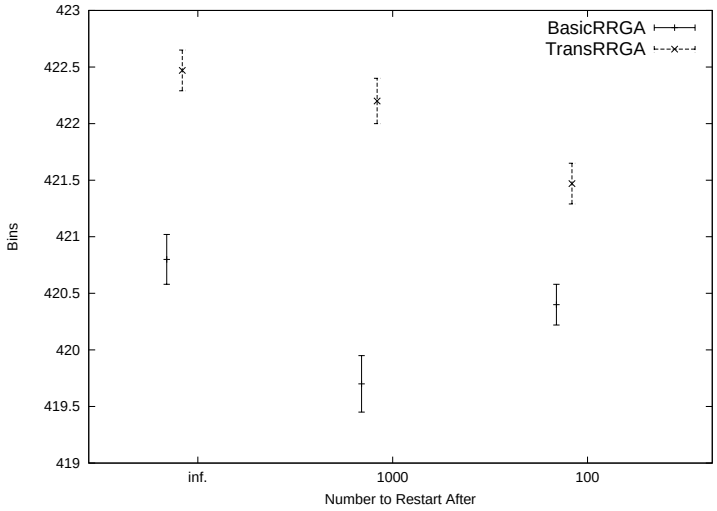



Figure B.18: Comparison of Best Results Between Representations on Problem Instance $u100017$

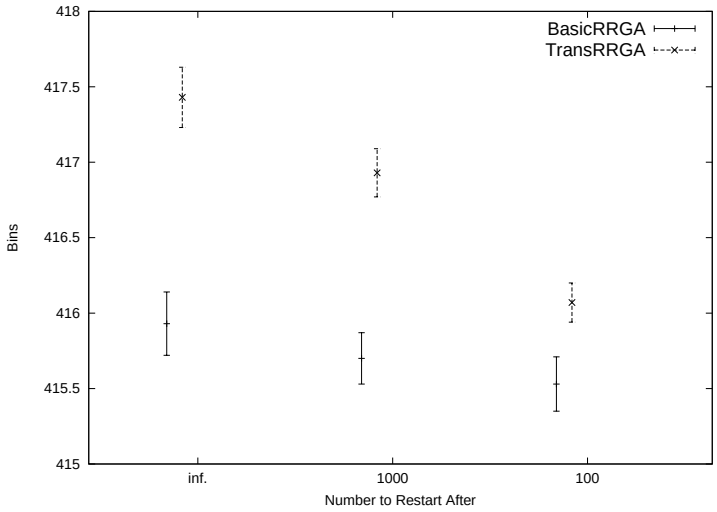



Figure B.19: Comparison of Best Results Between Representations on Problem Instance $u100018$

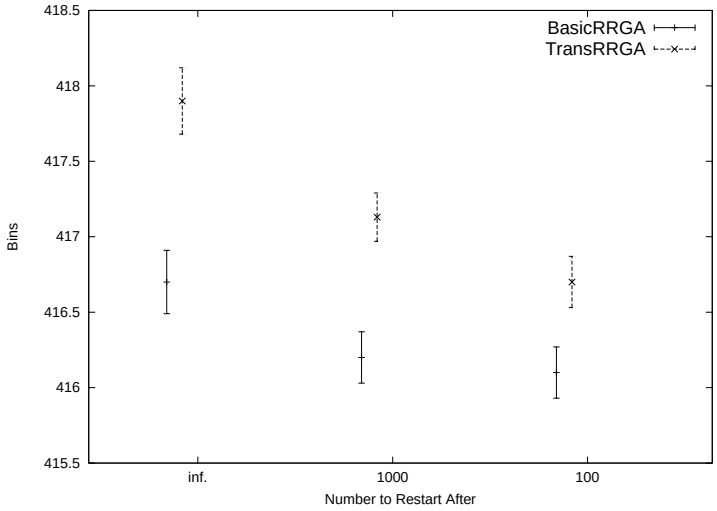



Figure B.20: Comparison of Best Results Between Representations on Problem Instance $u100019$

### B.1.2 hard28 Instance Results

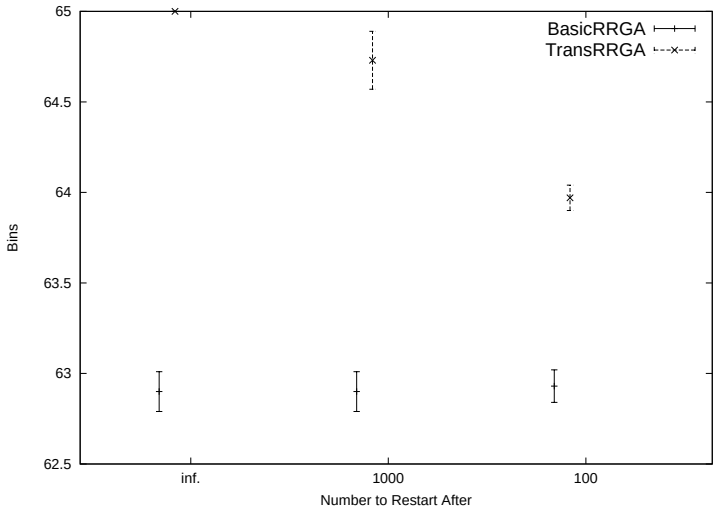



Figure B.21: Comparison of Best Results Between Representations on Problem Instance $h1$

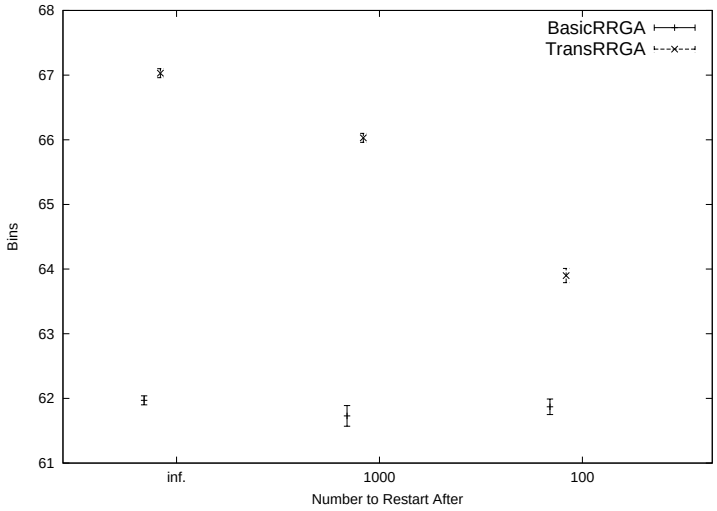



Figure B.22: Comparison of Best Results Between Representations on Problem Instance $h2$

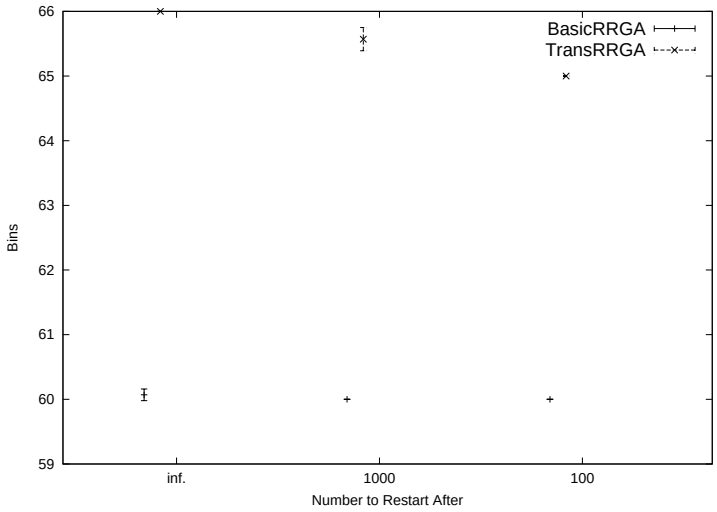



Figure B.23: Comparison of Best Results Between Representations on Problem Instance $h3$

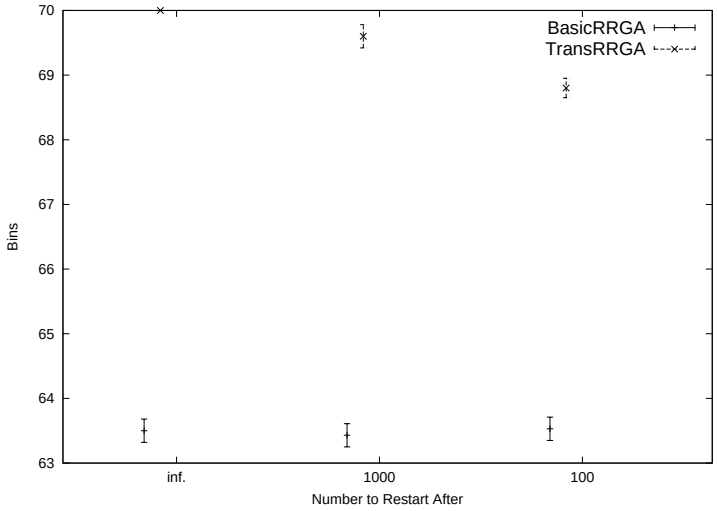



Figure B.24: Comparison of Best Results Between Representations on Problem Instance $h4$

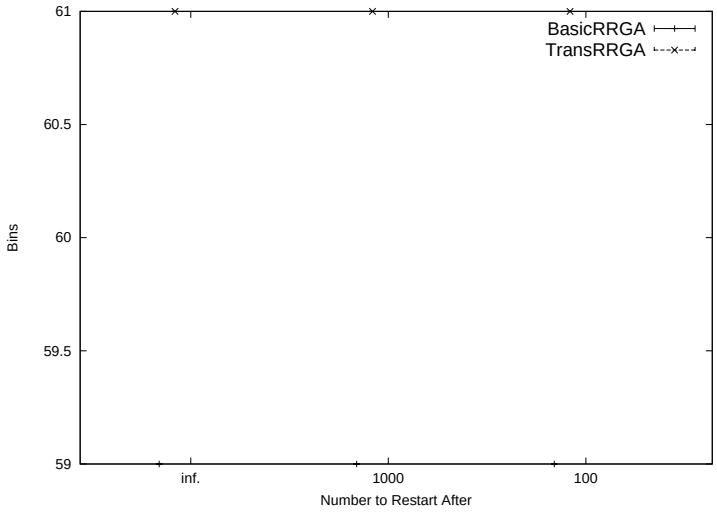



Figure B.25: Comparison of Best Results Between Representations on Problem Instance $h5$

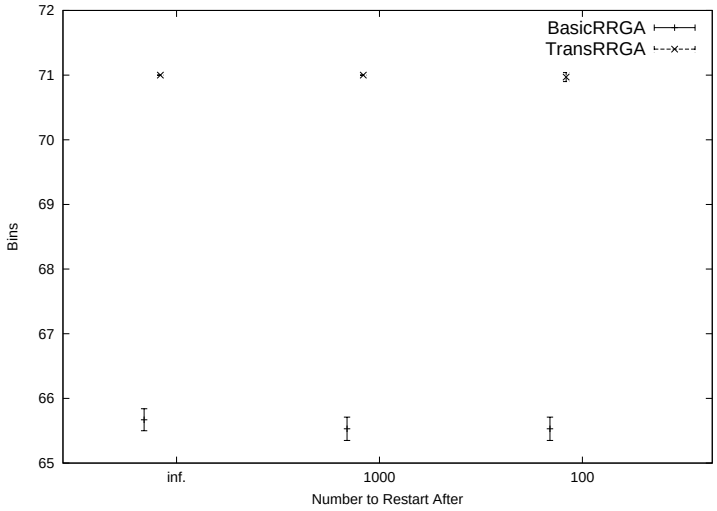



Figure B.26: Comparison of Best Results Between Representations on Problem Instance $h6$

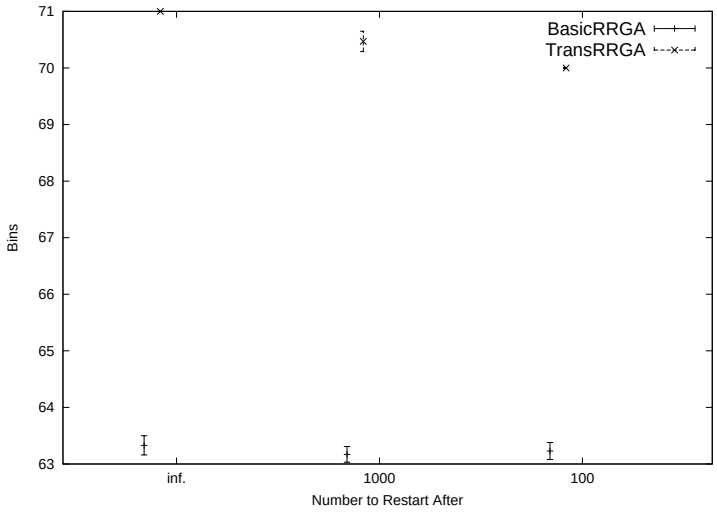



Figure B.27: Comparison of Best Results Between Representations on Problem Instance $h7$

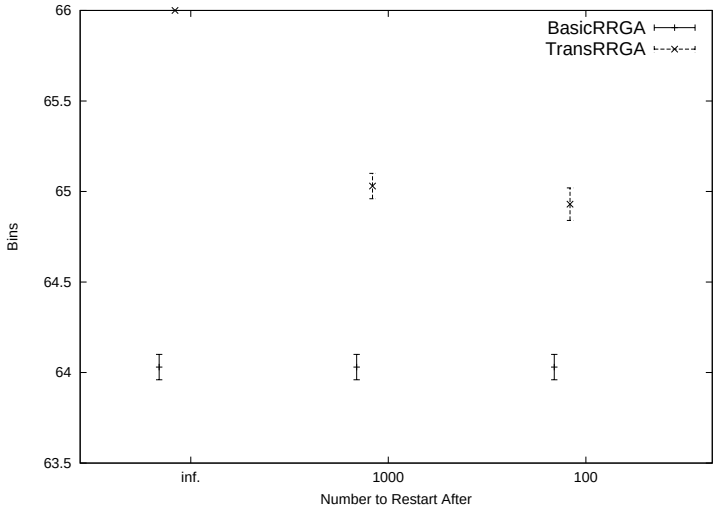



Figure B.28: Comparison of Best Results Between Representations on Problem Instance $h8$

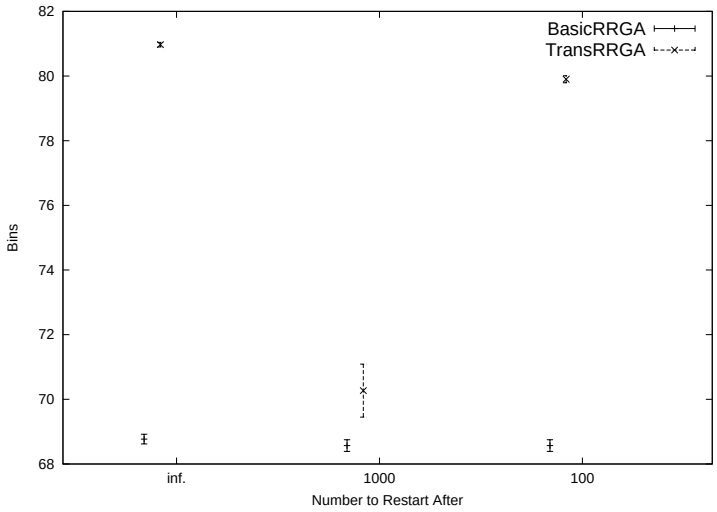



Figure B.29: Comparison of Best Results Between Representations on Problem Instance $h9$

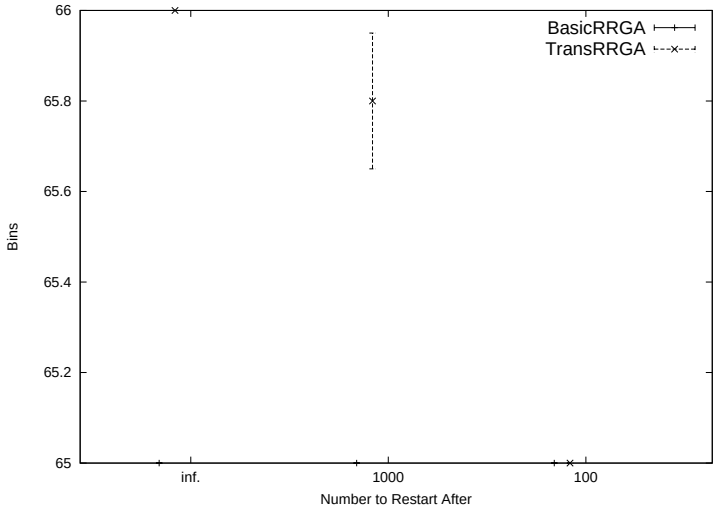



Figure B.30: Comparison of Best Results Between Representations on Problem Instance $h10$

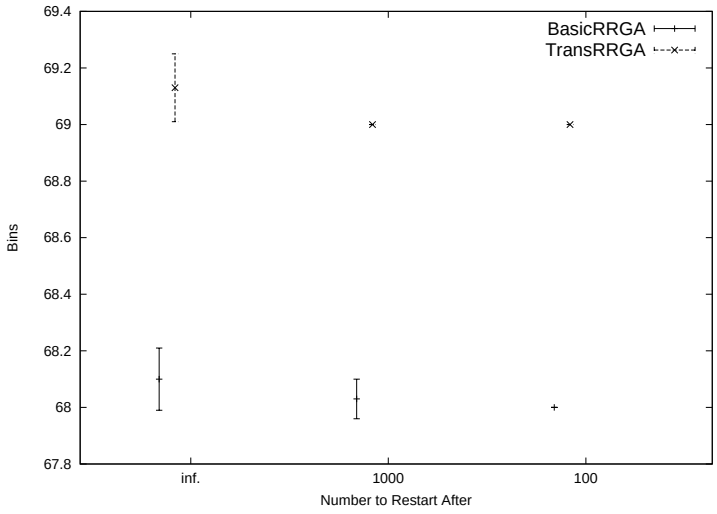



Figure B.31: Comparison of Best Results Between Representations on Problem Instance $h11$

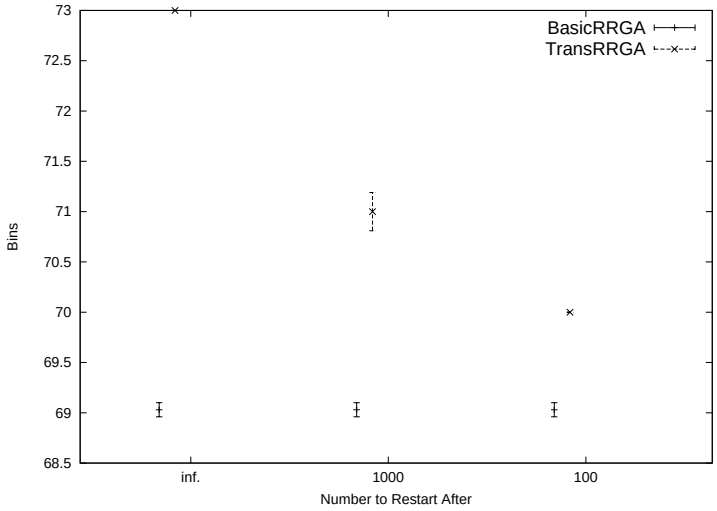



Figure B.32: Comparison of Best Results Between Representations on Problem Instance $h12$

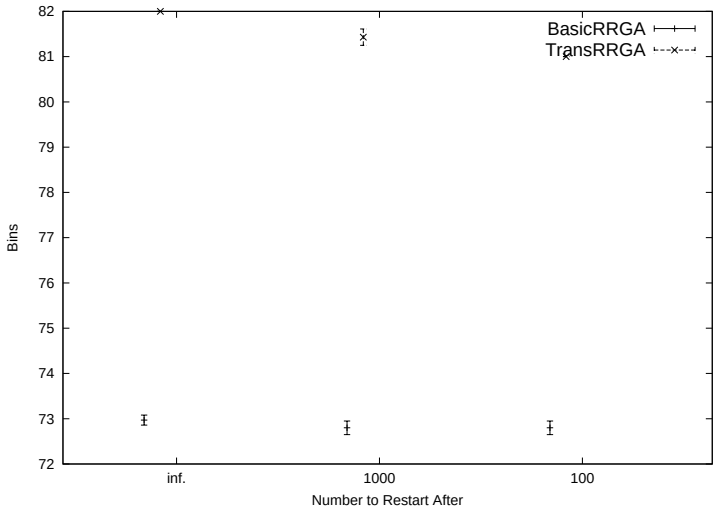



Figure B.33: Comparison of Best Results Between Representations on Problem Instance $h13$

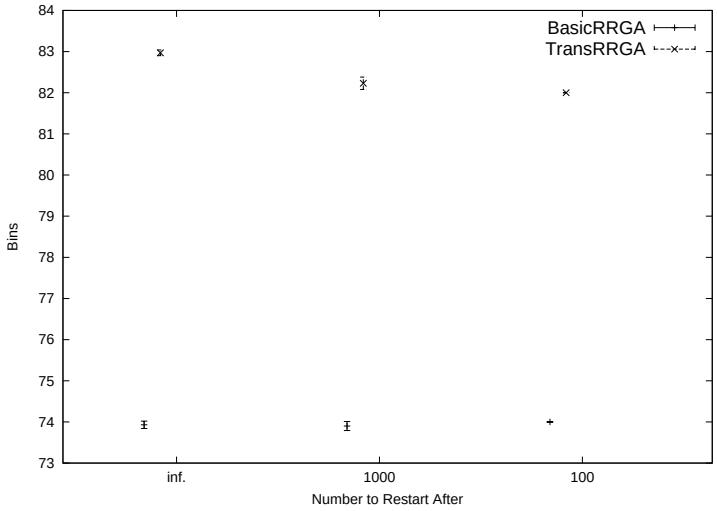



Figure B.34: Comparison of Best Results Between Representations on Problem Instance $h14$

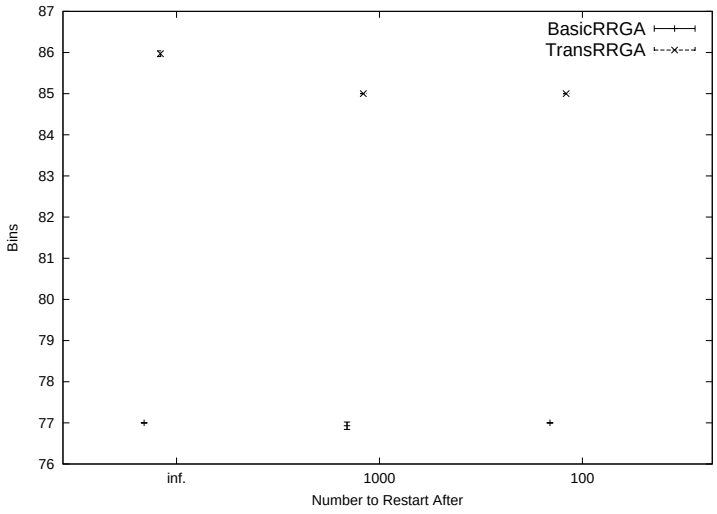



Figure B.35: Comparison of Best Results Between Representations on Problem Instance $h15$

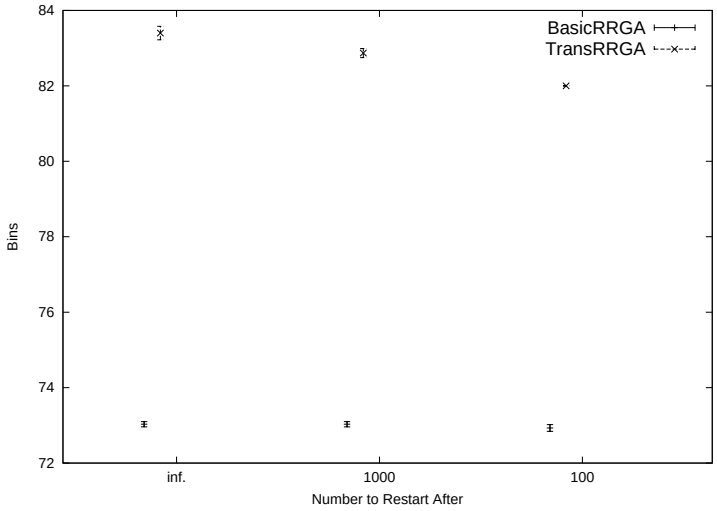



Figure B.36: Comparison of Best Results Between Representations on Problem Instance $h16$

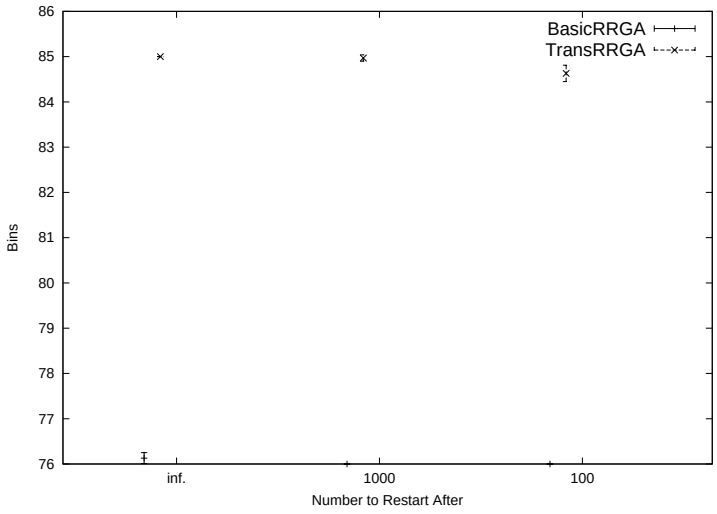



Figure B.37: Comparison of Best Results Between Representations on Problem Instance $h17$

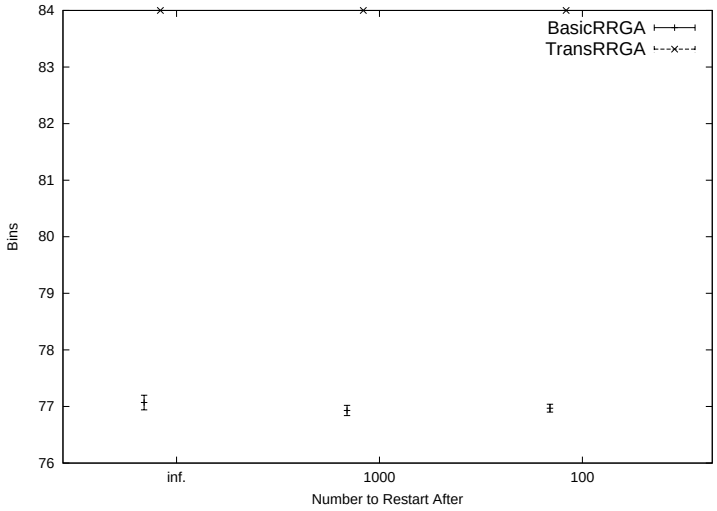



Figure B.38: Comparison of Best Results Between Representations on Problem Instance $h18$

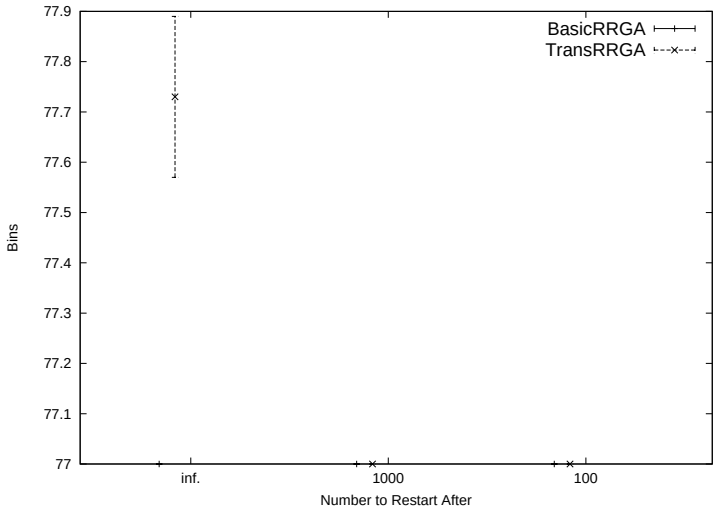



Figure B.39: Comparison of Best Results Between Representations on Problem Instance $h19$

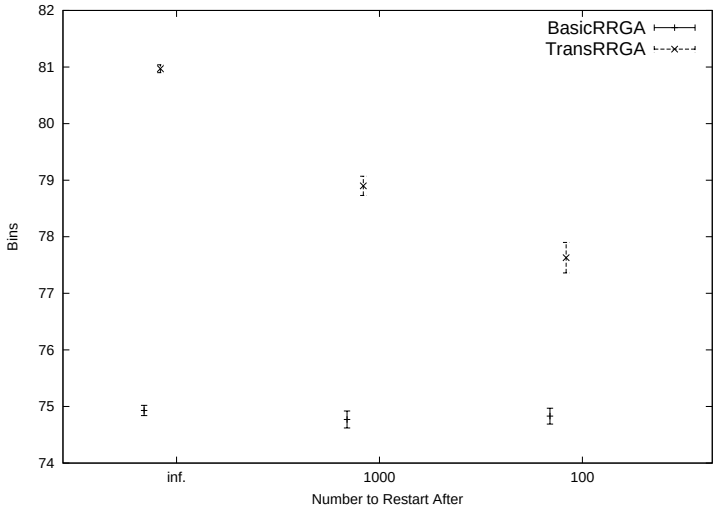



Figure B.40: Comparison of Best Results Between Representations on Problem Instance $h20$

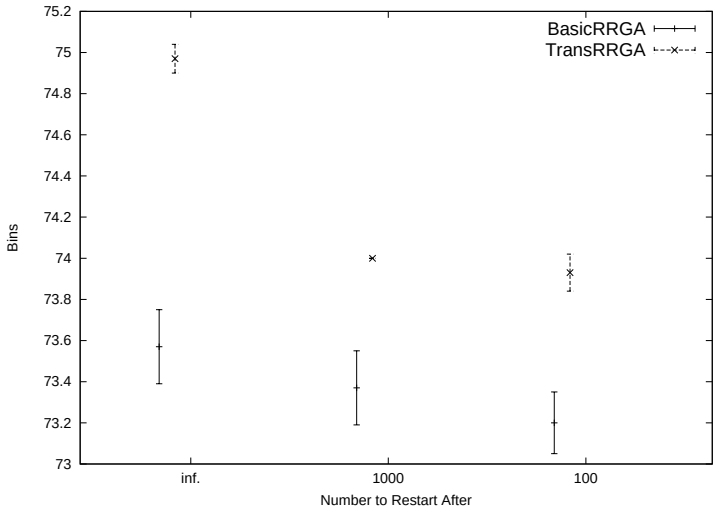



Figure B.41: Comparison of Best Results Between Representations on Problem Instance $h21$

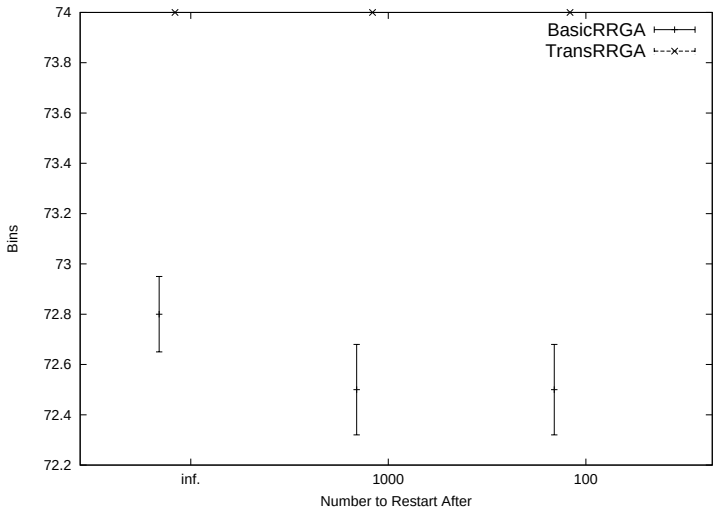



Figure B.42: Comparison of Best Results Between Representations on Problem Instance $h22$

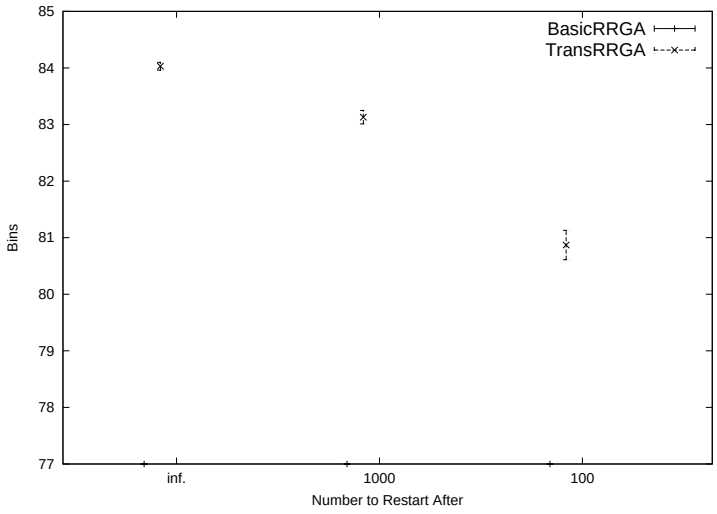



Figure B.43: Comparison of Best Results Between Representations on Problem Instance $h23$

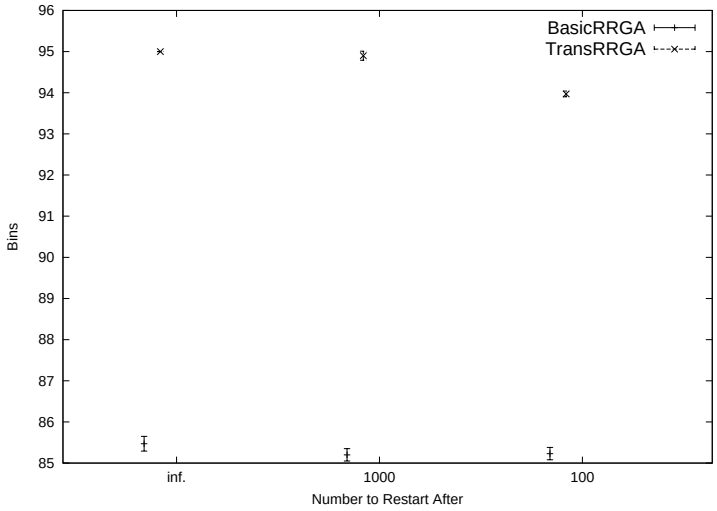



Figure B.44: Comparison of Best Results Between Representations on Problem Instance $h24$

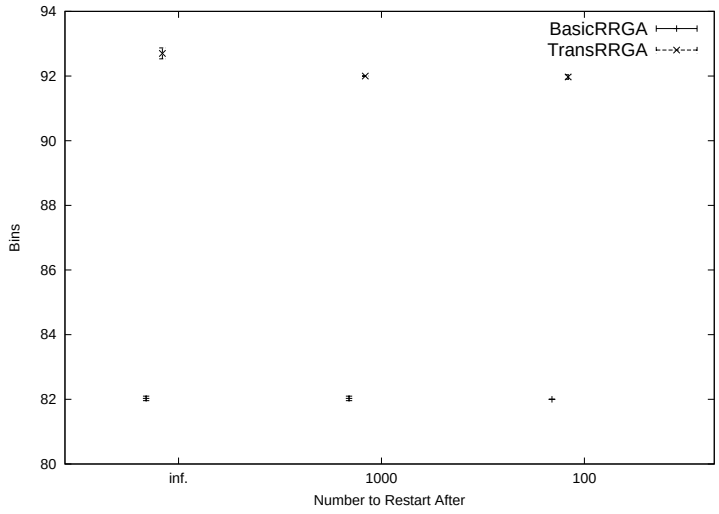



Figure B.45: Comparison of Best Results Between Representations on Problem Instance $h25$

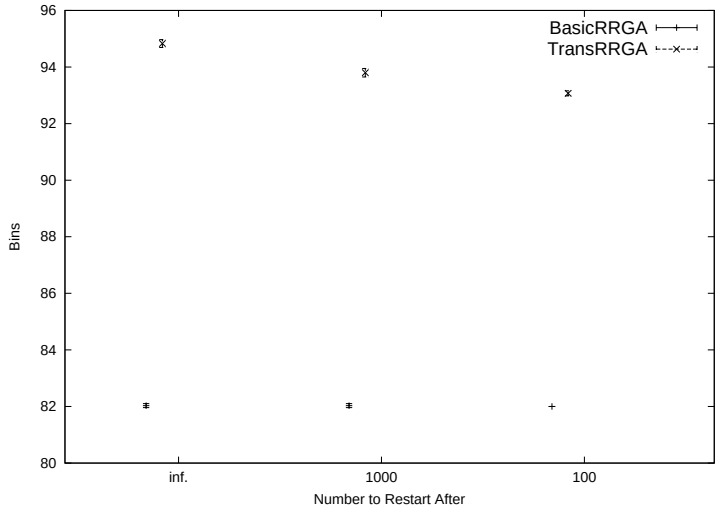



Figure B.46: Comparison of Best Results Between Representations on Problem Instance $h26$

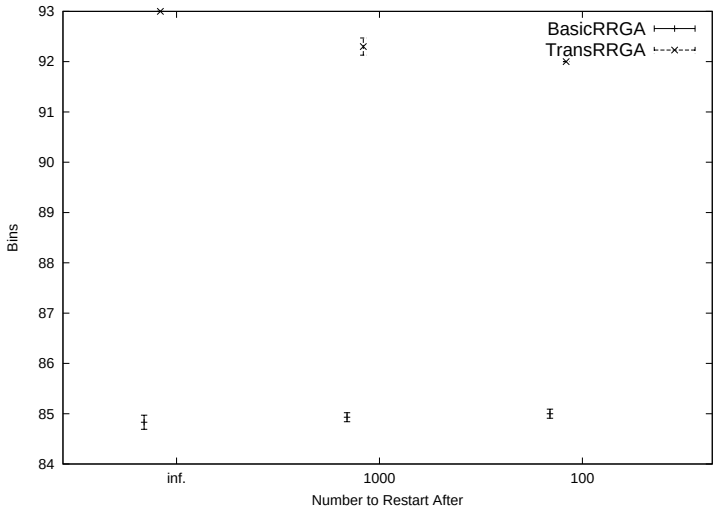



Figure B.47: Comparison of Best Results Between Representations on Problem Instance $h27$

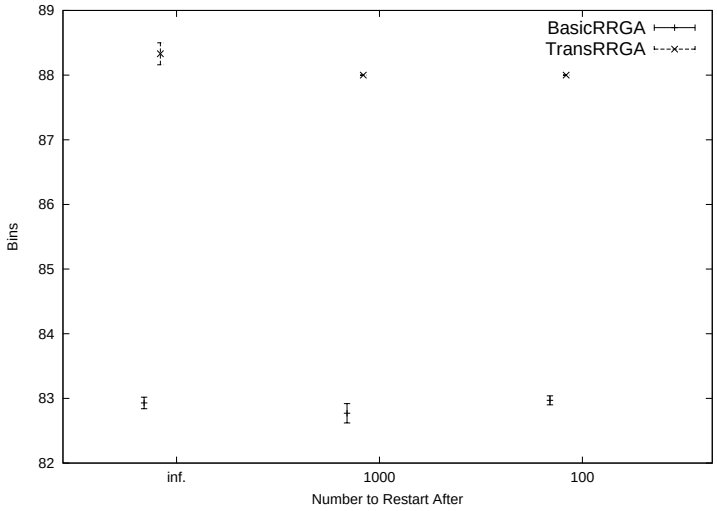



Figure B.48: Comparison of Best Results Between Representations on Problem Instance $h28$

## B.2 Graph Colouring Problem

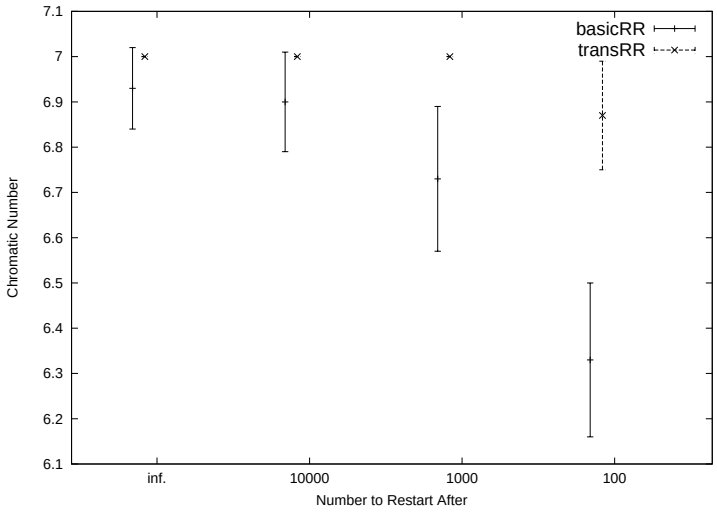



Figure B.49: Comparison of Best Results Between Representations on Problem Instance $DSJC125.1$

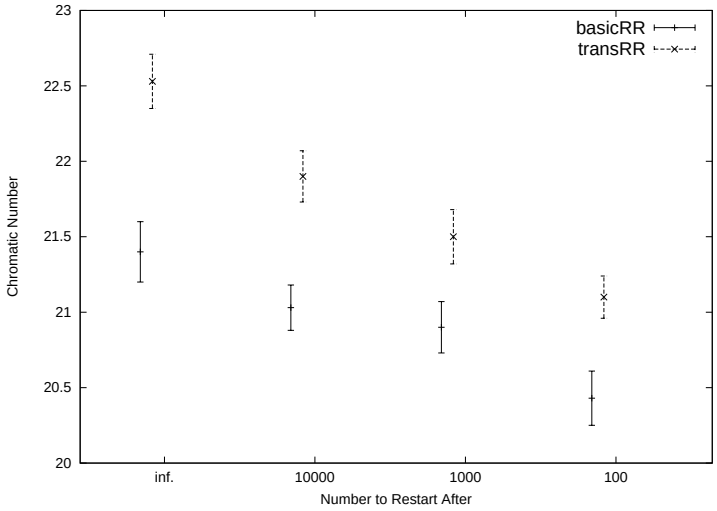



Figure B.50: Comparison of Best Results Between Representations on Problem Instance $DSJC125.5$

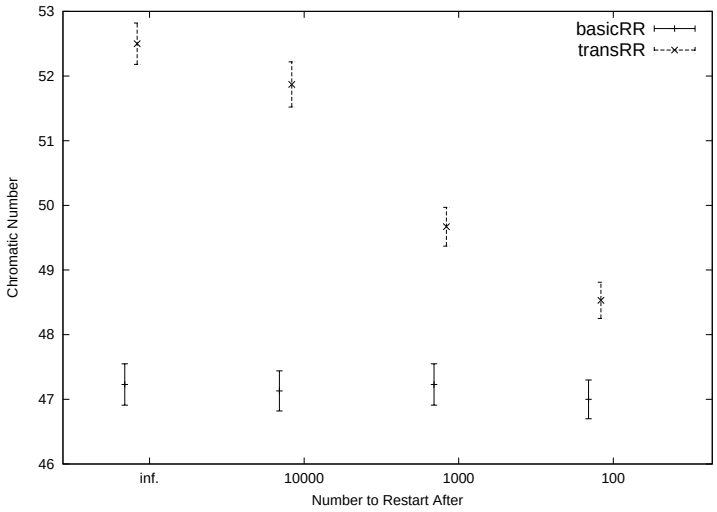



Figure B.51: Comparison of Best Results Between Representations on Problem Instance $DSJC125.9$

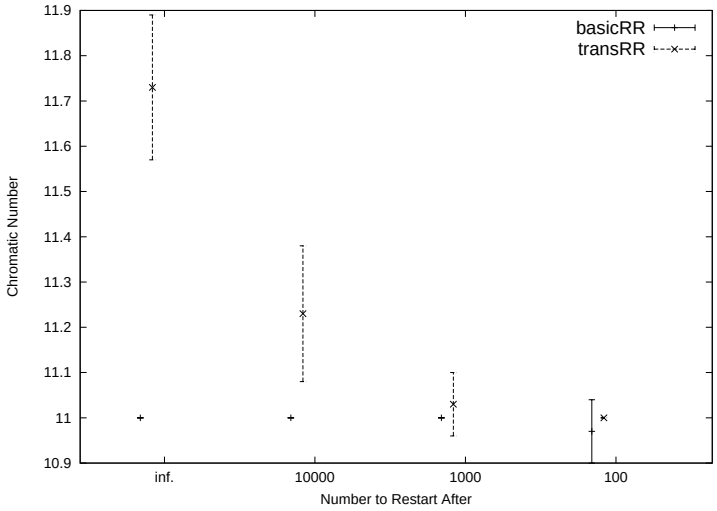



Figure B.52: Comparison of Best Results Between Representations on Problem Instance $DSJC250.1$

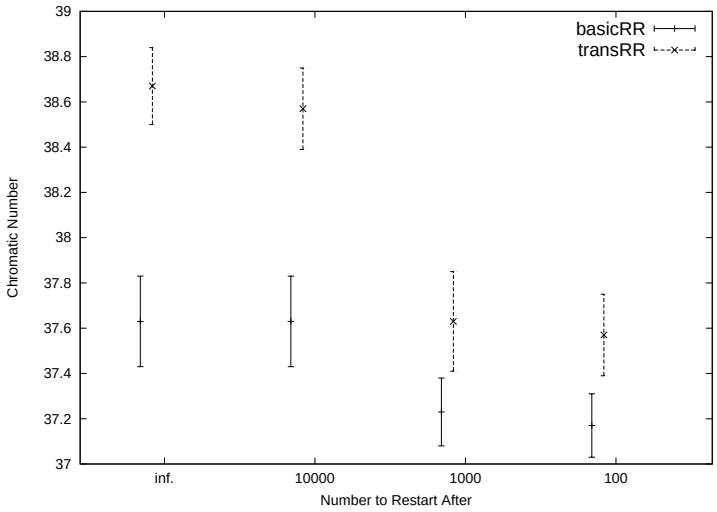



Figure B.53: Comparison of Best Results Between Representations on Problem Instance $DSJC250.5$

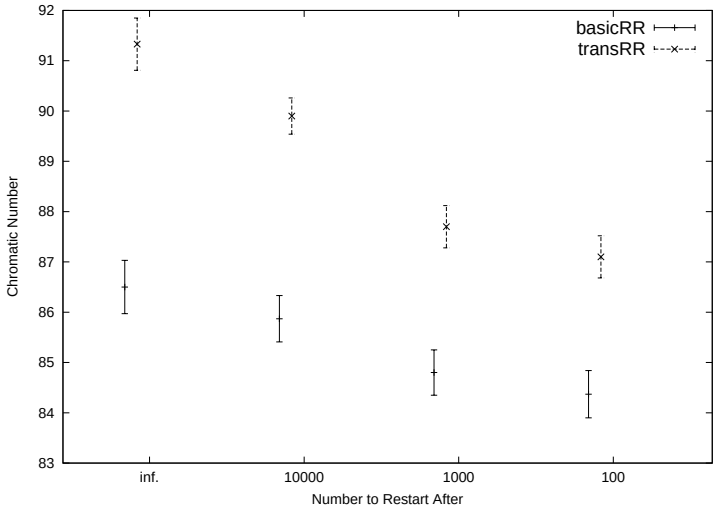



Figure B.54: Comparison of Best Results Between Representations on Problem Instance $DSJC250.9$

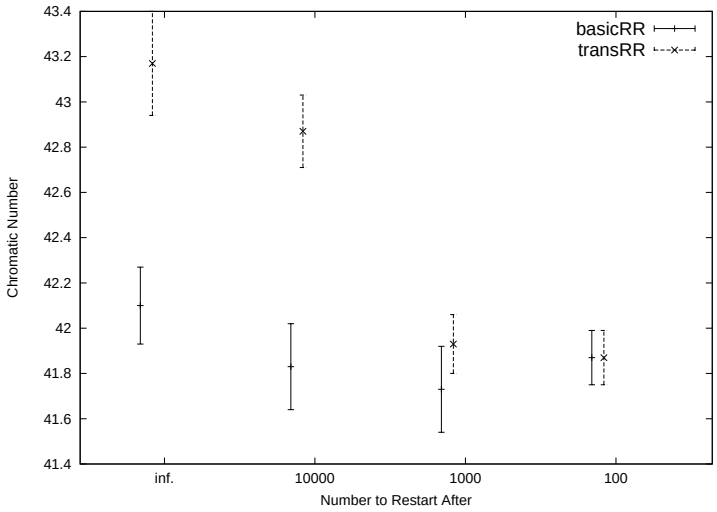



Figure B.55: Comparison of Best Results Between Representations on Problem Instance $flat300280$

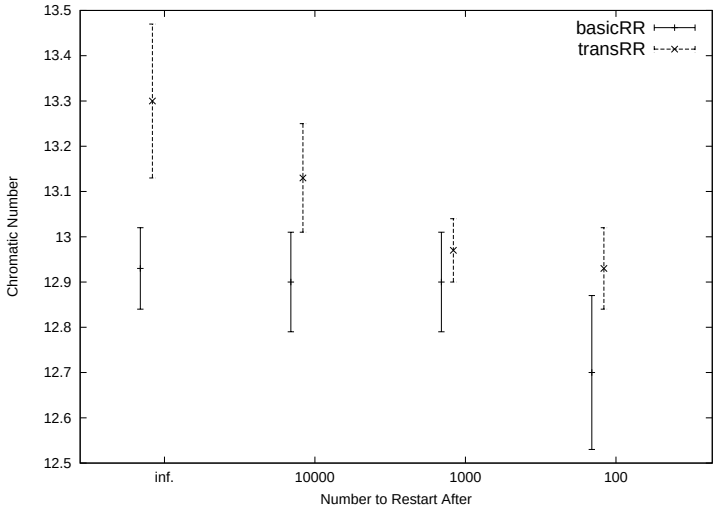



Figure B.56: Comparison of Best Results Between Representations on Problem Instance $queen1010$

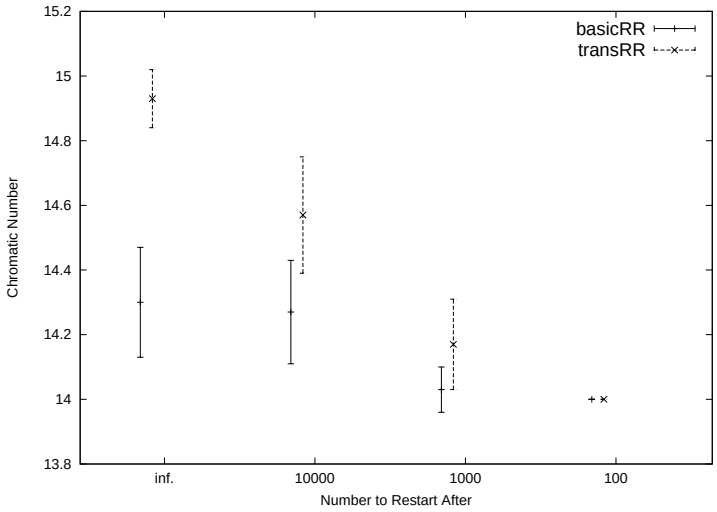



Figure B.57: Comparison of Best Results Between Representations on Problem Instance *queen*1111

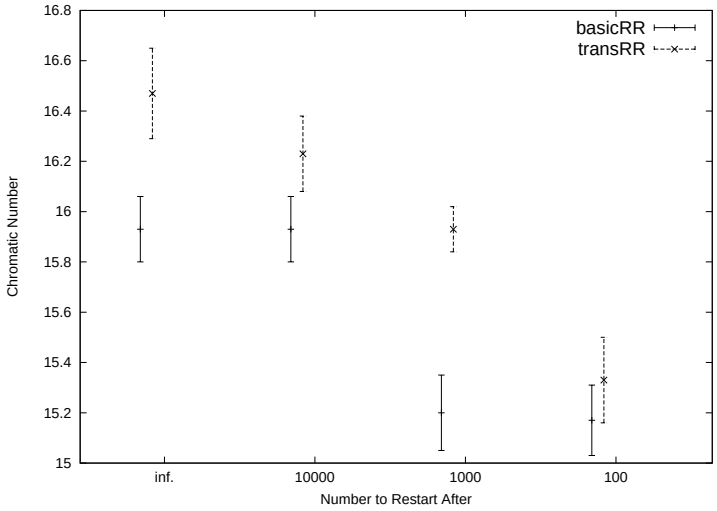



Figure B.58: Comparison of Best Results Between Representations on Problem Instance *queen*1212

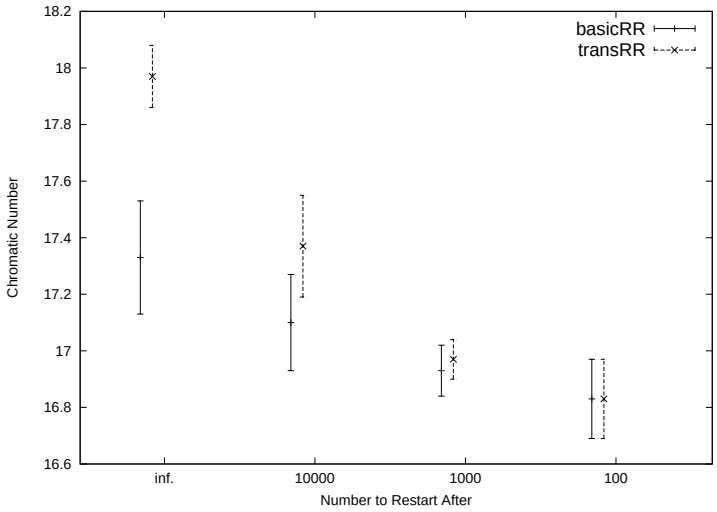



Figure B.59: Comparison of Best Results Between Representations on Problem Instance *queen*1313

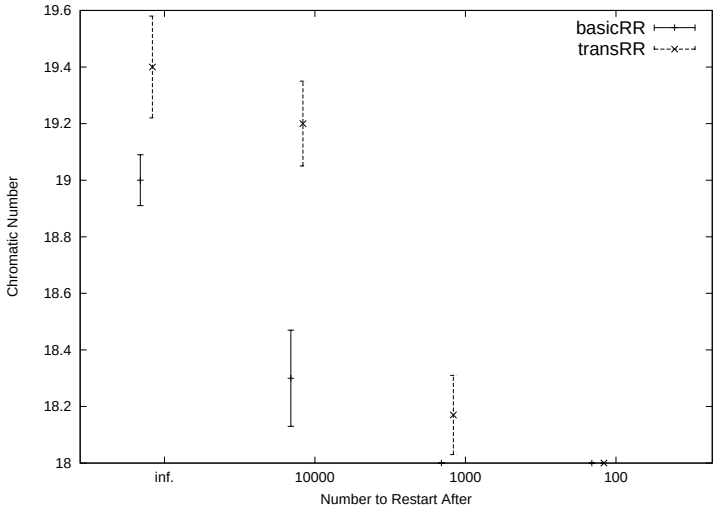



Figure B.60: Comparison of Best Results Between Representations on Problem Instance *queen*1414

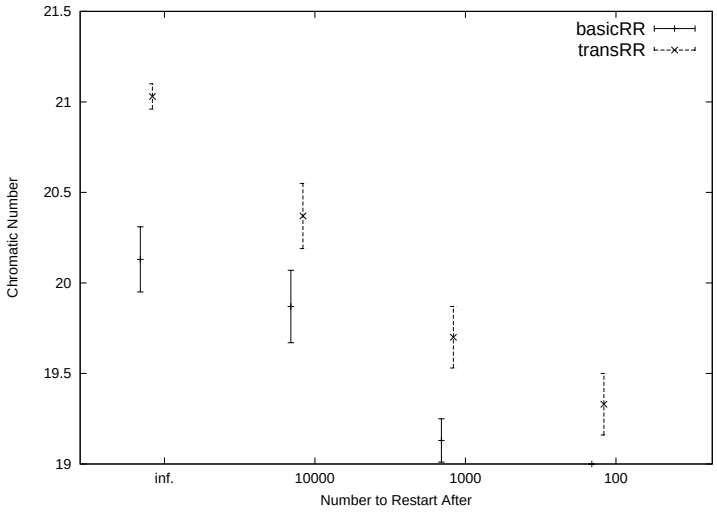



Figure B.61: Comparison of Best Results Between Representations on Problem Instance *queen*1515

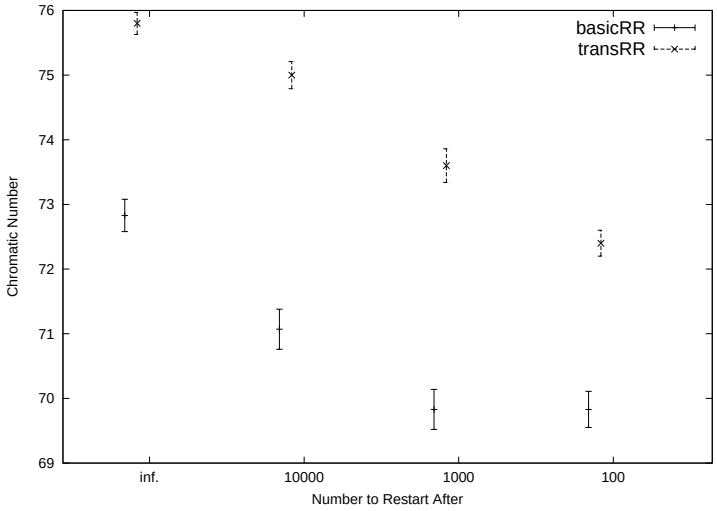



Figure B.62: Comparison of Best Results Between Representations on Problem Instance $r250.5$

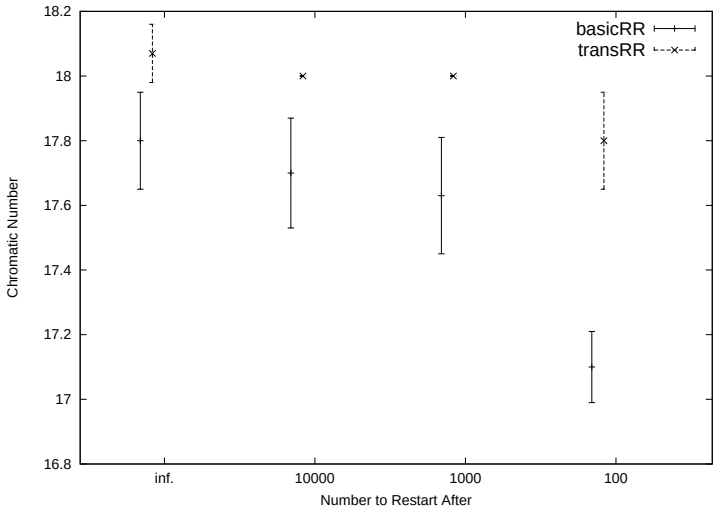



Figure B.63: Comparison of Best Results Between Representations on Problem Instance $DSJC500.1$

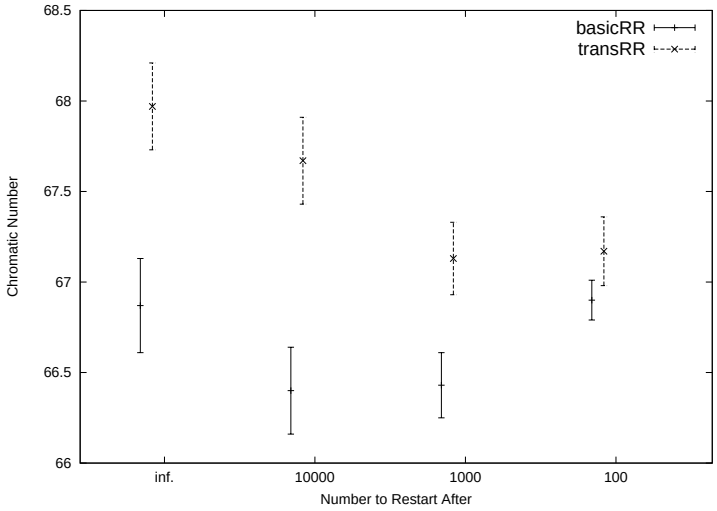



Figure B.64: Comparison of Best Results Between Representations on Problem Instance $DSJC500.5$

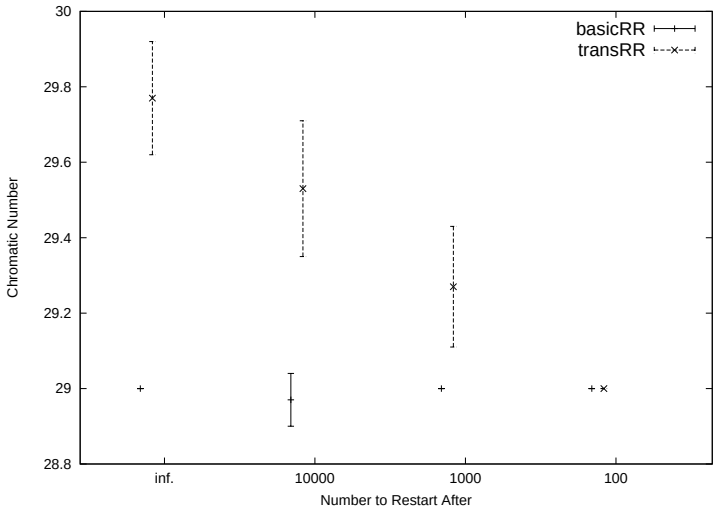



Figure B.65: Comparison of Best Results Between Representations on Problem Instance $DSJC1000.1$

## B.3 Travelling Salesman Problem: Large Problem Instances

### B.3.1 No Post Optimization

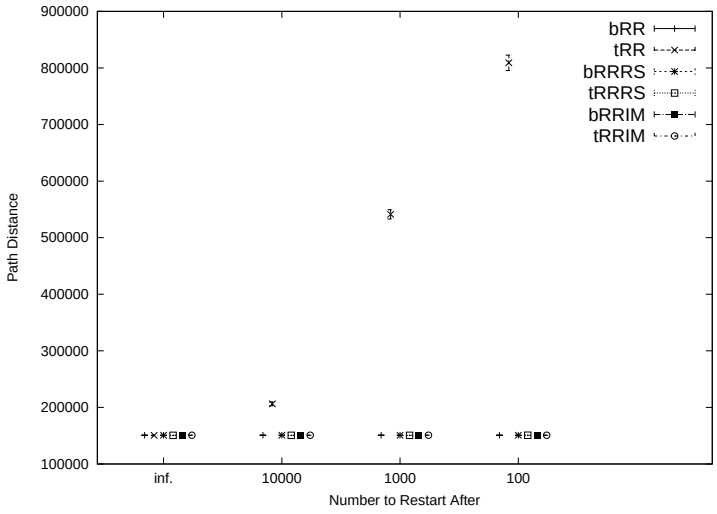



Figure B.66: Comparison of Best Results Between Representations on Problem Instance d1291

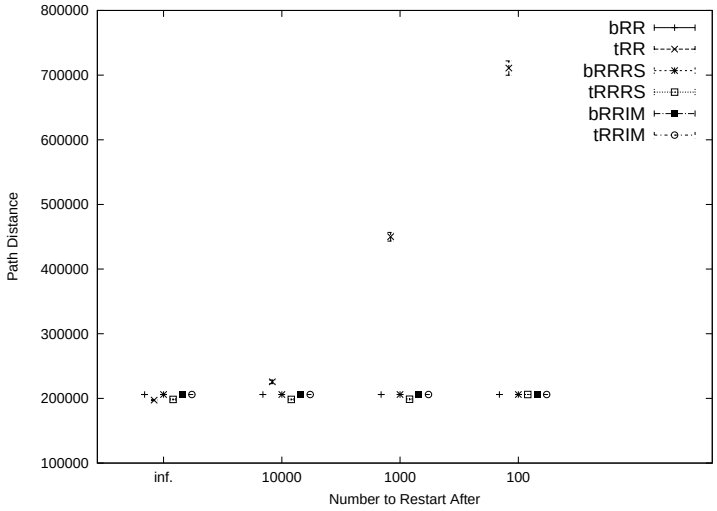



Figure B.67: Comparison of Best Results Between Representations on Problem Instance d1655

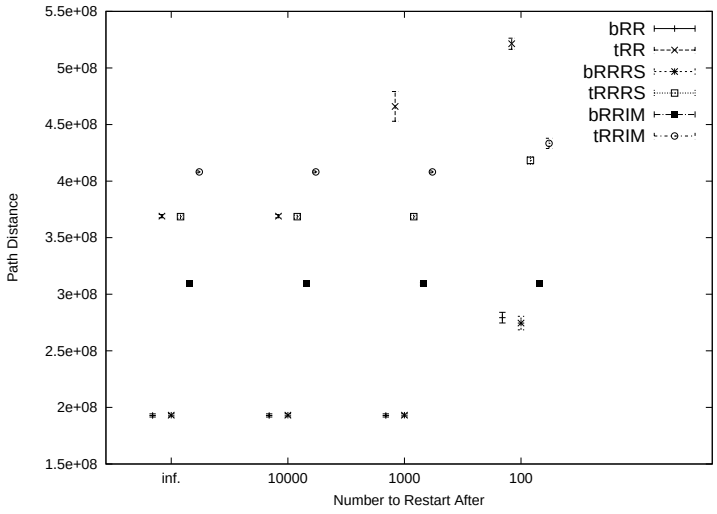



Figure B.68: Comparison of Best Results Between Representations on Problem Instance dsj1000

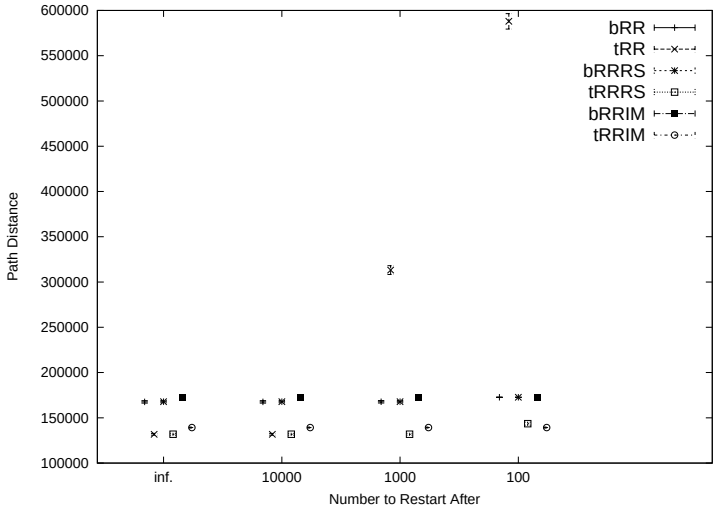



Figure B.69: Comparison of Best Results Between Representations on Problem Instance fl1400

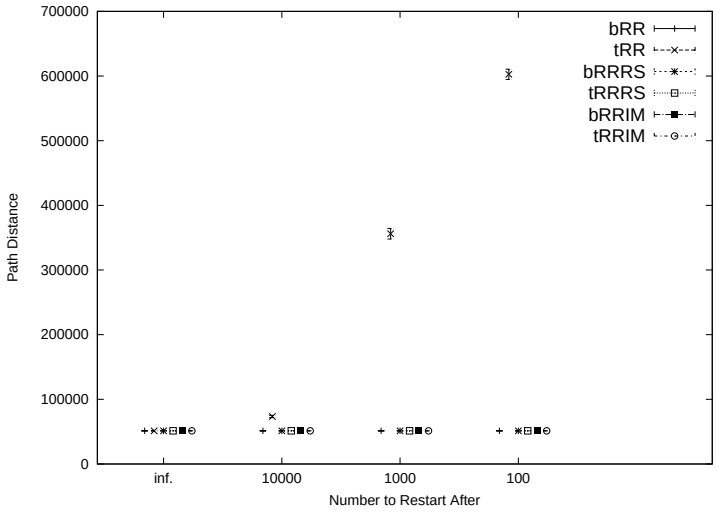



Figure B.70: Comparison of Best Results Between Representations on Problem Instance fl1577

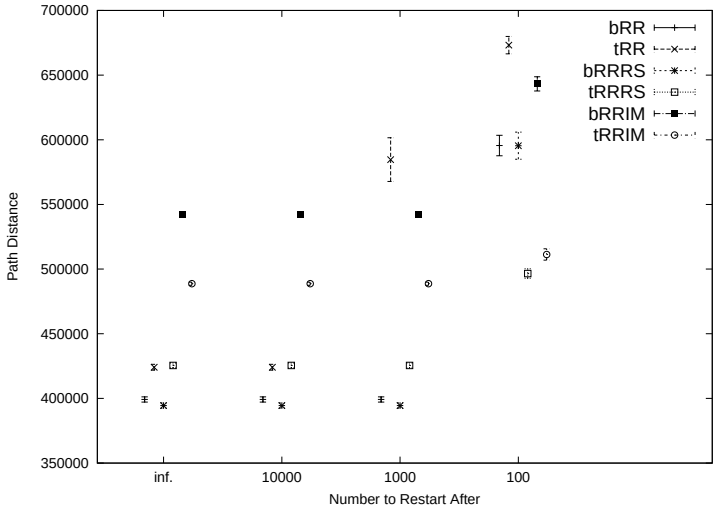



Figure B.71: Comparison of Best Results Between Representations on Problem Instance nrw1379

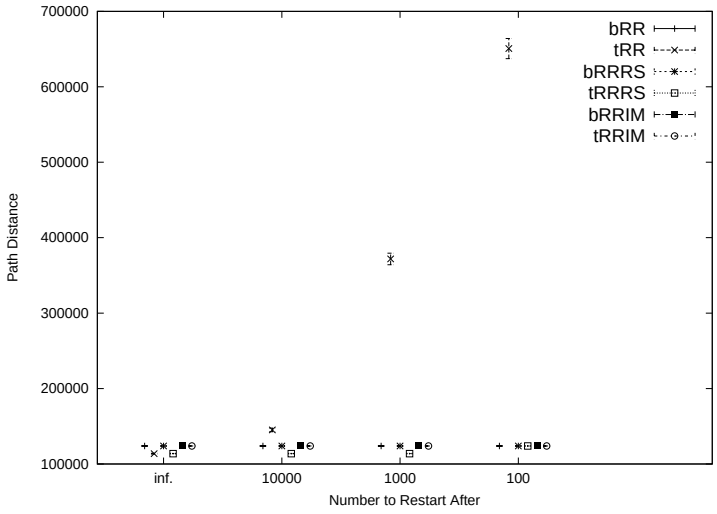



Figure B.72: Comparison of Best Results Between Representations on Problem Instance pcb1173

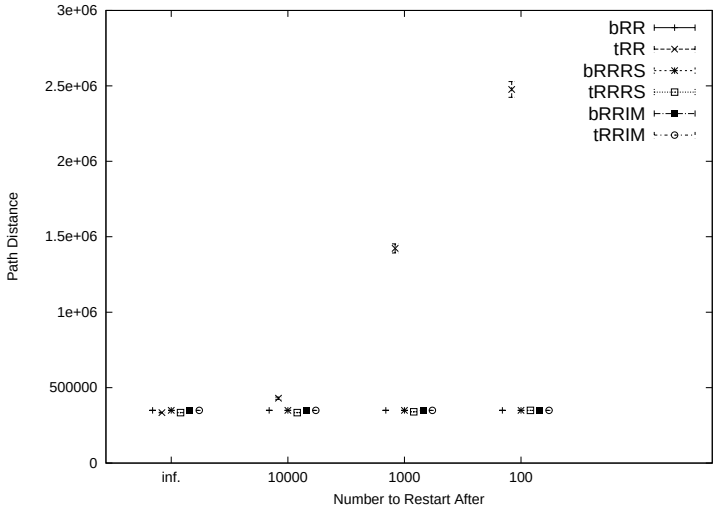



Figure B.73: Comparison of Best Results Between Representations on Problem Instance pr1002

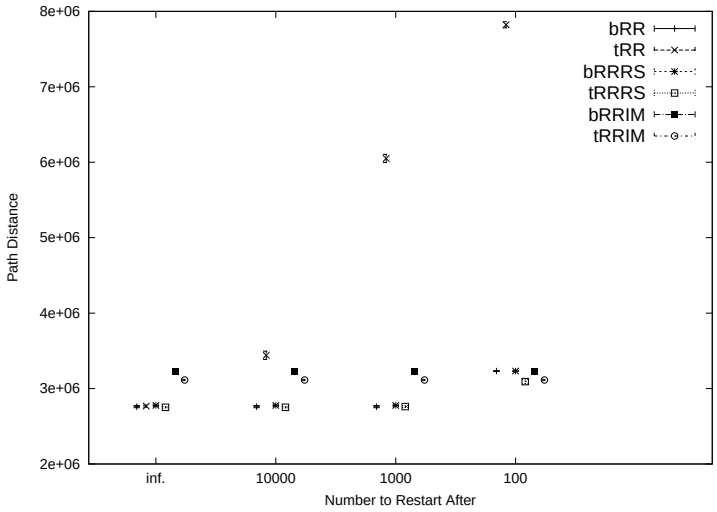



Figure B.74: Comparison of Best Results Between Representations on Problem Instance rl1304

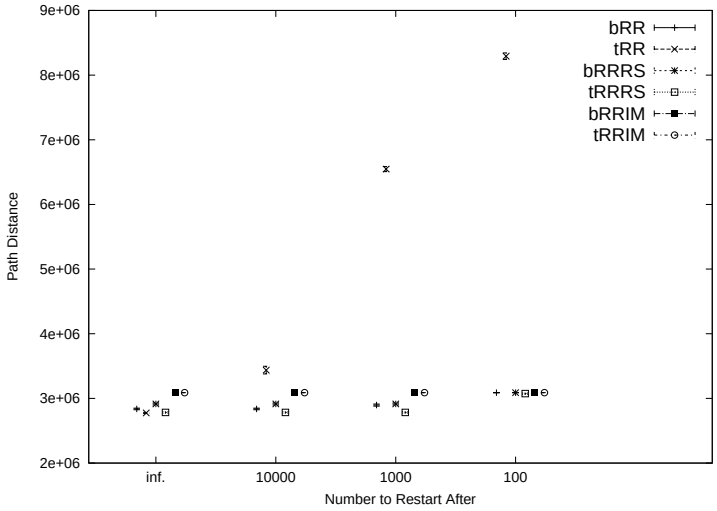



Figure B.75: Comparison of Best Results Between Representations on Problem Instance rl1323

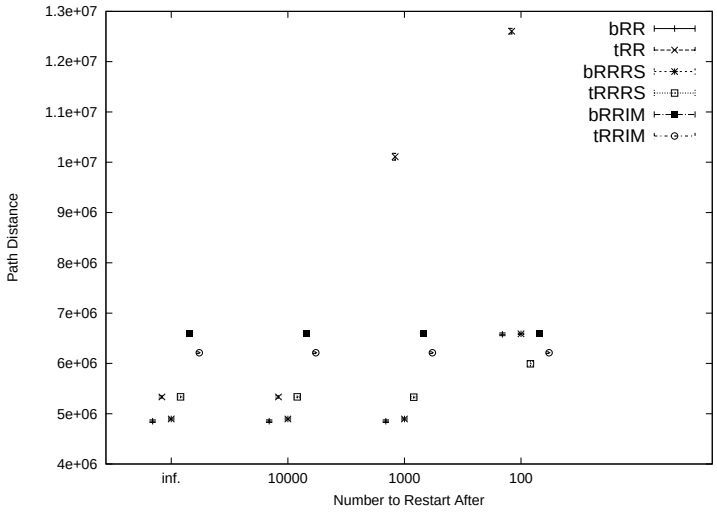



Figure B.76: Comparison of Best Results Between Representations on Problem Instance rl1889

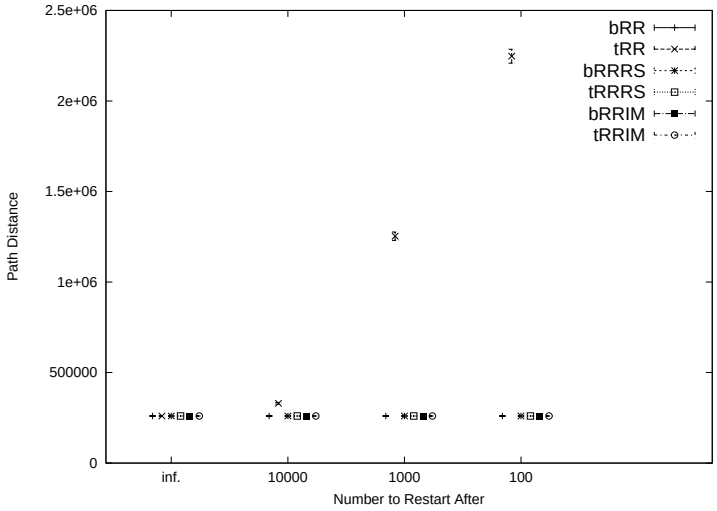



Figure B.77: Comparison of Best Results Between Representations on Problem Instance u1060

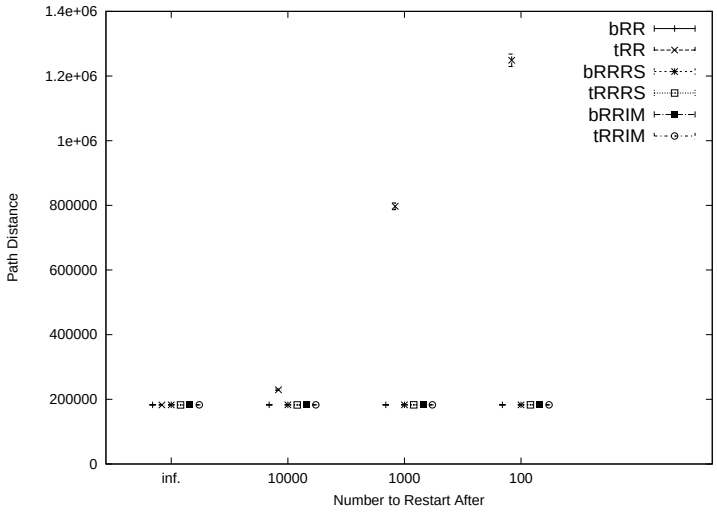



Figure B.78: Comparison of Best Results Between Representations on Problem Instance u1432

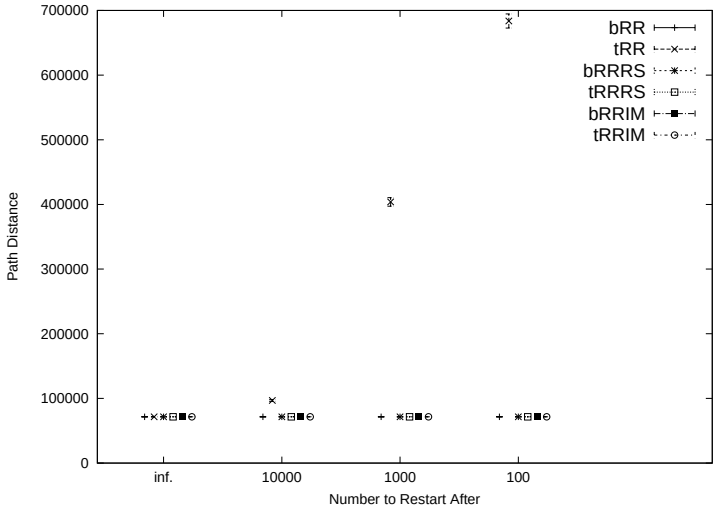



Figure B.79: Comparison of Best Results Between Representations on Problem Instance u1817

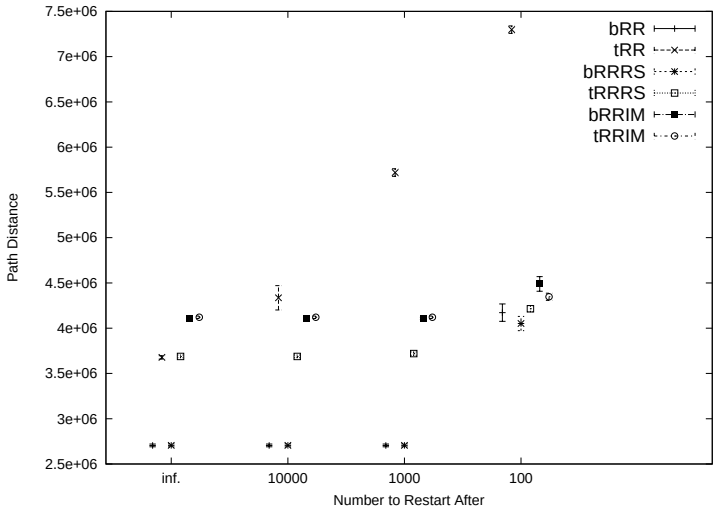



Figure B.80: Comparison of Best Results Between Representations on Problem Instance vm1084

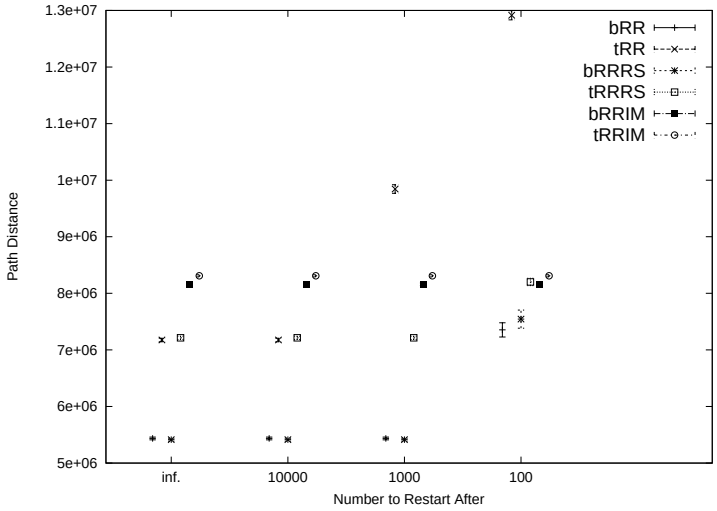



Figure B.81: Comparison of Best Results Between Representations on Problem Instance vm1748

### B.3.2 Post Optimization

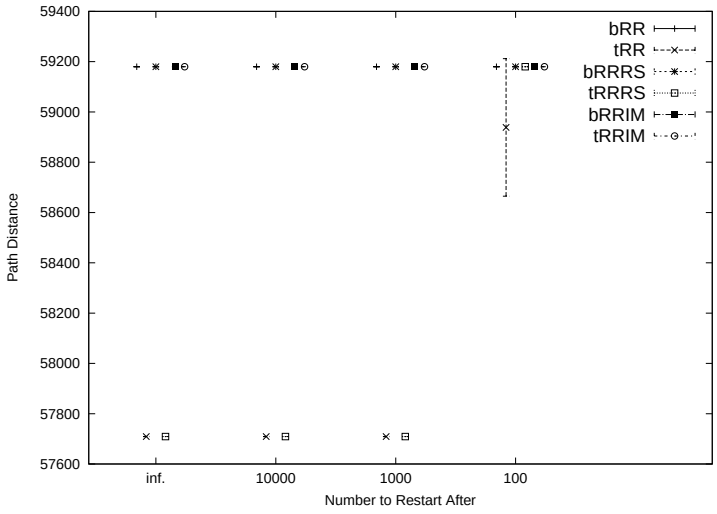



Figure B.82: Comparison of Best Results Between Representations on Problem Instance d1291

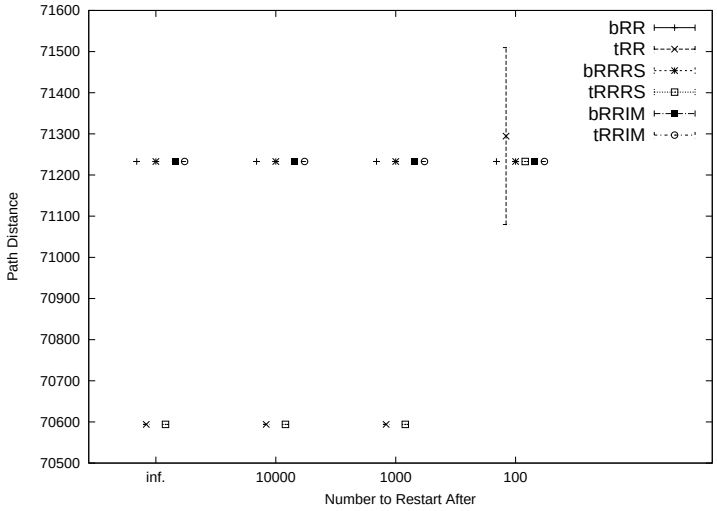



Figure B.83: Comparison of Best Results Between Representations on Problem Instance d1655

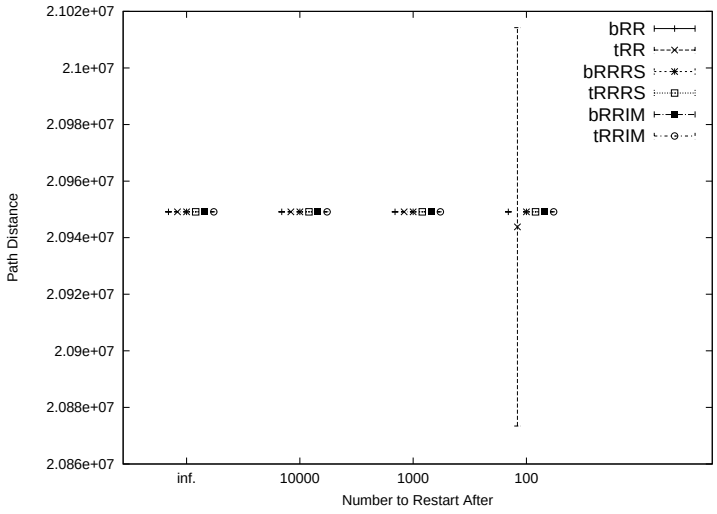



Figure B.84: Comparison of Best Results Between Representations on Problem Instance dsj1000

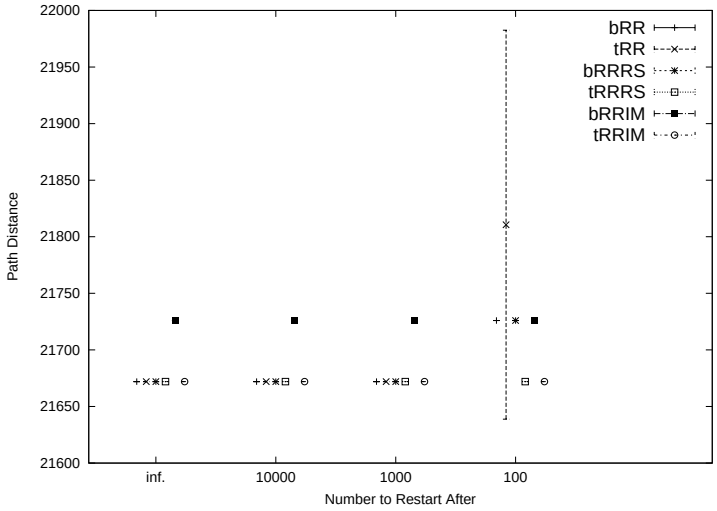



Figure B.85: Comparison of Best Results Between Representations on Problem Instance fl1400

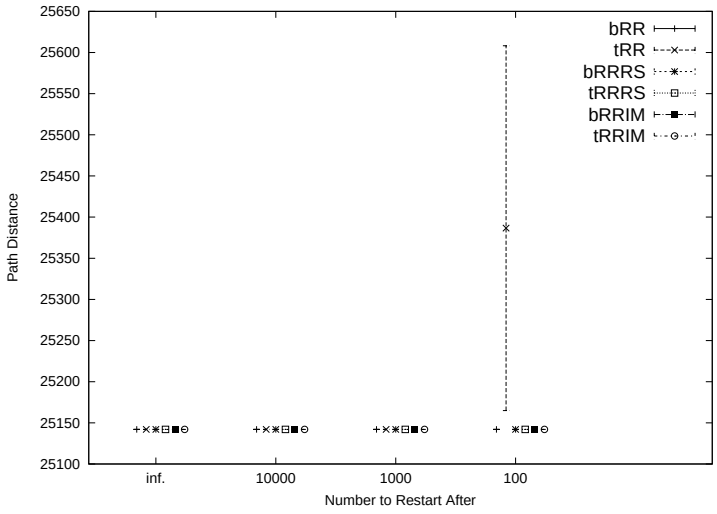



Figure B.86: Comparison of Best Results Between Representations on Problem Instance fl1577

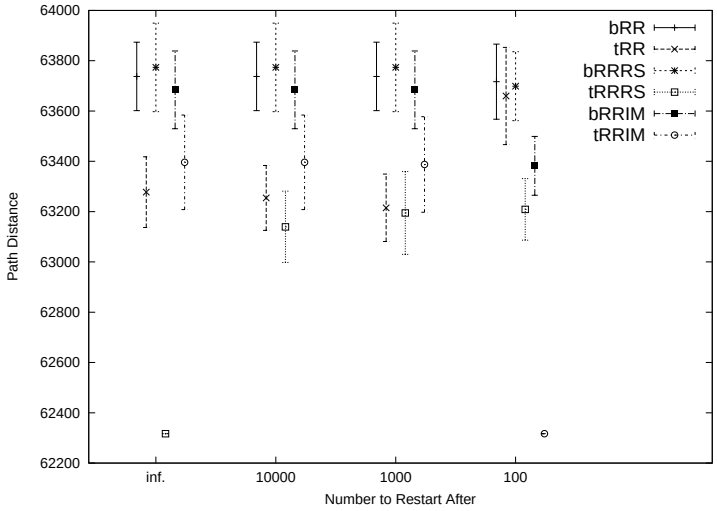



Figure B.87: Comparison of Best Results Between Representations on Problem Instance nrw1379

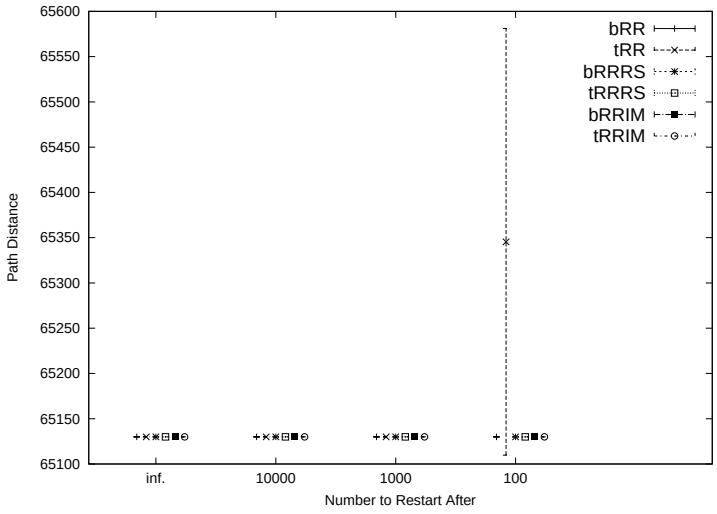



Figure B.88: Comparison of Best Results Between Representations on Problem Instance pcb1173

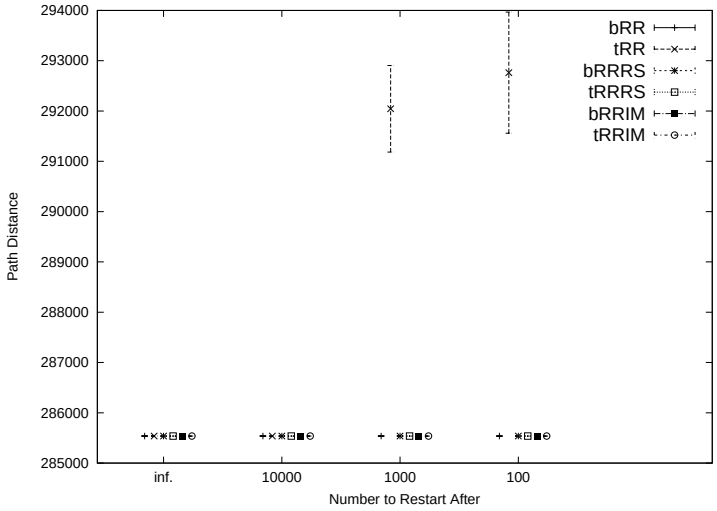



Figure B.89: Comparison of Best Results Between Representations on Problem Instance pr1002

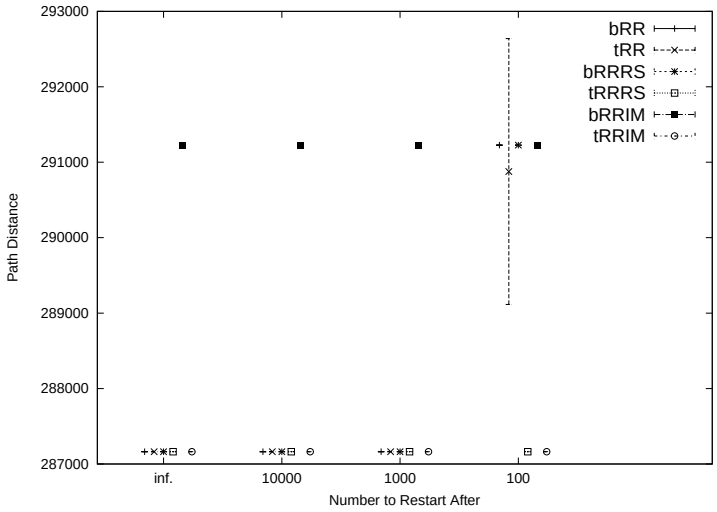



Figure B.90: Comparison of Best Results Between Representations on Problem Instance rl1304

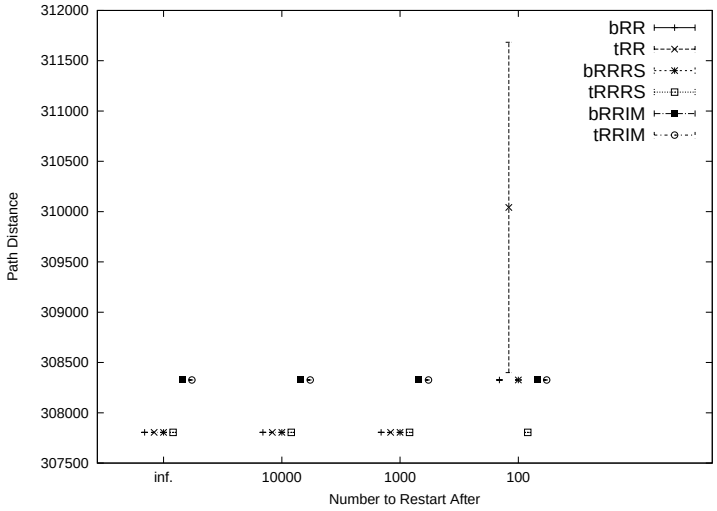



Figure B.91: Comparison of Best Results Between Representations on Problem Instance rl1323

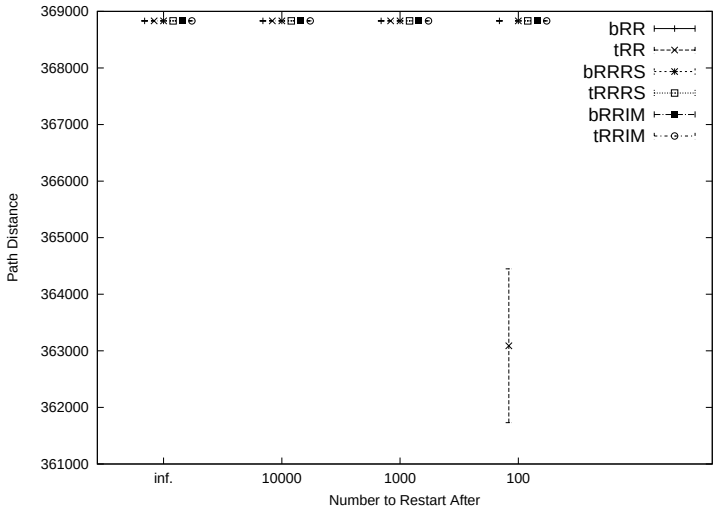



Figure B.92: Comparison of Best Results Between Representations on Problem Instance rl1889

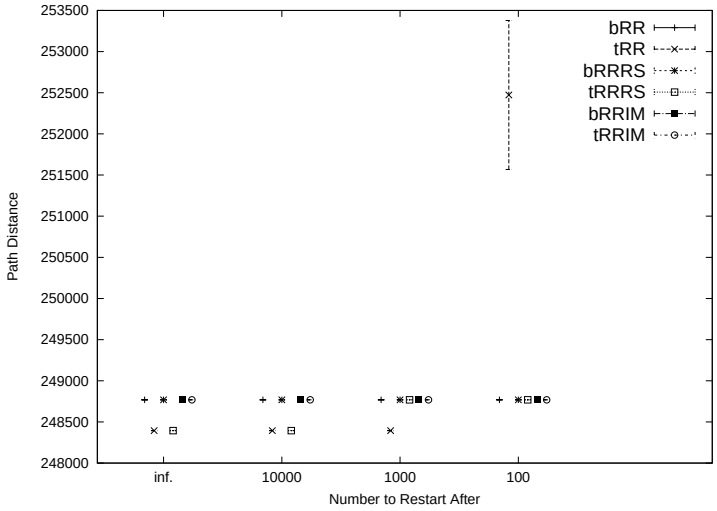



Figure B.93: Comparison of Best Results Between Representations on Problem Instance u1060

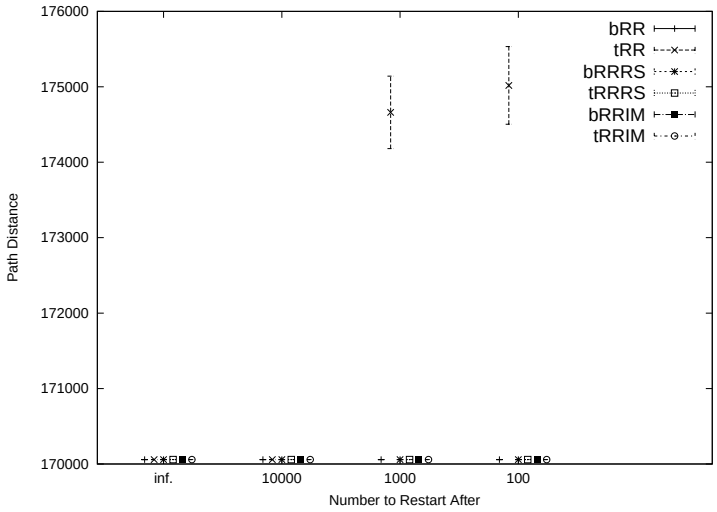



Figure B.94: Comparison of Best Results Between Representations on Problem Instance u1432

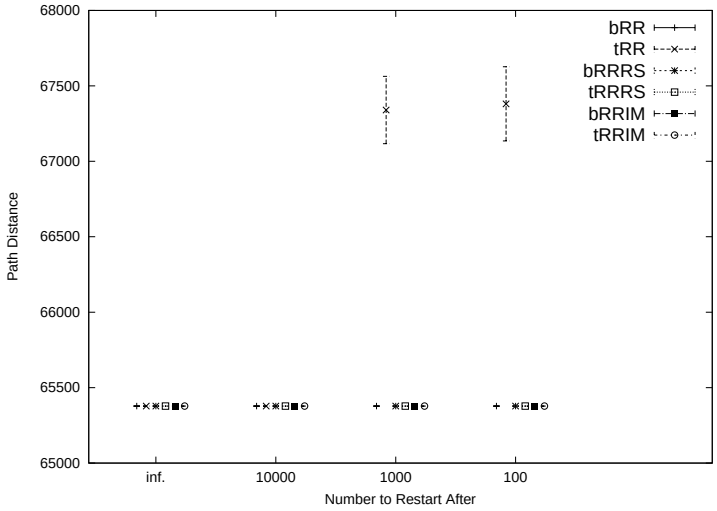



Figure B.95: Comparison of Best Results Between Representations on Problem Instance u1817

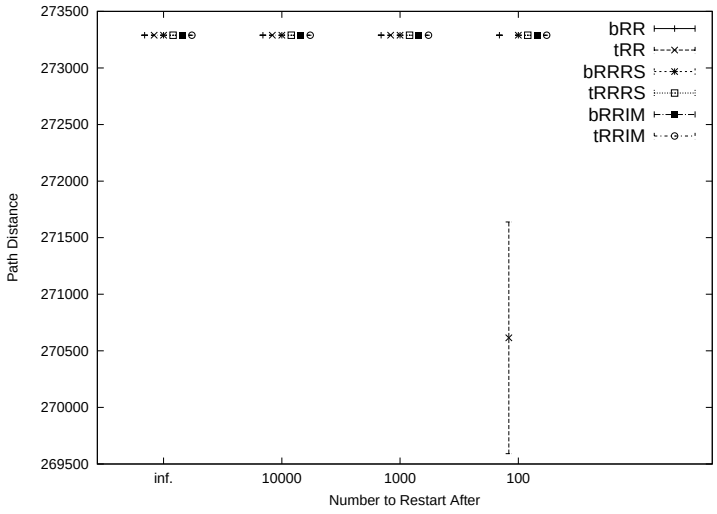



Figure B.96: Comparison of Best Results Between Representations on Problem Instance vm1084

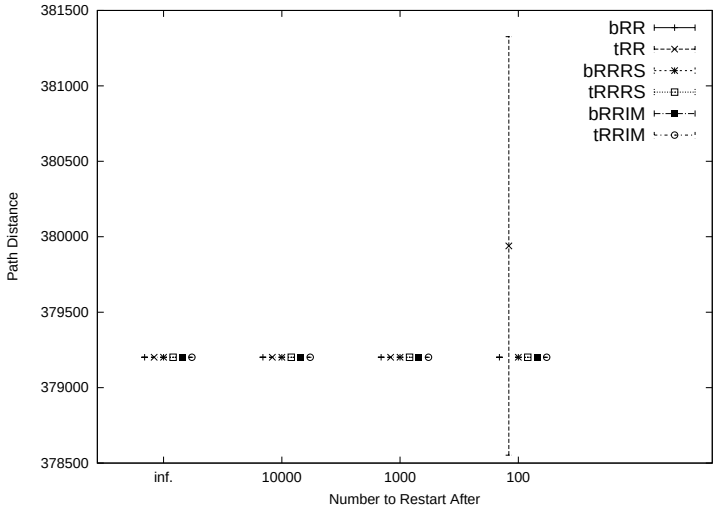



Figure B.97: Comparison of Best Results Between Representations on Problem Instance vm1748

### B.3.3 Comparison Between No Post Optimization Results and Post Optimization Results

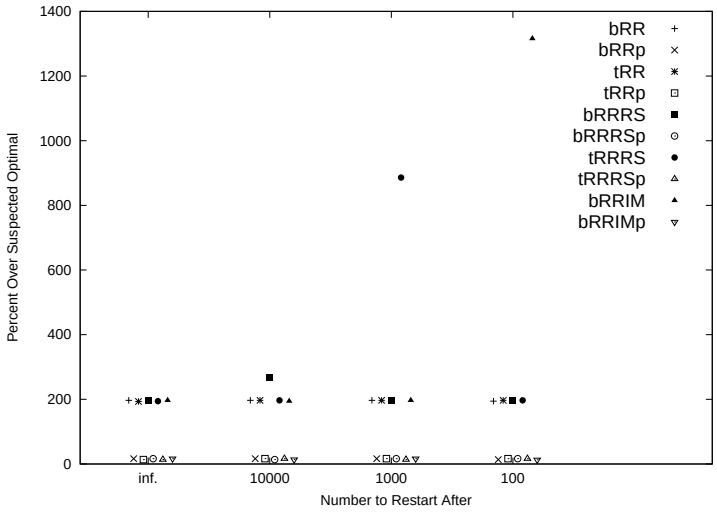



Figure B.98: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance d1291

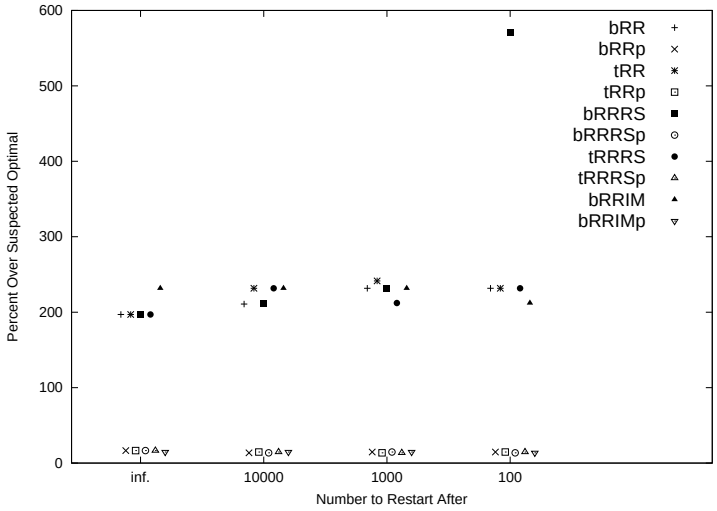



Figure B.99: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance d1655

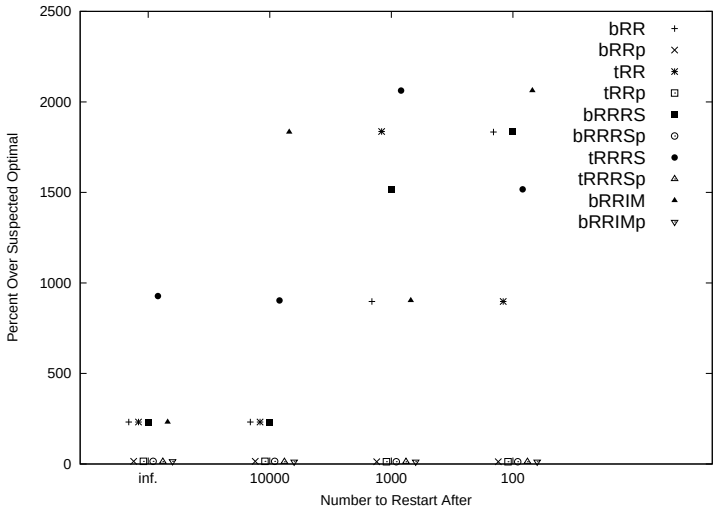



Figure B.100: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance dsj1000

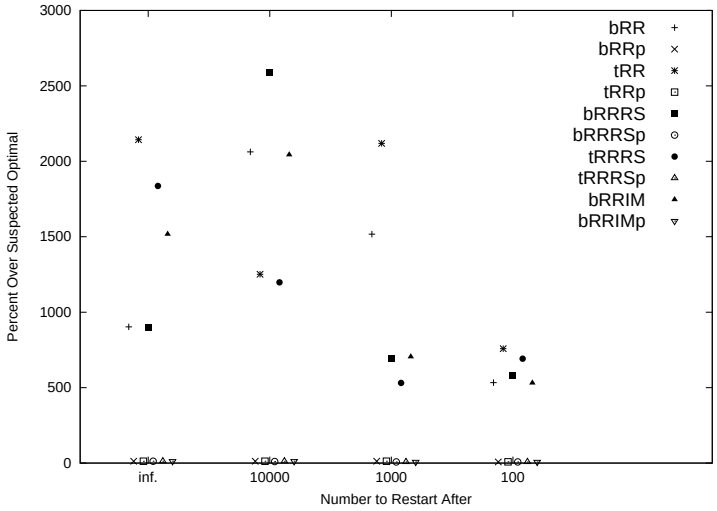



Figure B.101: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance fl1400

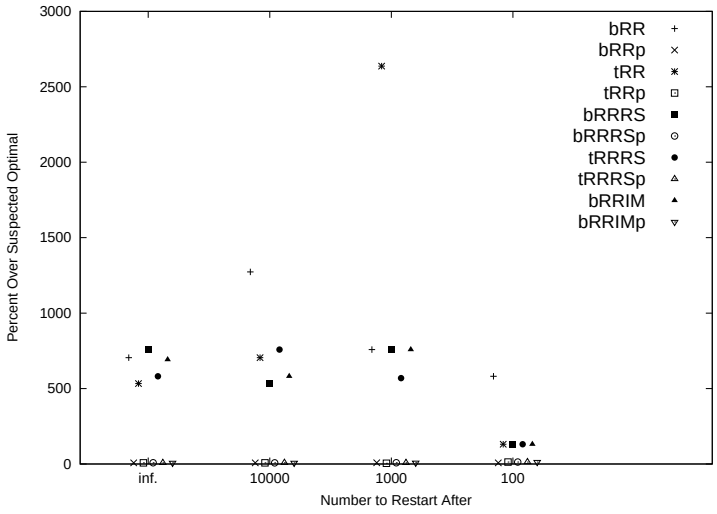



Figure B.102: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance fl1577

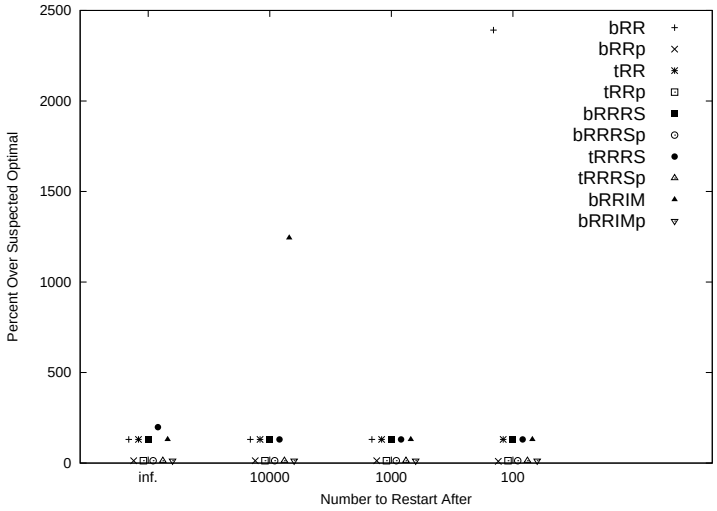



Figure B.103: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance nrw1379

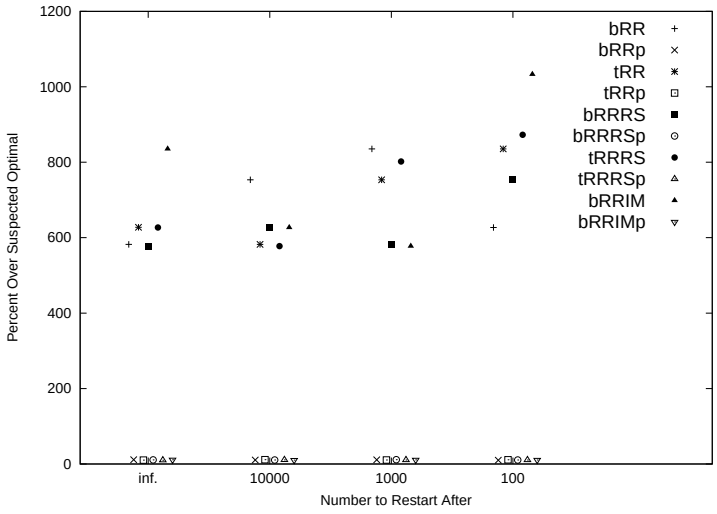



Figure B.104: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance pcb1173

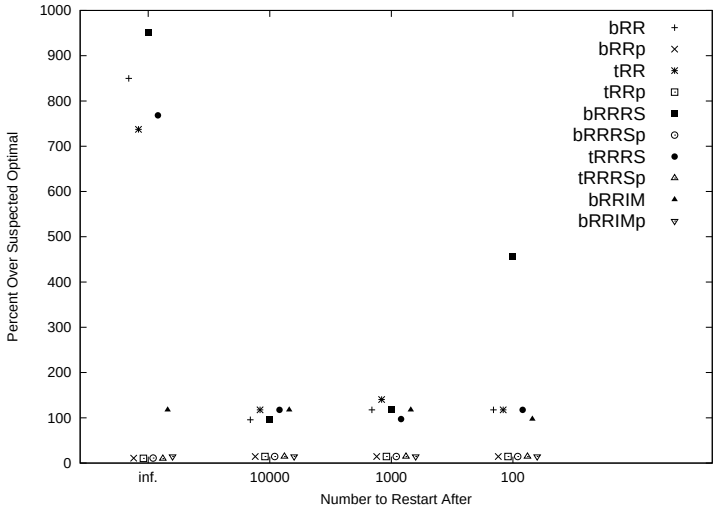



Figure B.105: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance pr1002

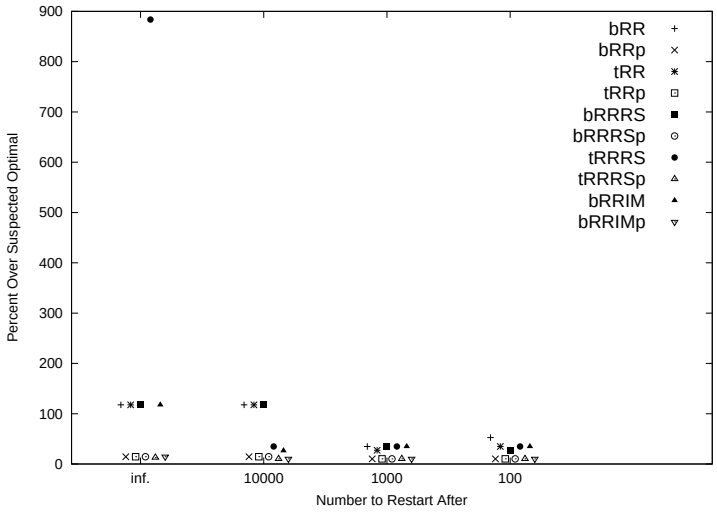



Figure B.106: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance rl1304

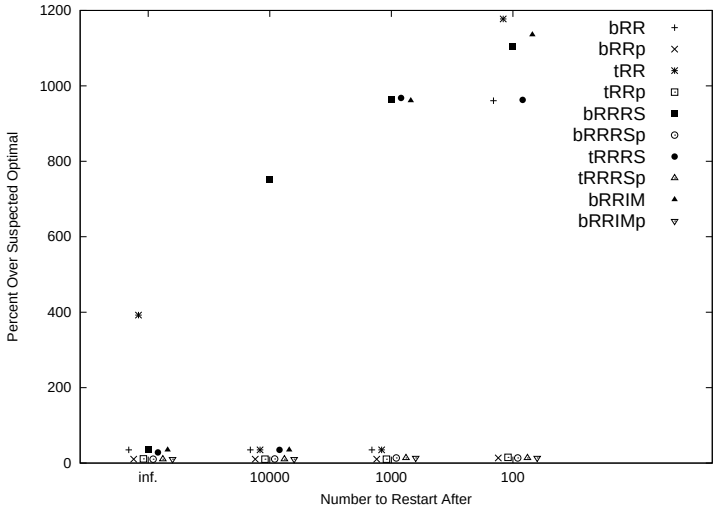



Figure B.107: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance rl1323

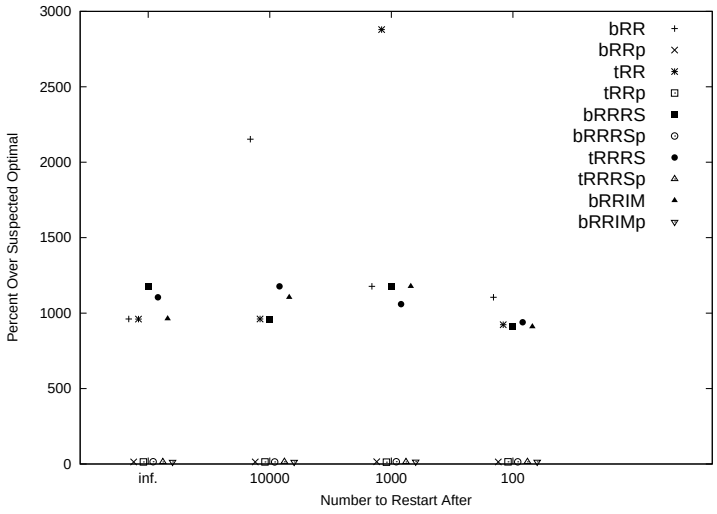



Figure B.108: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance rl1889

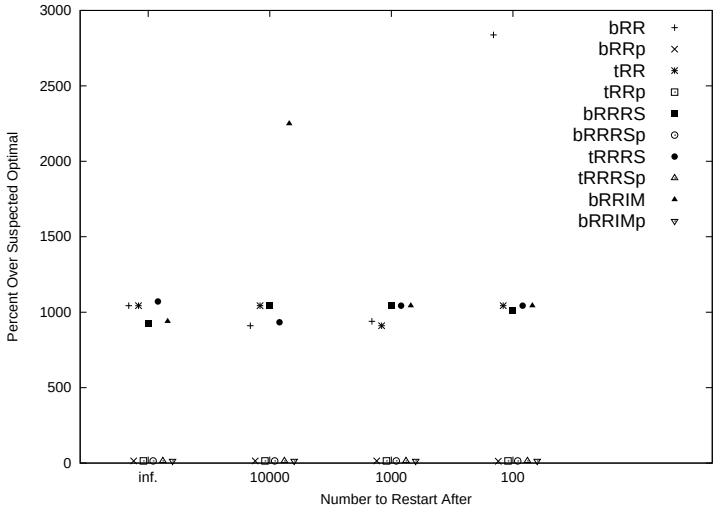



Figure B.109: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance u1060

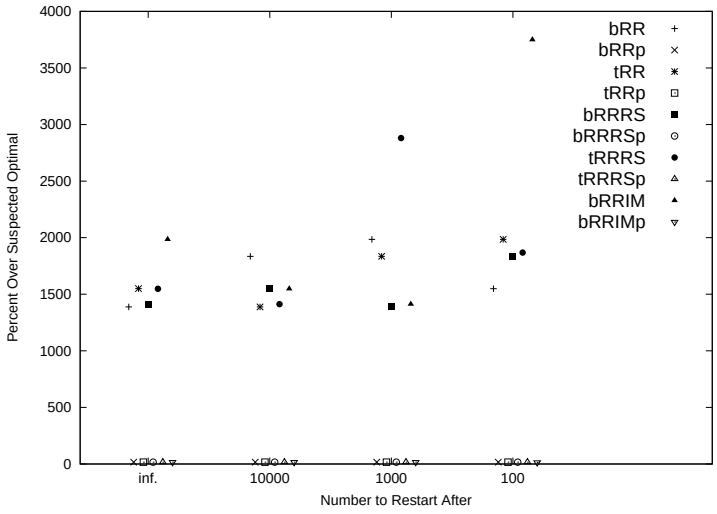



Figure B.110: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance u1432

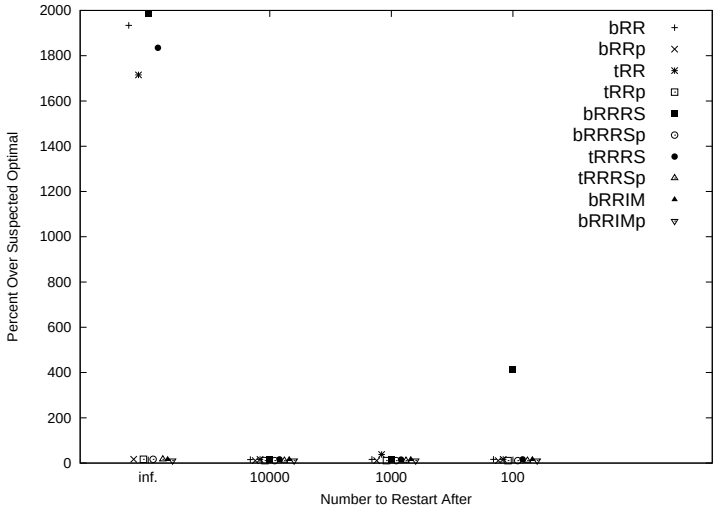



Figure B.111: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance u1817

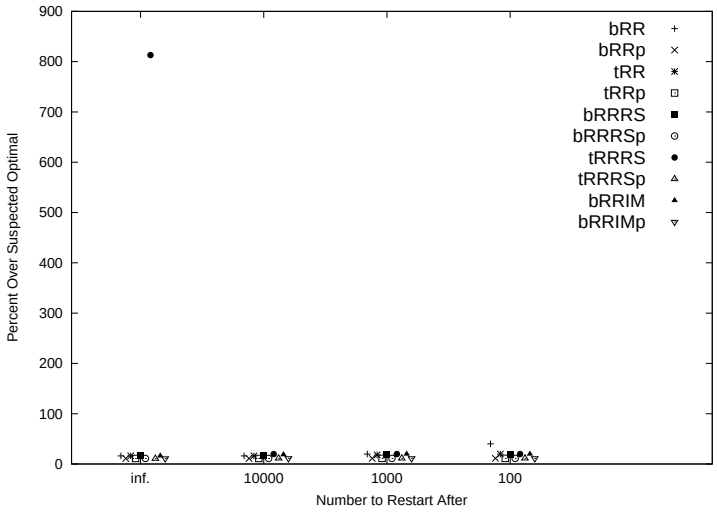



Figure B.112: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance vm1084

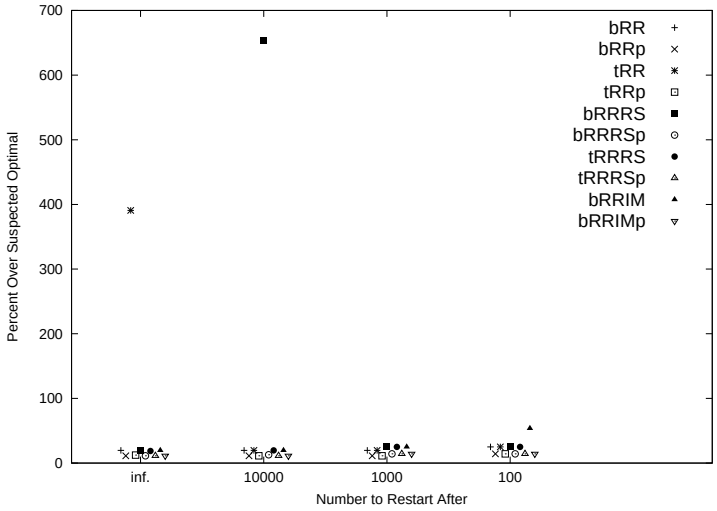



Figure B.113: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance vm1748

## B.4 DNA Error Correction

### B.4.1 Code 1

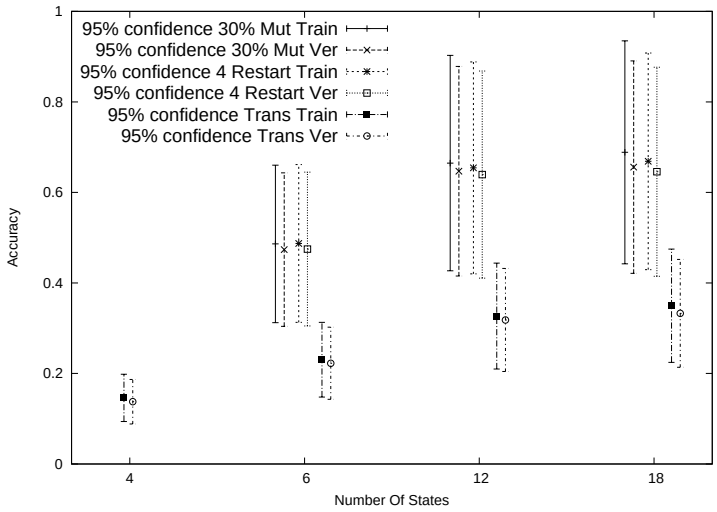



Figure B.114: Best performing Experiment results summed over all three distances for direct analysis for each experiment set on the single $(12, 55, 7)_4$ error code

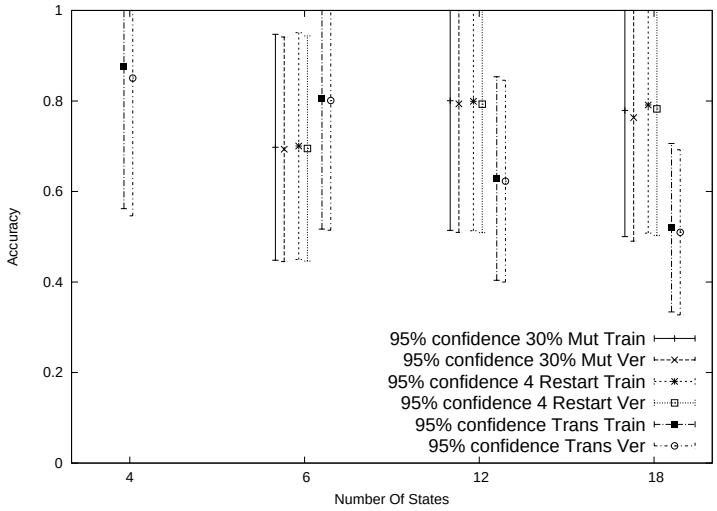



Figure B.115: Best performing Experiment results summed over all three distances for fuzzy analysis for each experiment set on the single $(12, 55, 7)_4$ error code

### B.4.2 Code 2

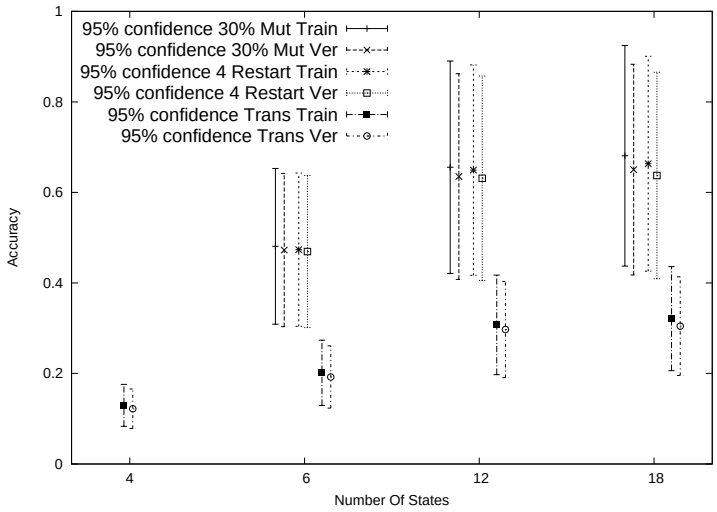



Figure B.116: Best performing Experiment results summed over all three distances for direct analysis for each experiment set on the $(12, 60, 7)_4$ error code

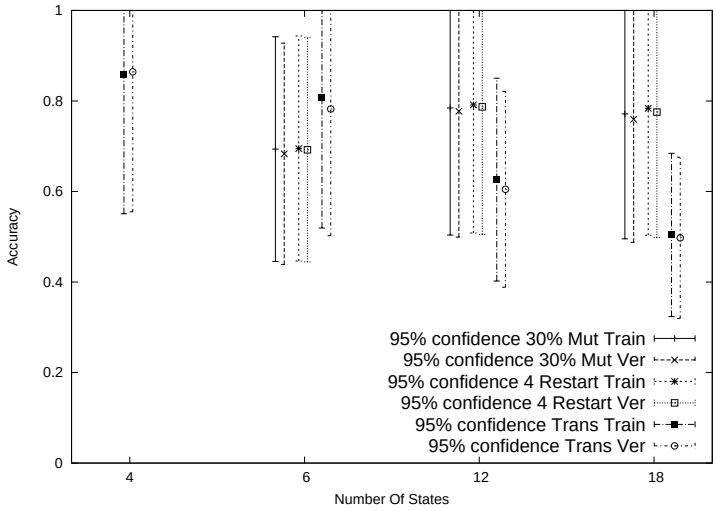



Figure B.117: Best performing Experiment results summed over all three distances for fuzzy analysis for each experiment set on the first $(12, 60, 7)_4$ error code

### B.4.3 Code 3

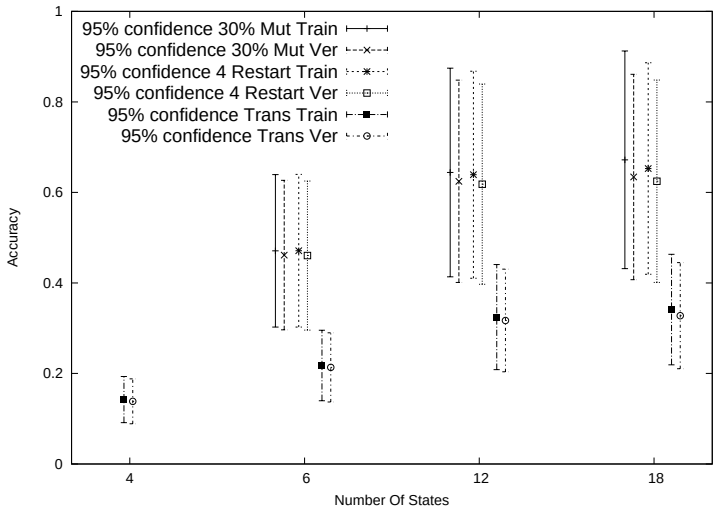



Figure B.118: Best performing Experiment results summed over all three distances for direct analysis for each experiment set on the second $(12, 60, 7)_4$ error code

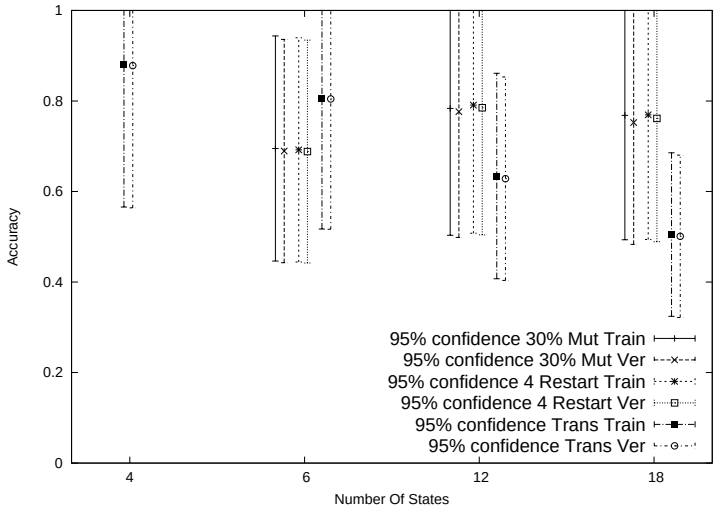



Figure B.119: Best performing Experiment results summed over all three distances for fuzzy analysis for each experiment set on the second $(12, 60, 7)_4$ error code

## B.5 DNA Fragment Assembly

### B.5.1 First Set of Results

#### Results With No Post Optimization

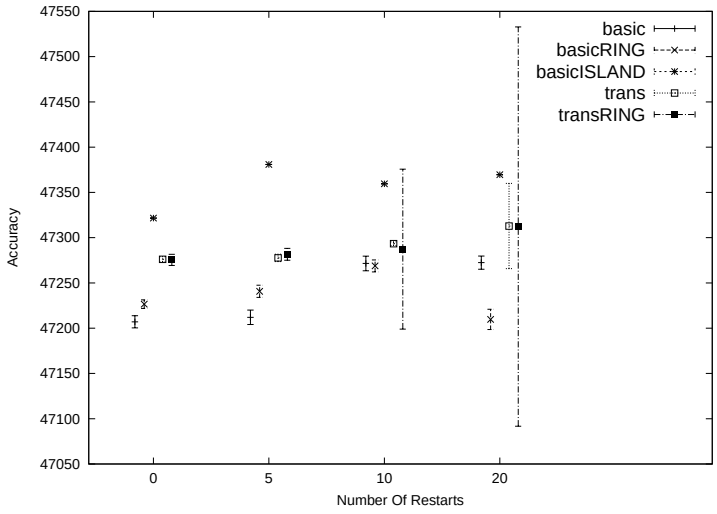



Figure B.120: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin1

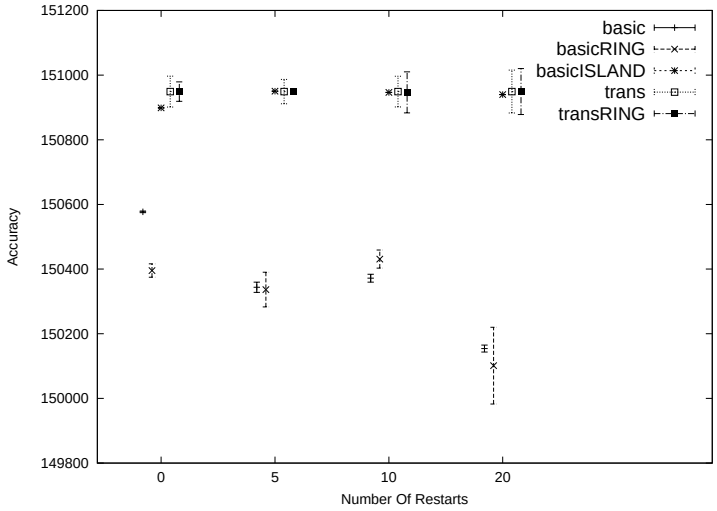



Figure B.121: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin2

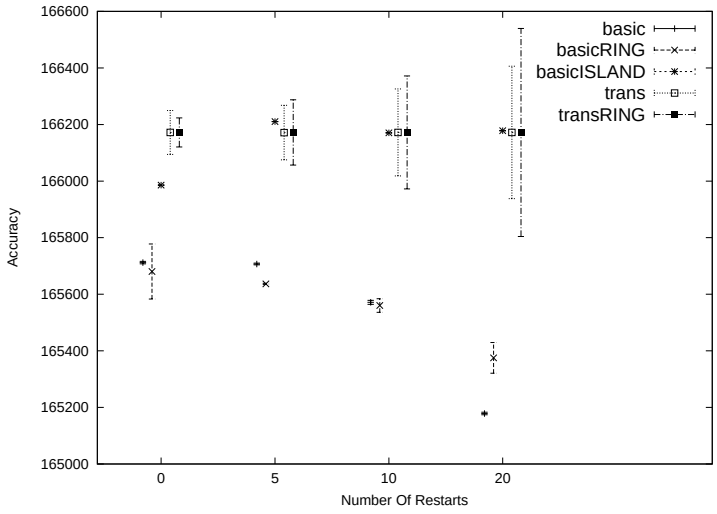



Figure B.122: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin3

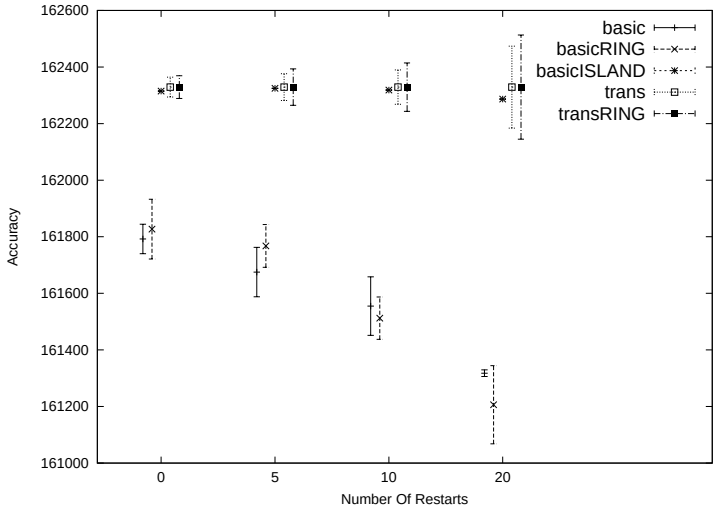



Figure B.123: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin5

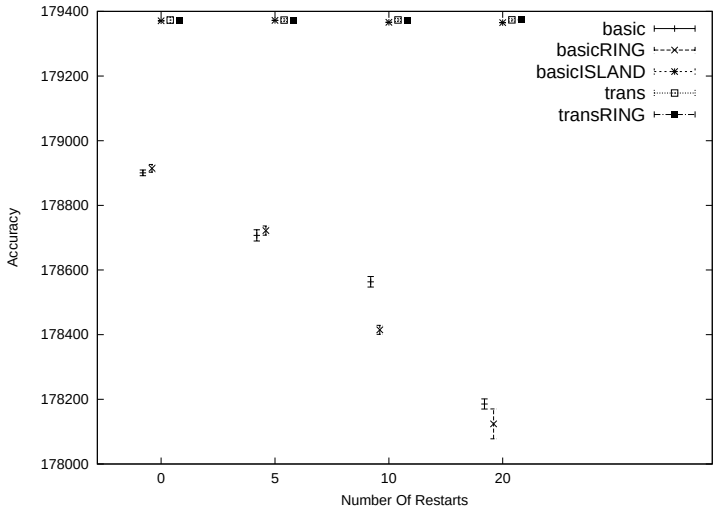



Figure B.124: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin7

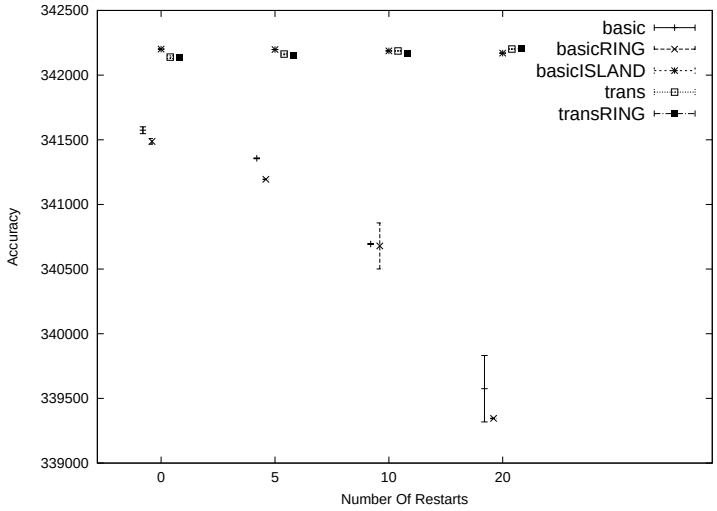



Figure B.125: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin9

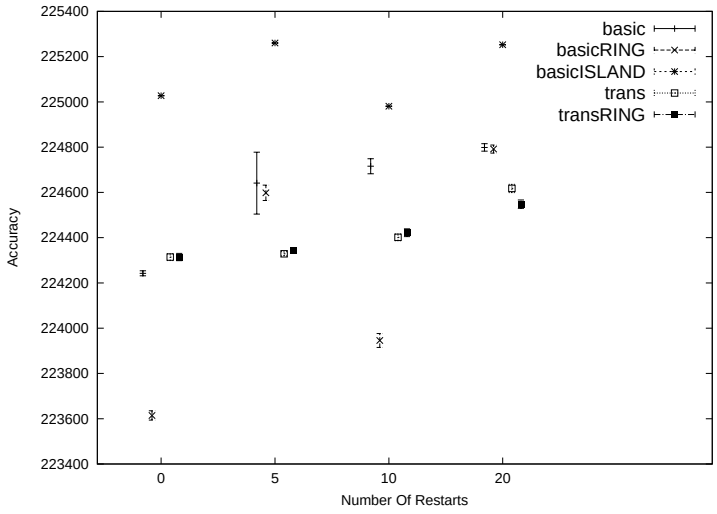



Figure B.126: Comparison of Best Results Between Algorithm Variaions on Problem Instance bx842596_4

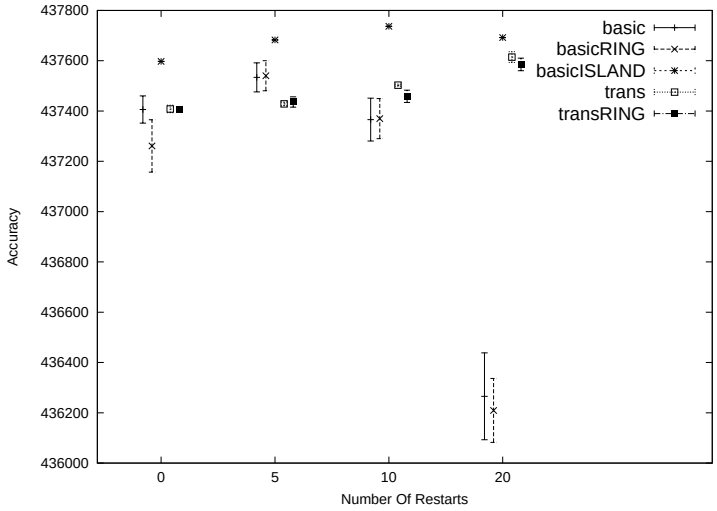



Figure B.127: Comparison of Best Results Between Algorithm Variaions on Problem Instance bx842596_7

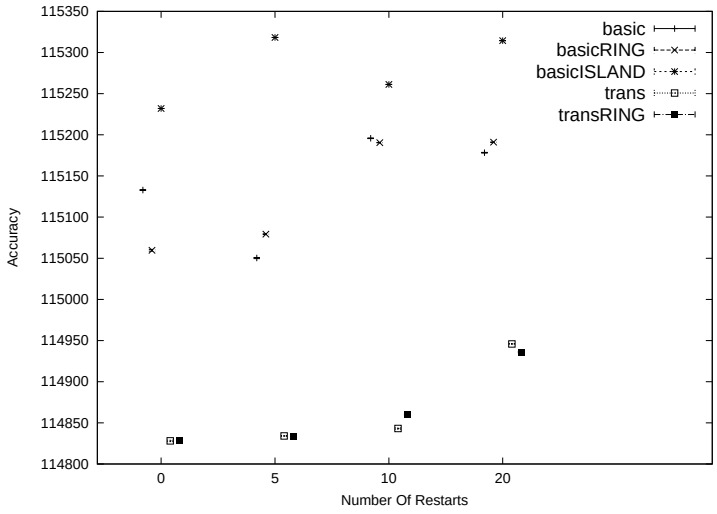



Figure B.128: Comparison of Best Results Between Algorithm Variaions on Problem Instance j02459_7

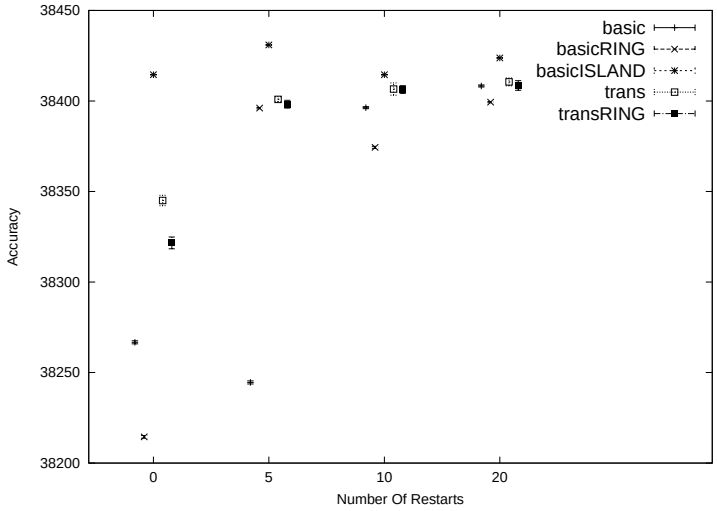



Figure B.129: Comparison of Best Results Between Algorithm Variaions on Problem Instance m15421_5

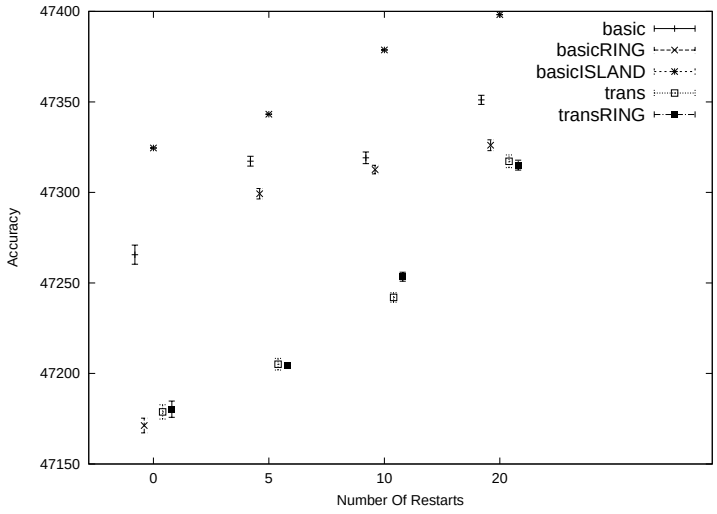



Figure B.130: Comparison of Best Results Between Algorithm Variaions on Problem Instance m15421_6

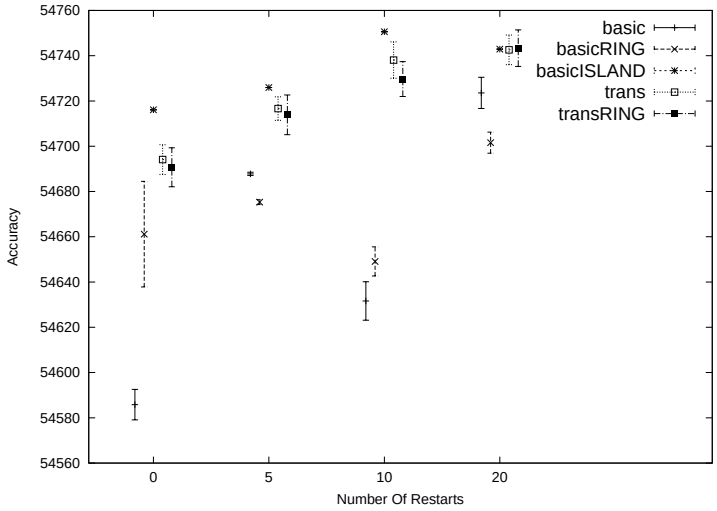



Figure B.131: Comparison of Best Results Between Algorithm Variaions on Problem Instance m15421_7

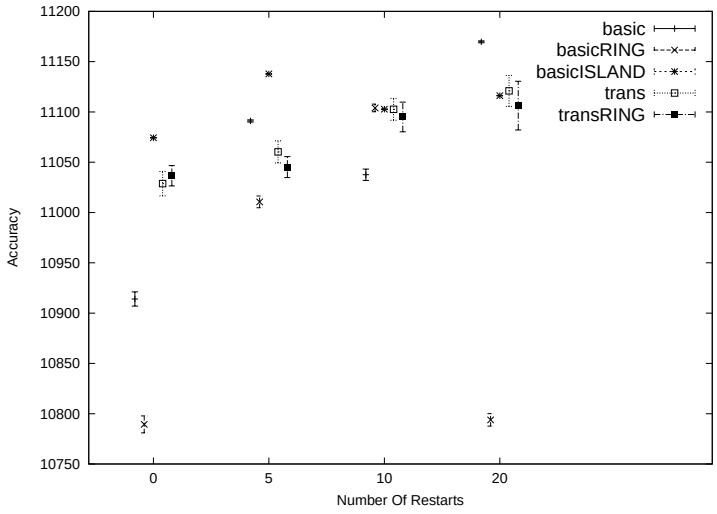



Figure B.132: Comparison of Best Results Between Algorithm Variaions on Problem Instance x60189_4

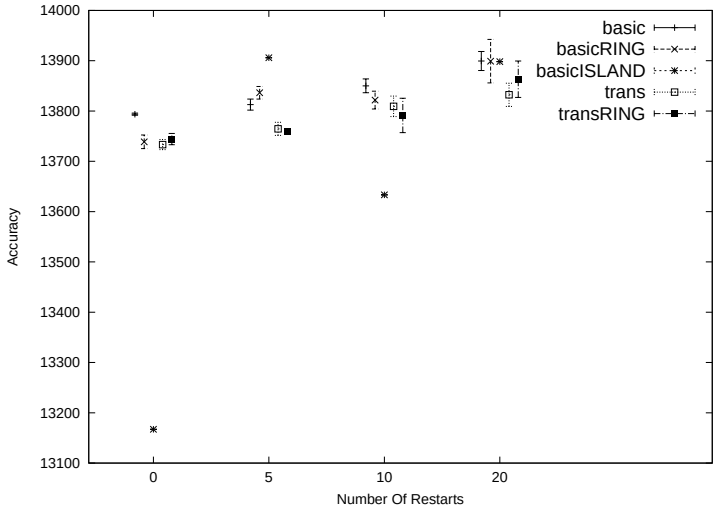



Figure B.133: Comparison of Best Results Between Algorithm Variaions on Problem Instance x60189_5

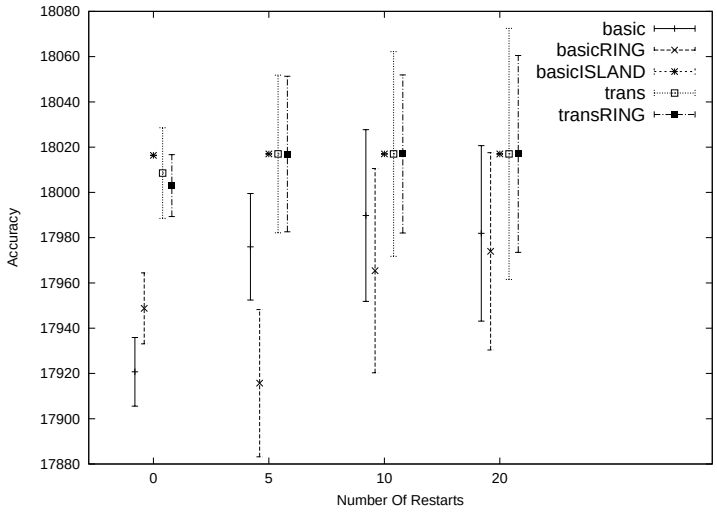



Figure B.134: Comparison of Best Results Between Algorithm Variaions on Problem Instance x60189_6

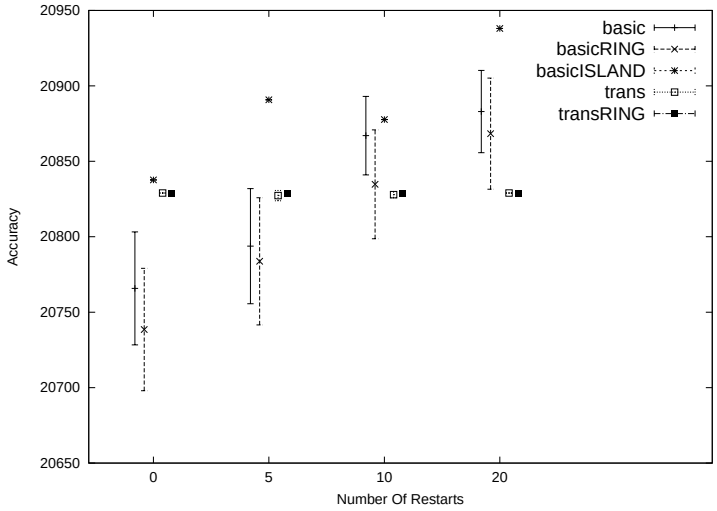



Figure B.135: Comparison of Best Results Between Algorithm Variaions on Problem Instance x60189_7

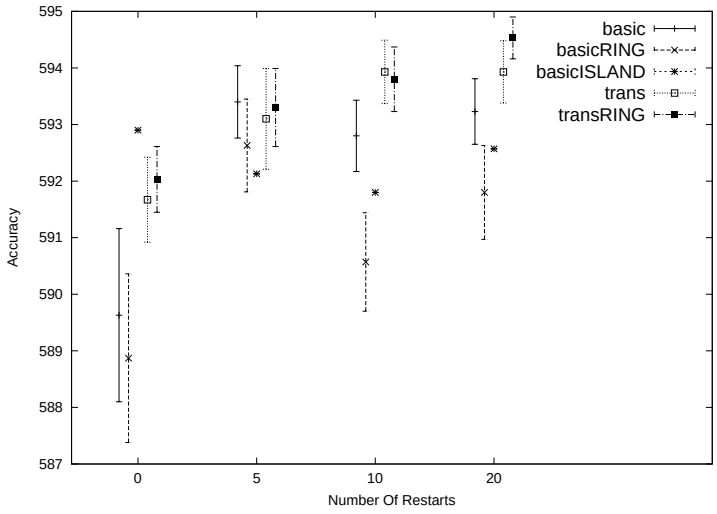



Figure B.136: Comparison of Best Results Between Algorithm Variaions on Problem Instance f25_305

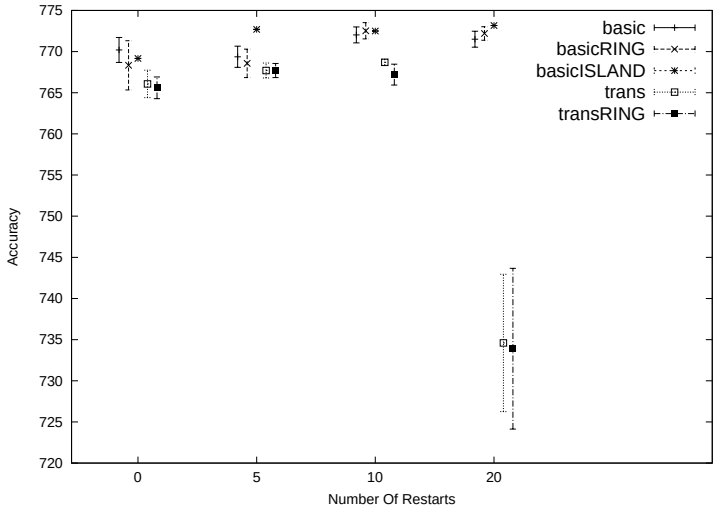



Figure B.137: Comparison of Best Results Between Algorithm Variaions on Problem Instance f25_400

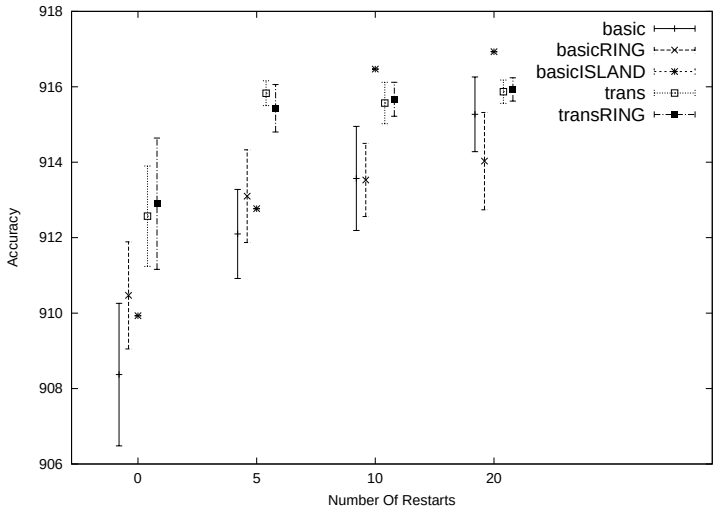



Figure B.138: Comparison of Best Results Between Algorithm Variaions on Problem Instance f25_500

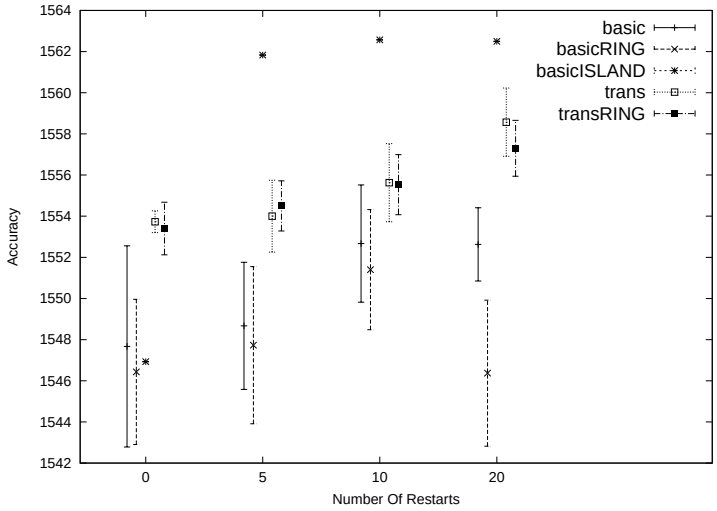



Figure B.139: Comparison of Best Results Between Algorithm Variaions on Problem Instance f50_315

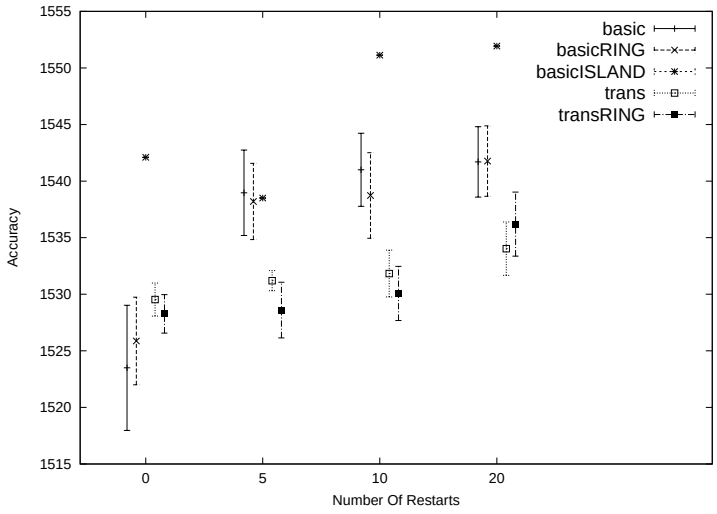



Figure B.140: Comparison of Best Results Between Algorithm Variaions on Problem Instance f50_412

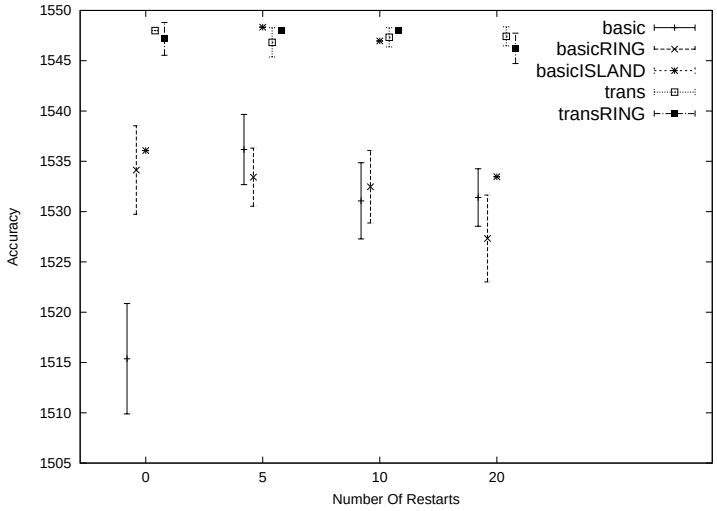



Figure B.141: Comparison of Best Results Between Algorithm Variaions on Problem Instance f50_498

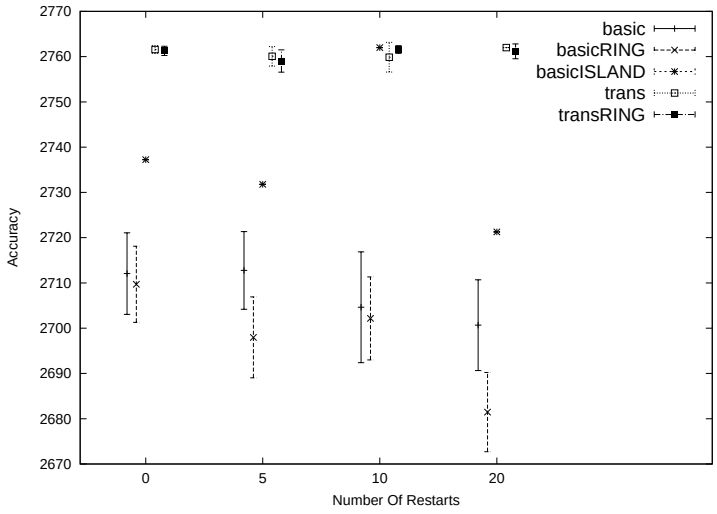



Figure B.142: Comparison of Best Results Between Algorithm Variaions on Problem Instance f100_307

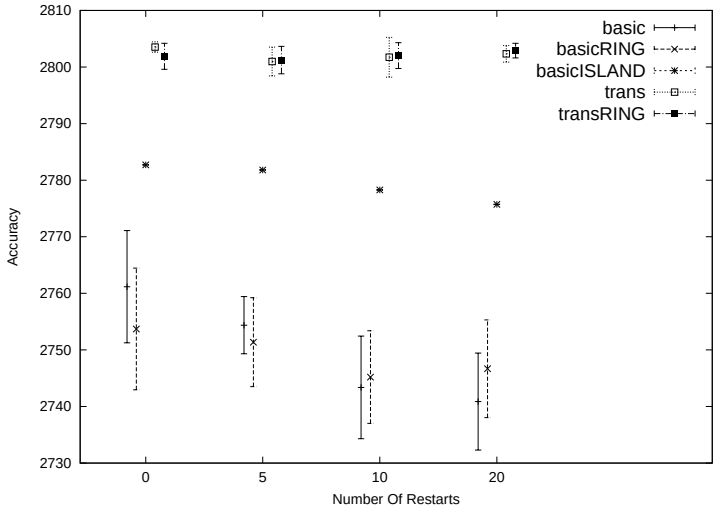



Figure B.143: Comparison of Best Results Between Algorithm Variaions on Problem Instance f100_415

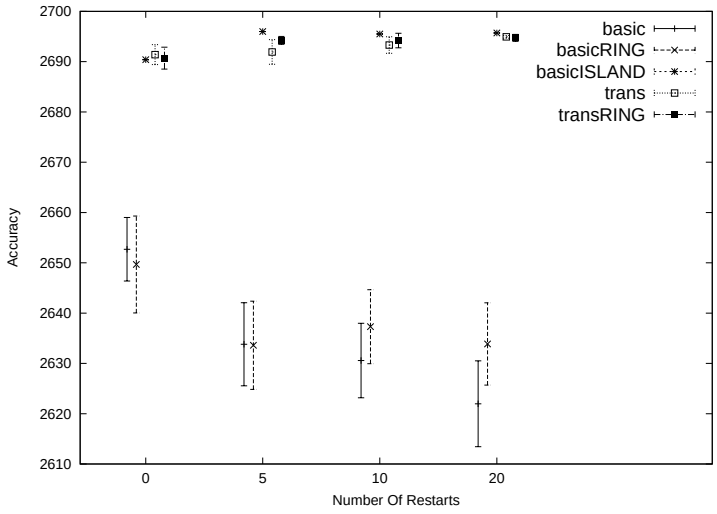



Figure B.144: Comparison of Best Results Between Algorithm Variaions on Problem Instance f100_512

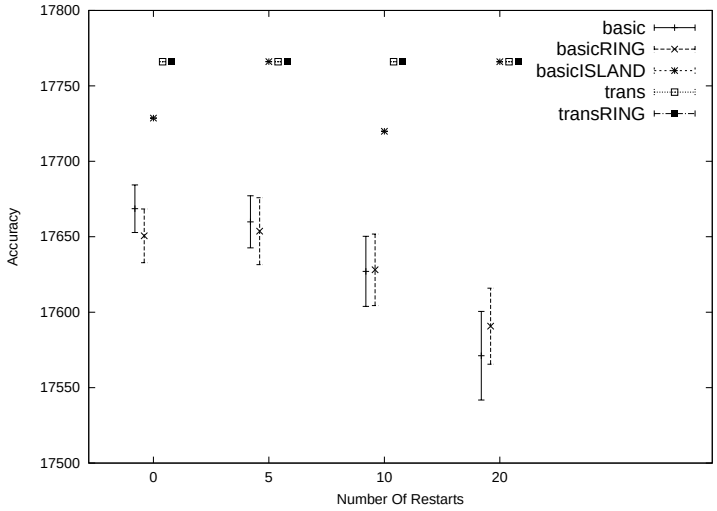



Figure B.145: Comparison of Best Results Between Algorithm Variaions on Problem Instance f508_354

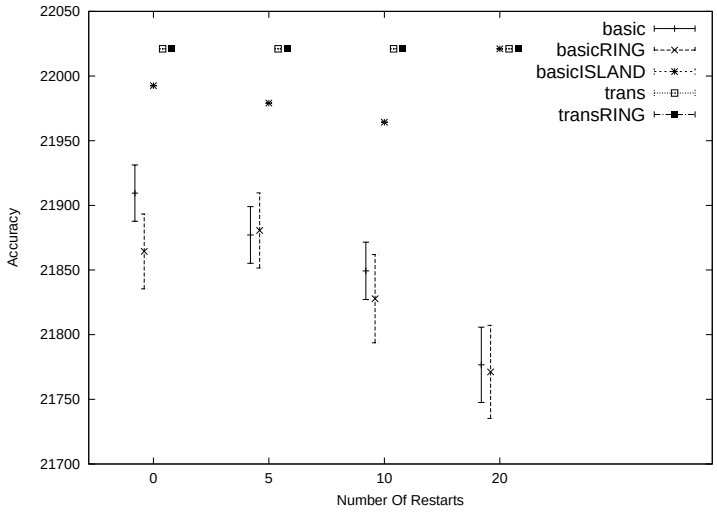



Figure B.146: Comparison of Best Results Between Algorithm Variaions on Problem Instance f635_350

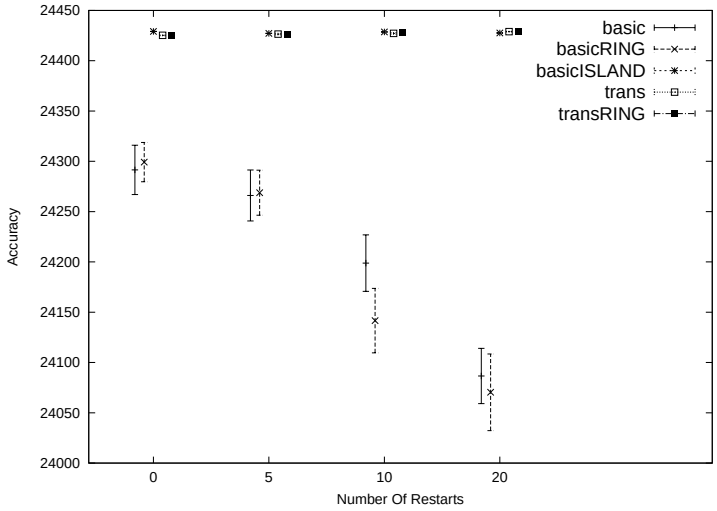



Figure B.147: Comparison of Best Results Between Algorithm Variaions on Problem Instance f737_355

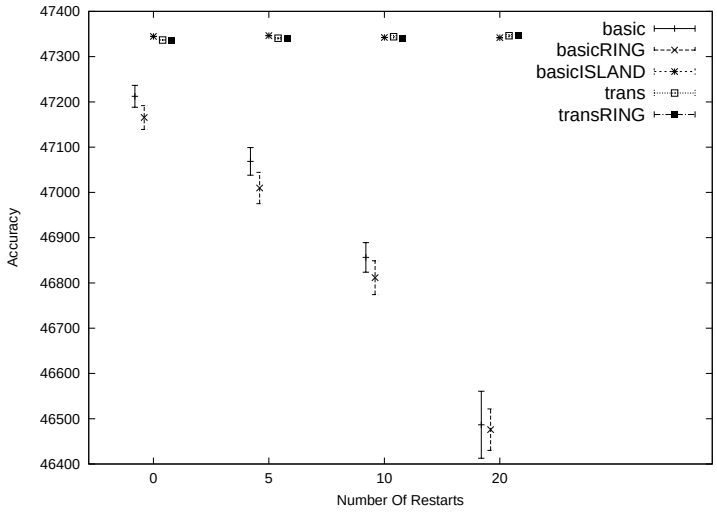



Figure B.148: Comparison of Best Results Between Algorithm Variaions on Problem Instance f1343_354

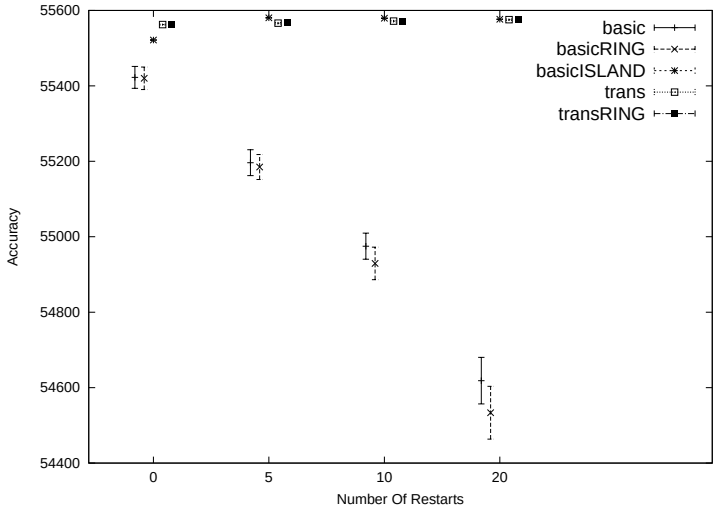



Figure B.149: Comparison of Best Results Between Algorithm Variaions on Problem Instance f1577_354

**Results With Post Optimization**

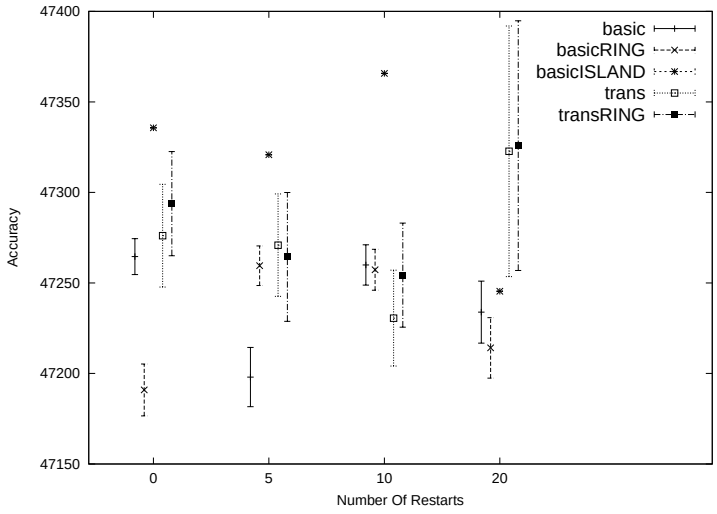



Figure B.150: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin1

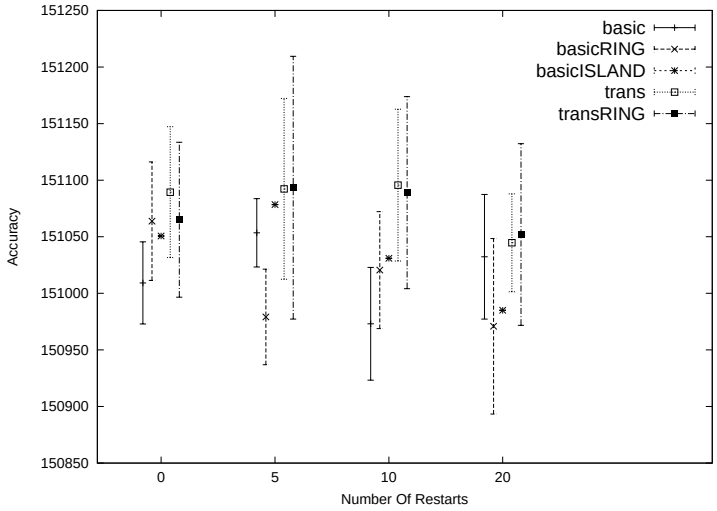



Figure B.151: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin2

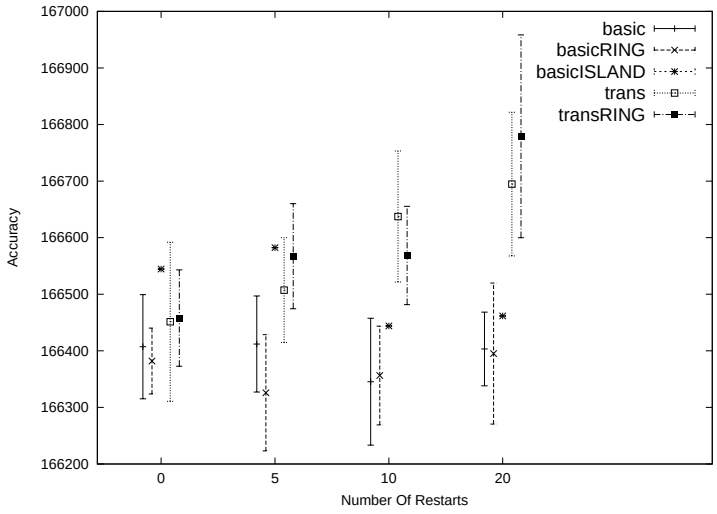



Figure B.152: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin3

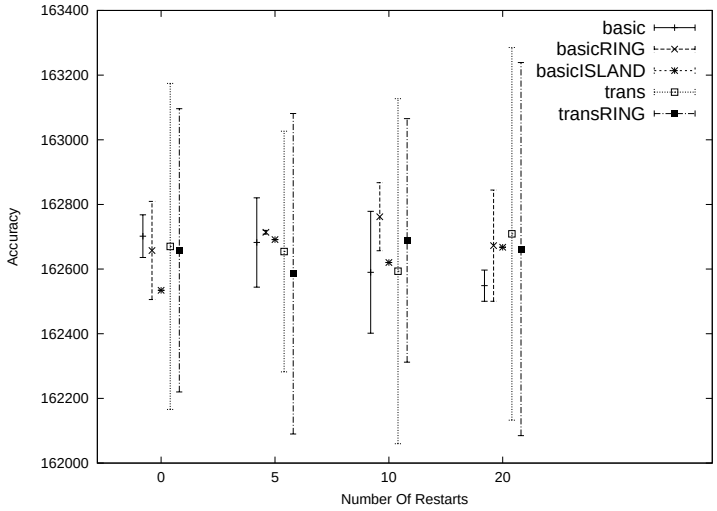



Figure B.153: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin5

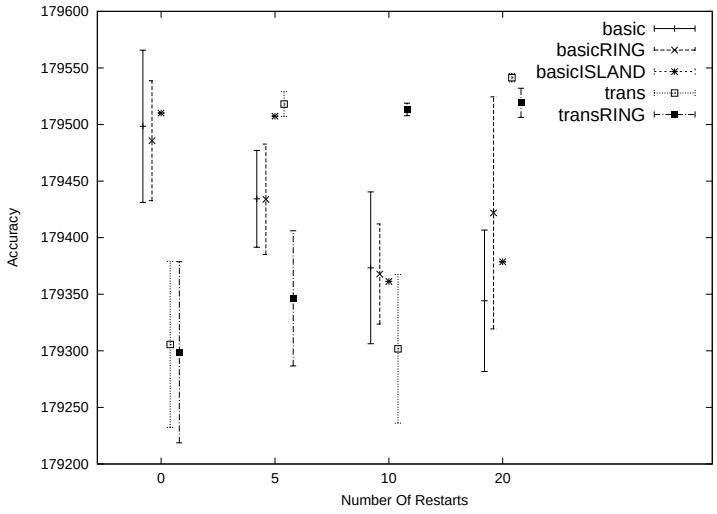



Figure B.154: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin7

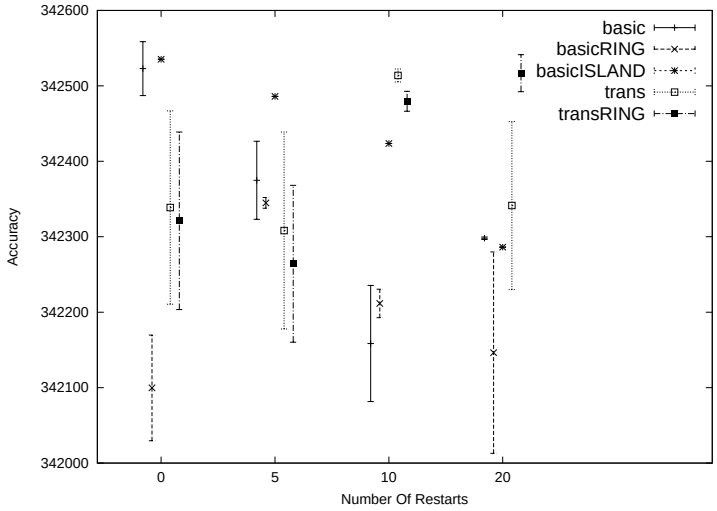



Figure B.155: Comparison of Best Results Between Algorithm Variaions on Problem Instance acin9

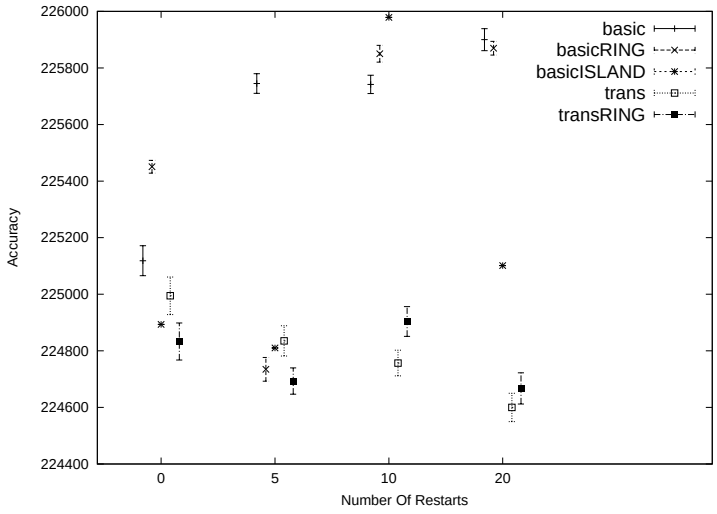



Figure B.156: Comparison of Best Results Between Algorithm Variaions on Problem Instance bx842596_4

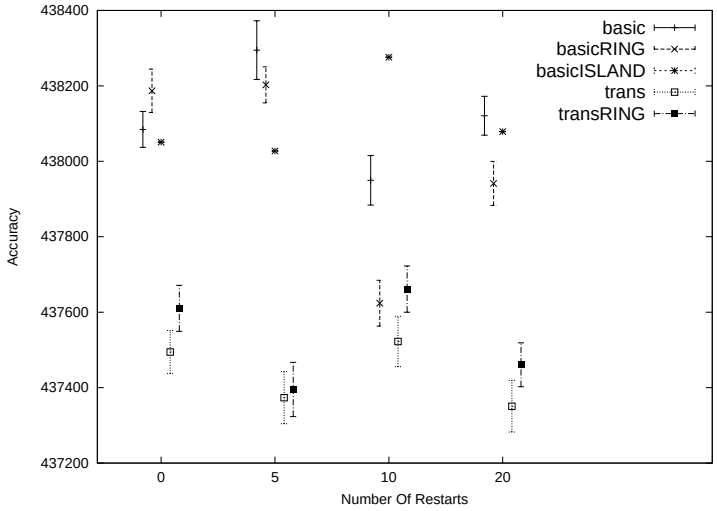



Figure B.157: Comparison of Best Results Between Algorithm Variaions on Problem Instance bx842596_7

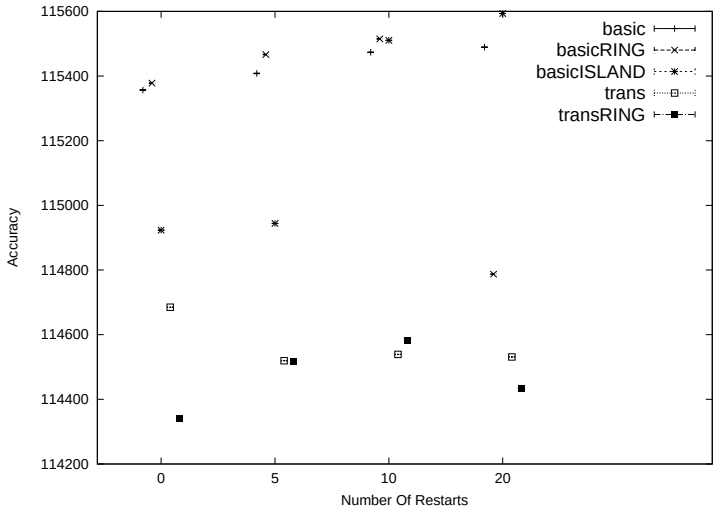



Figure B.158: Comparison of Best Results Between Algorithm Variaions on Problem Instance j02459_7

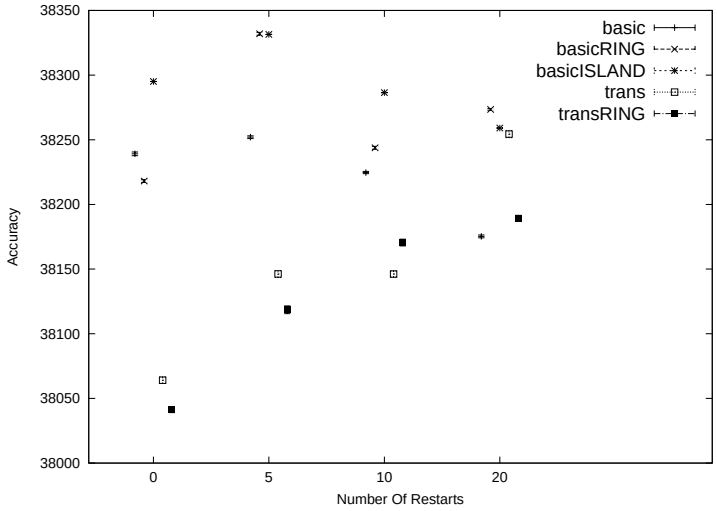



Figure B.159: Comparison of Best Results Between Algorithm Variaions on Problem Instance m15421_5

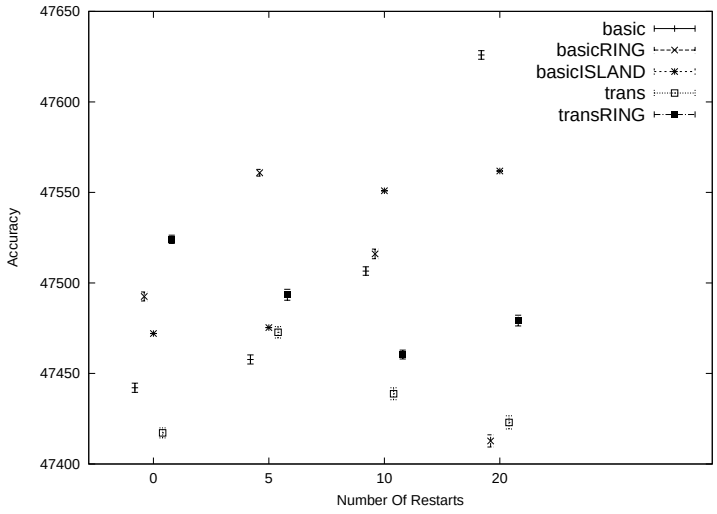



Figure B.160: Comparison of Best Results Between Algorithm Variaions on Problem Instance m15421_6

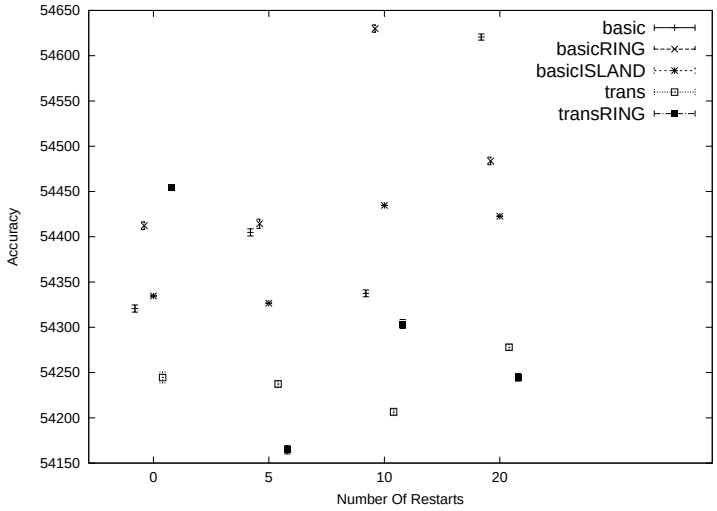



Figure B.161: Comparison of Best Results Between Algorithm Variaions on Problem Instance m15421_7

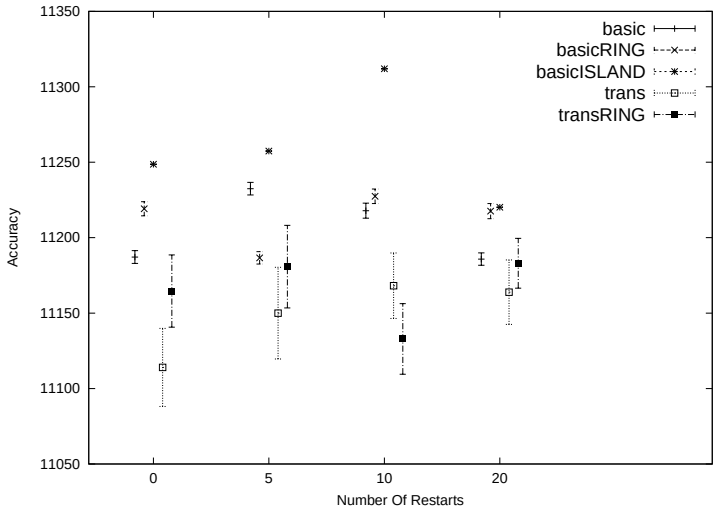



Figure B.162: Comparison of Best Results Between Algorithm Variaions on Problem Instance x60189_4

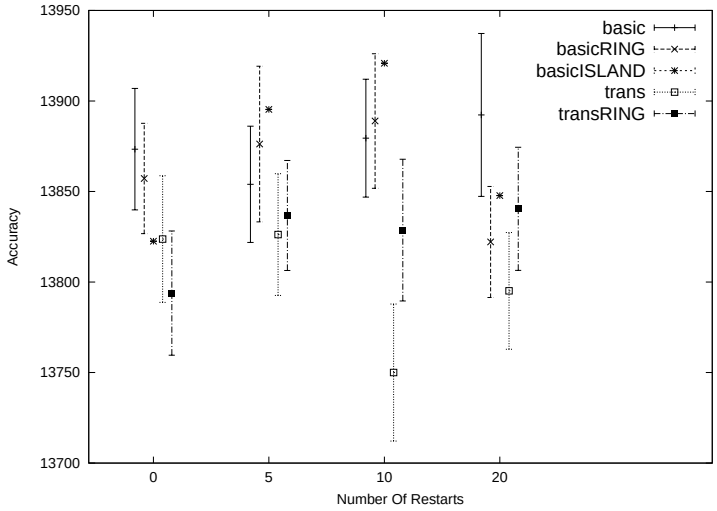



Figure B.163: Comparison of Best Results Between Algorithm Variaions on Problem Instance x60189_5

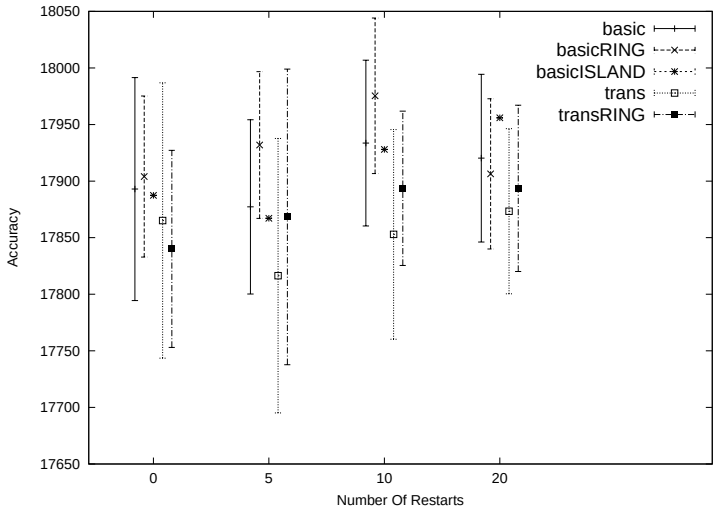



Figure B.164: Comparison of Best Results Between Algorithm Variaions on Problem Instance x60189_6

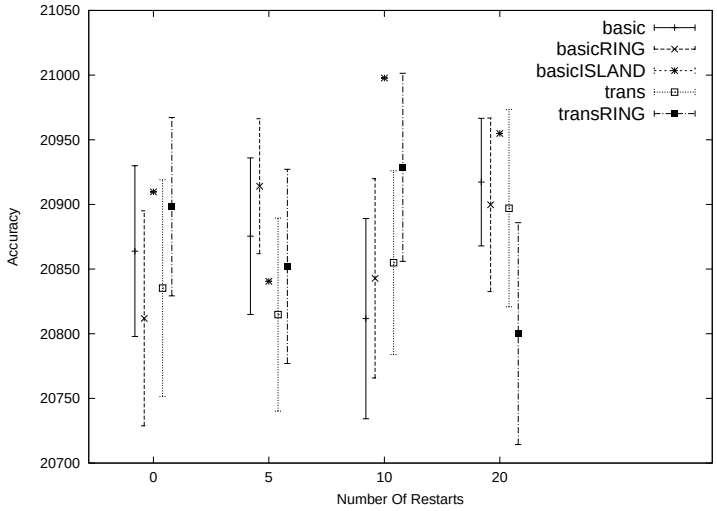



Figure B.165: Comparison of Best Results Between Algorithm Variaions on Problem Instance x60189_7

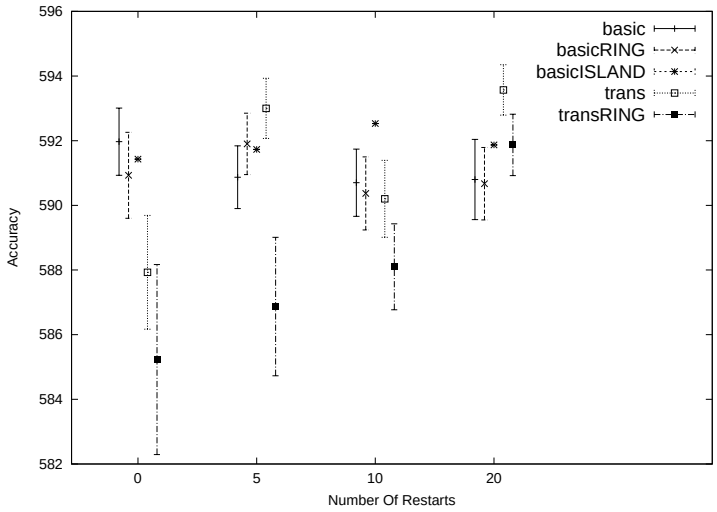



Figure B.166: Comparison of Best Results Between Algorithm Variaions on Problem Instance f25_305

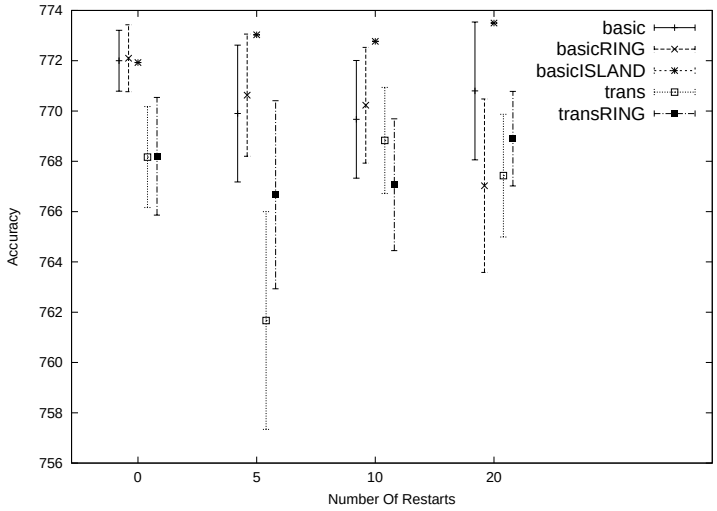



Figure B.167: Comparison of Best Results Between Algorithm Variaions on Problem Instance f25_400

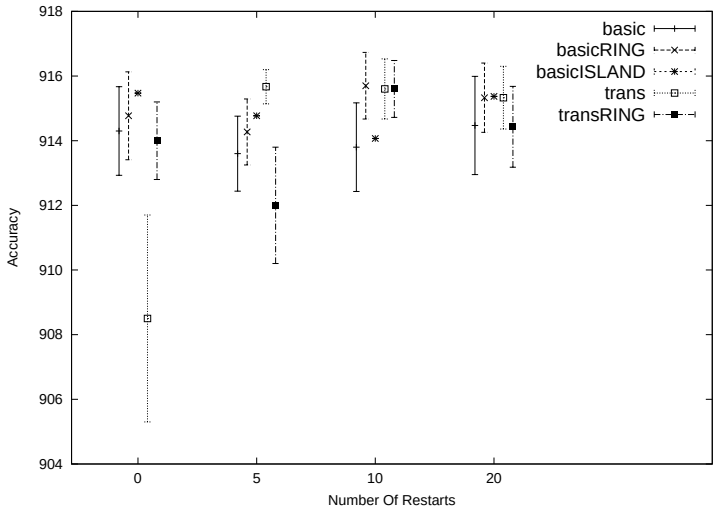



Figure B.168: Comparison of Best Results Between Algorithm Variaions on Problem Instance f25_500

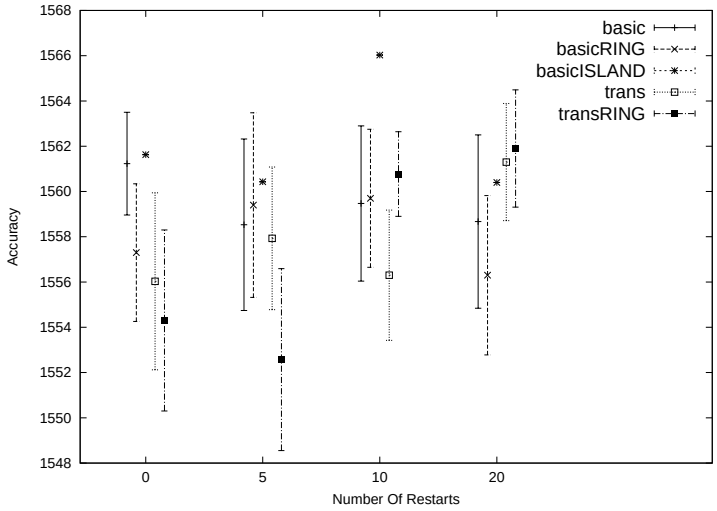



Figure B.169: Comparison of Best Results Between Algorithm Variaions on Problem Instance f50_315

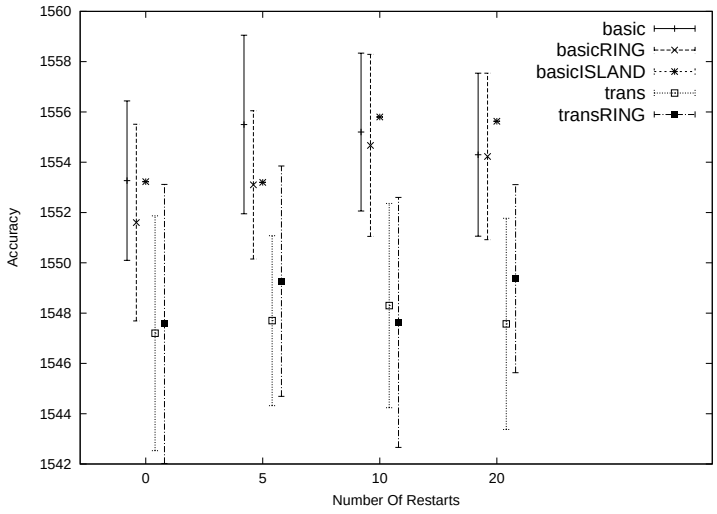



Figure B.170: Comparison of Best Results Between Algorithm Variaions on Problem Instance f50_412

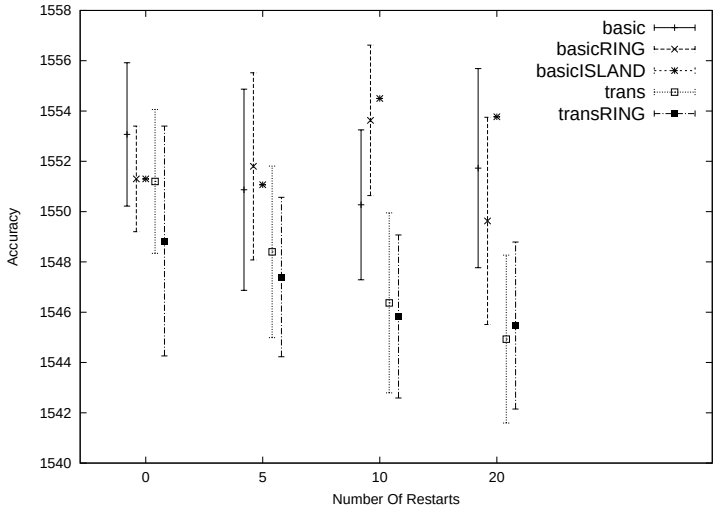



Figure B.171: Comparison of Best Results Between Algorithm Variaions on Problem Instance f50_498

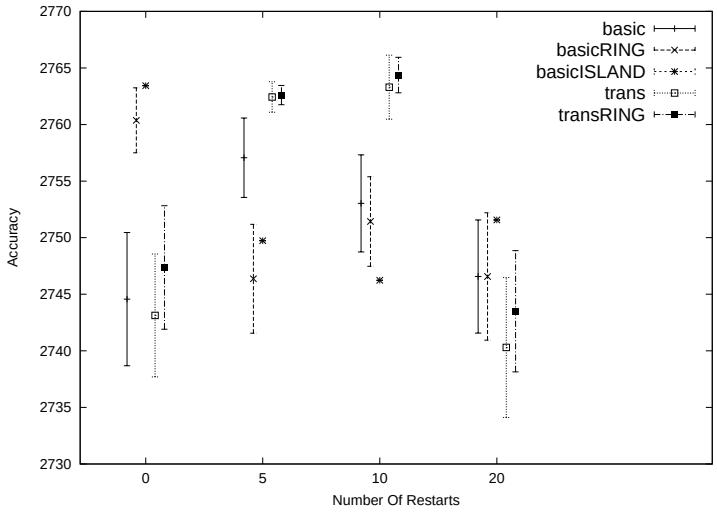



Figure B.172: Comparison of Best Results Between Algorithm Variaions on Problem Instance f100_307

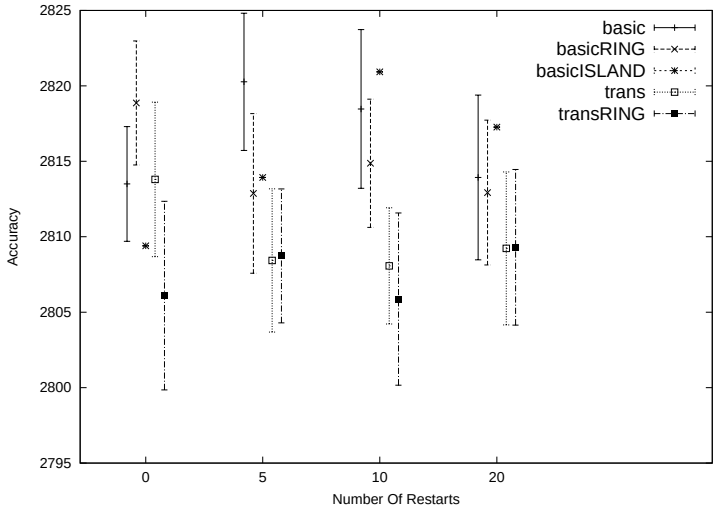



Figure B.173: Comparison of Best Results Between Algorithm Variaions on Problem Instance f100_415

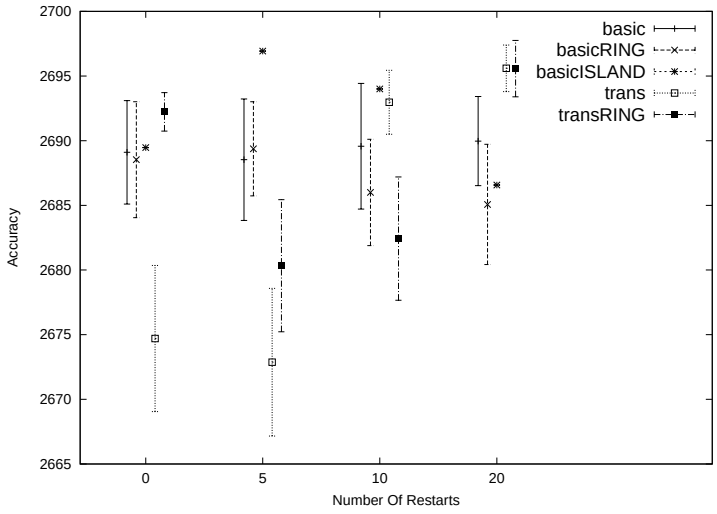



Figure B.174: Comparison of Best Results Between Algorithm Variaions on Problem Instance f100_512

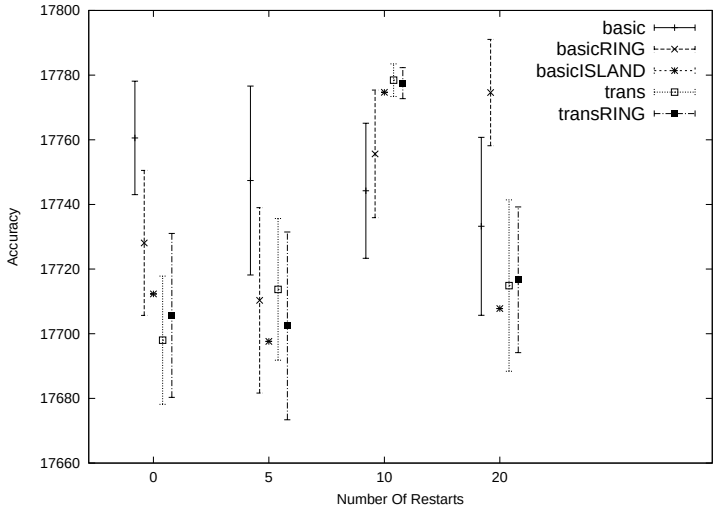



Figure B.175: Comparison of Best Results Between Algorithm Variaions on Problem Instance f508_354

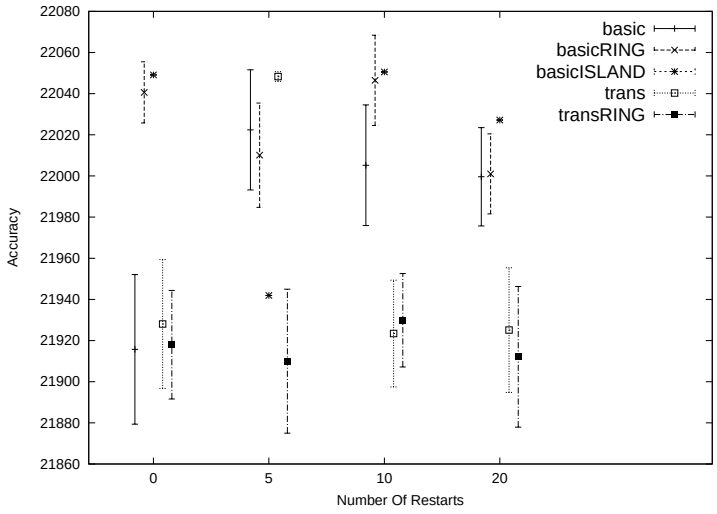



Figure B.176: Comparison of Best Results Between Algorithm Variaions on Problem Instance f635_350

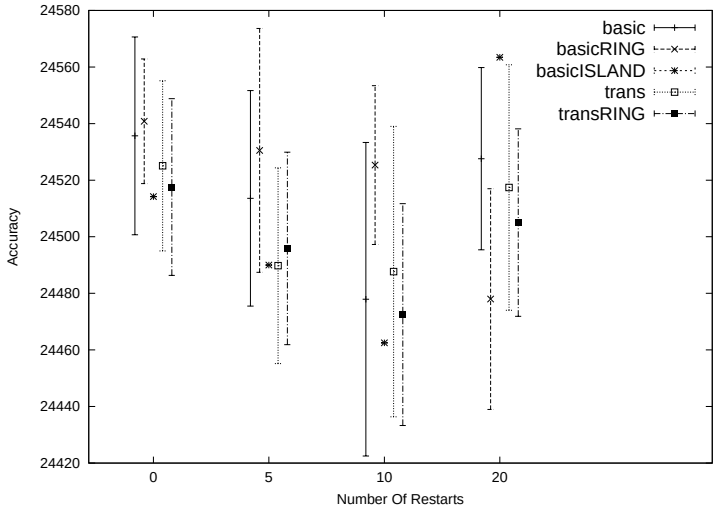



Figure B.177: Comparison of Best Results Between Algorithm Variaions on Problem Instance f737_355

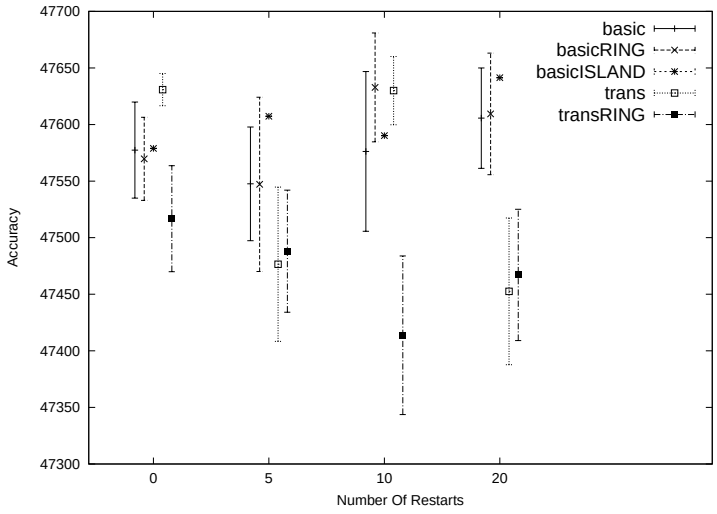



Figure B.178: Comparison of Best Results Between Algorithm Variaions on Problem Instance f1343_354

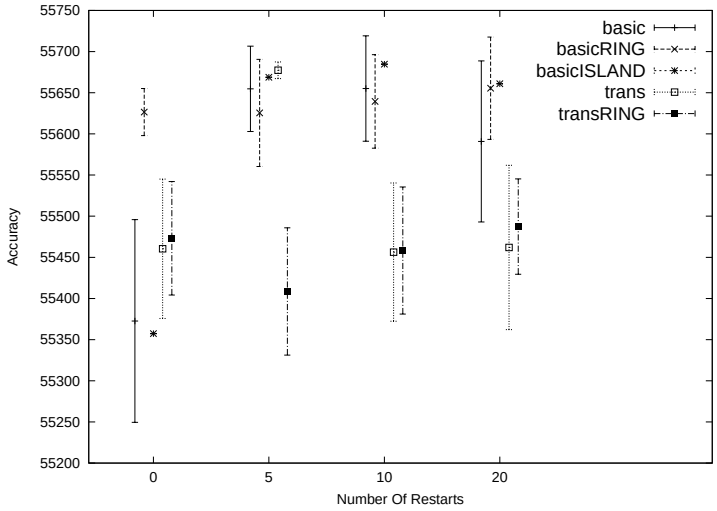



Figure B.179: Comparison of Best Results Between Algorithm Variaions on Problem Instance f1577_354

**Comparison Between No Post Optimization Results and Post Optimization Results**

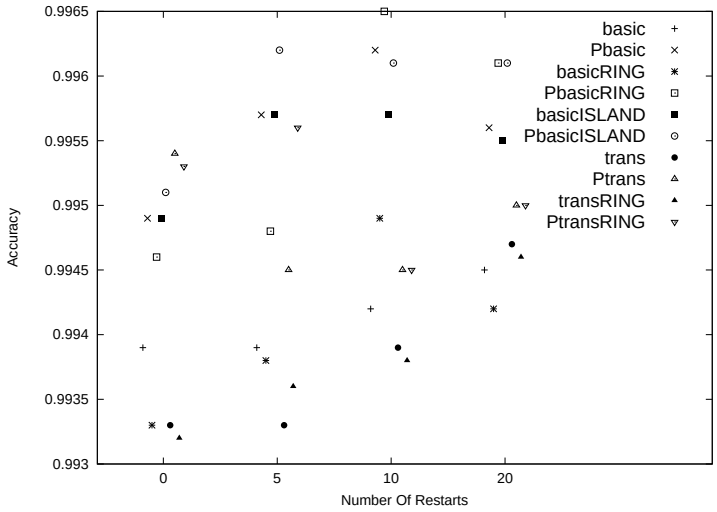



Figure B.180: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance acin1

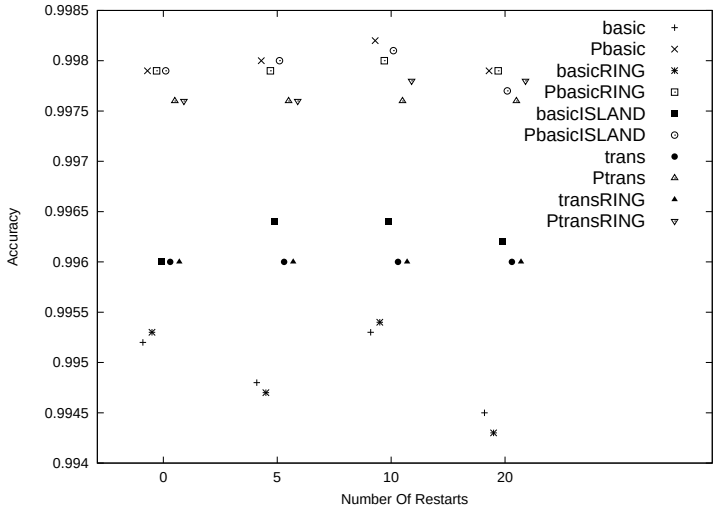



Figure B.181: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance acin2

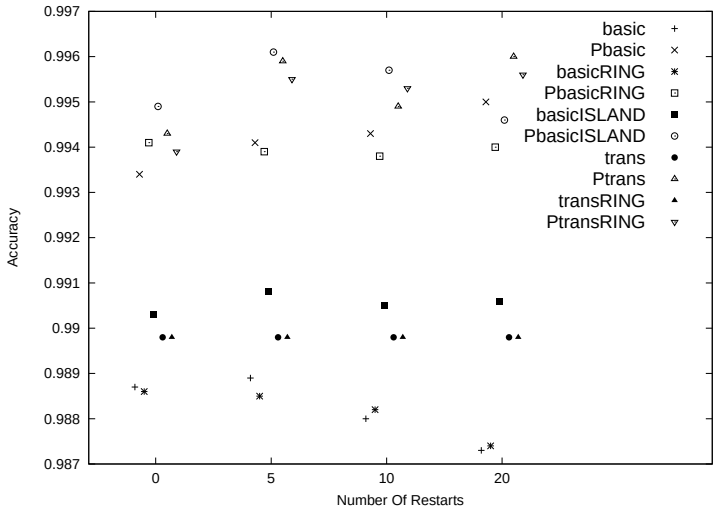



Figure B.182: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance acin3

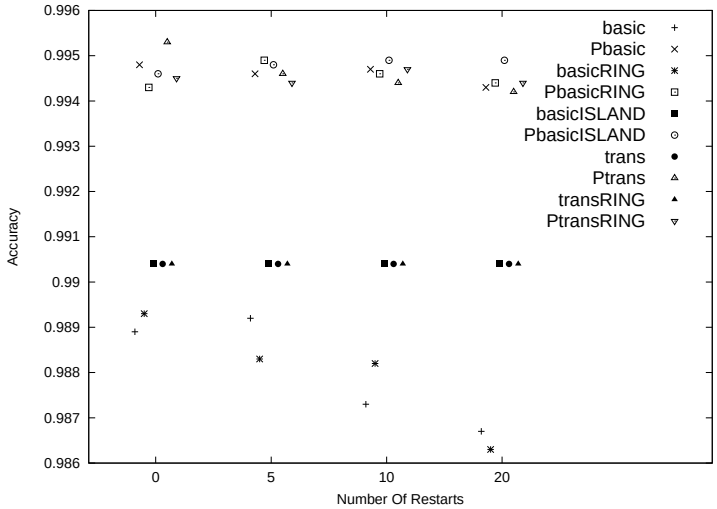



Figure B.183: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance acin5

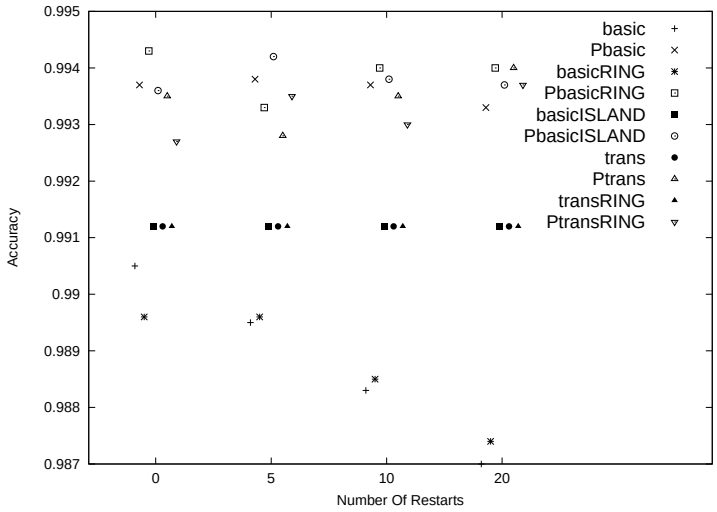



Figure B.184: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance acin7

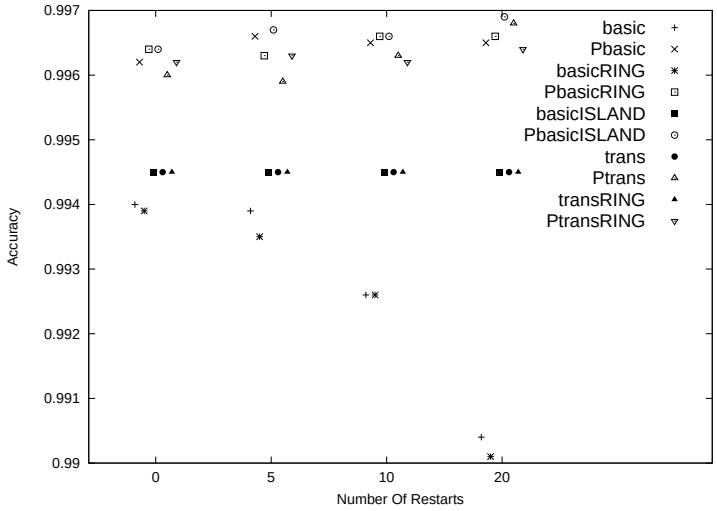



Figure B.185: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance acin9

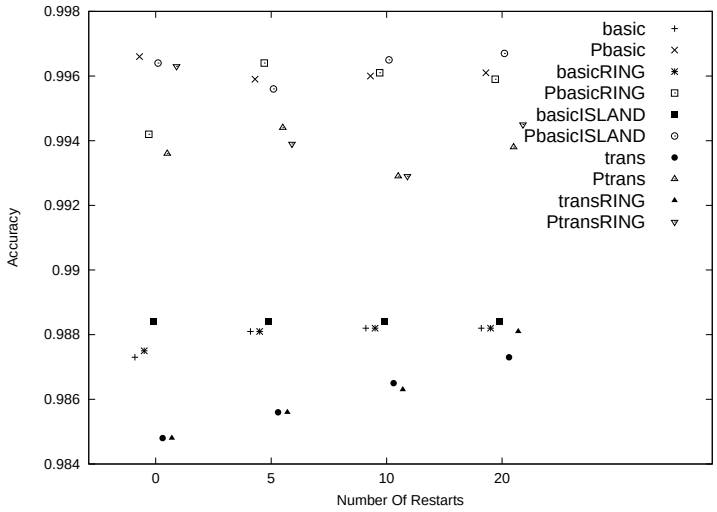



Figure B.186: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance bx842596_4

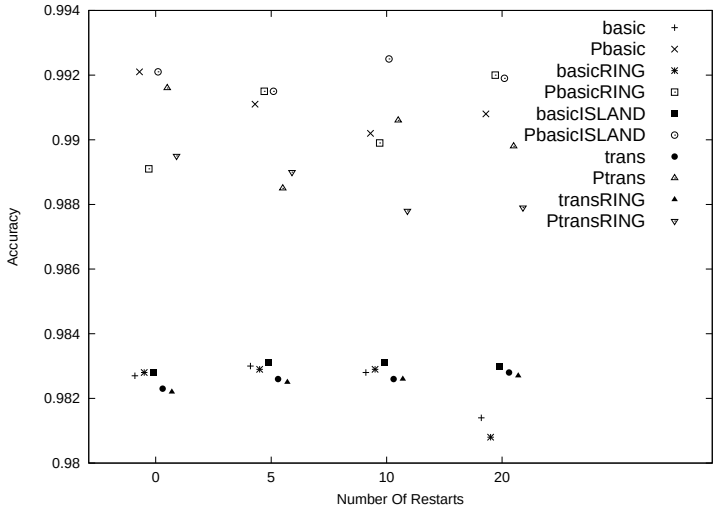



Figure B.187: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance bx842596_7

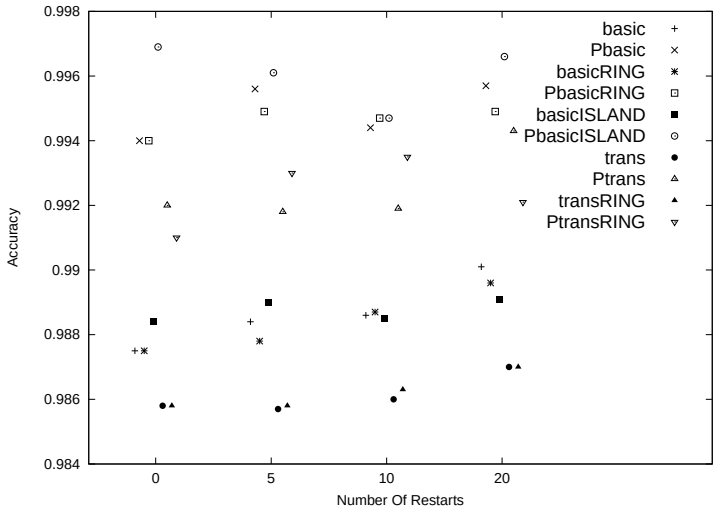



Figure B.188: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance j02459_7

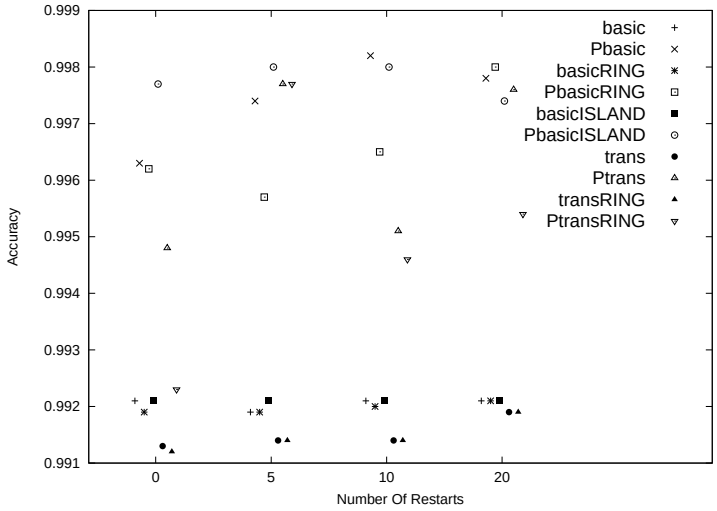



Figure B.189: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance m15421_5

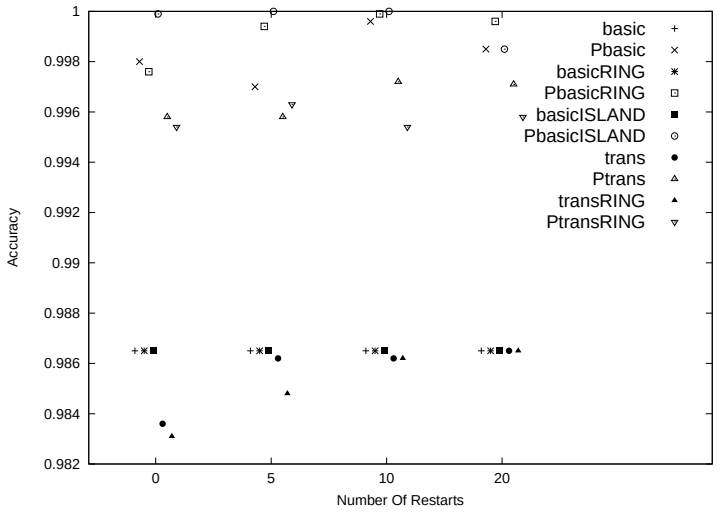



Figure B.190: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance m15421_6

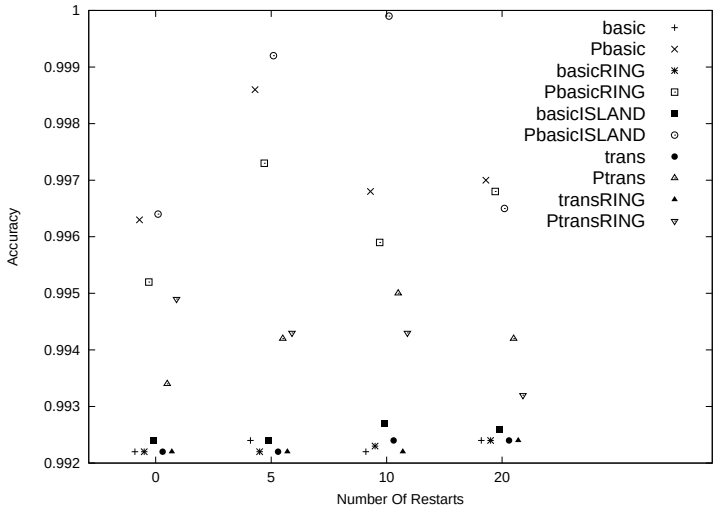



Figure B.191: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance m15421_7

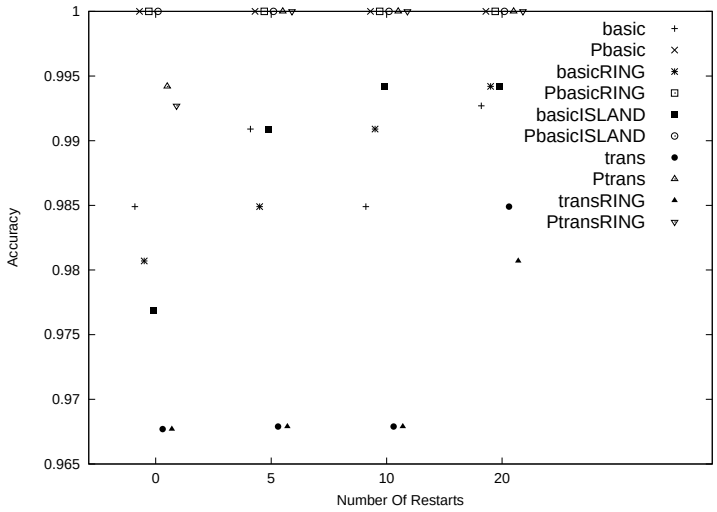



Figure B.192: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance x60189_4

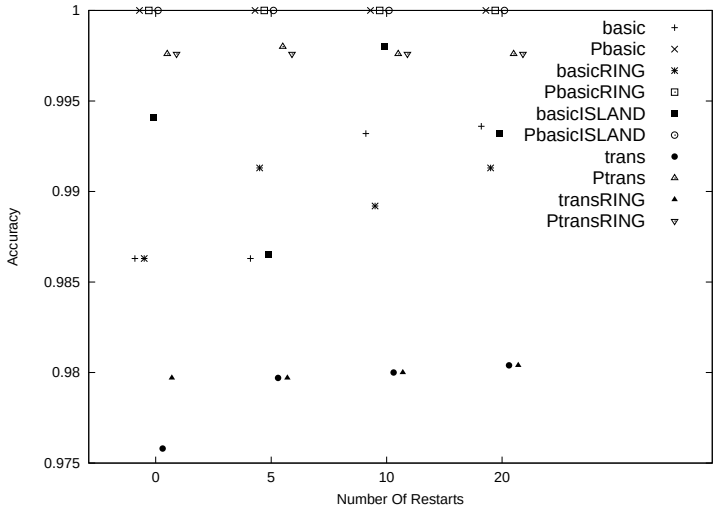



Figure B.193: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance x60189_5

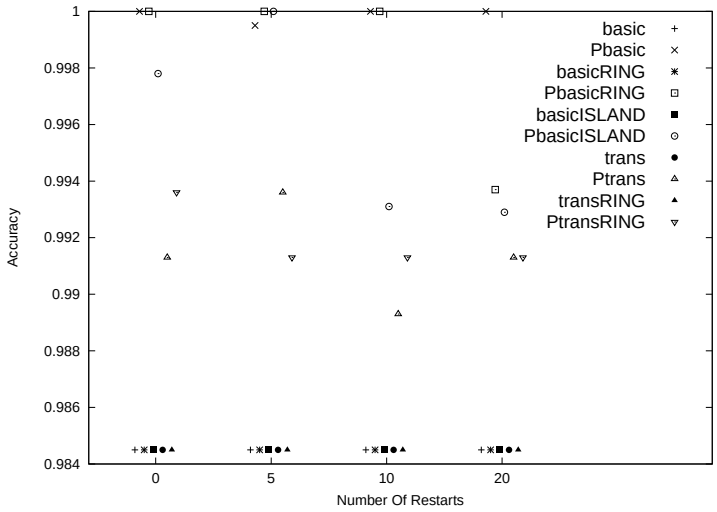



Figure B.194: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance x60189_6

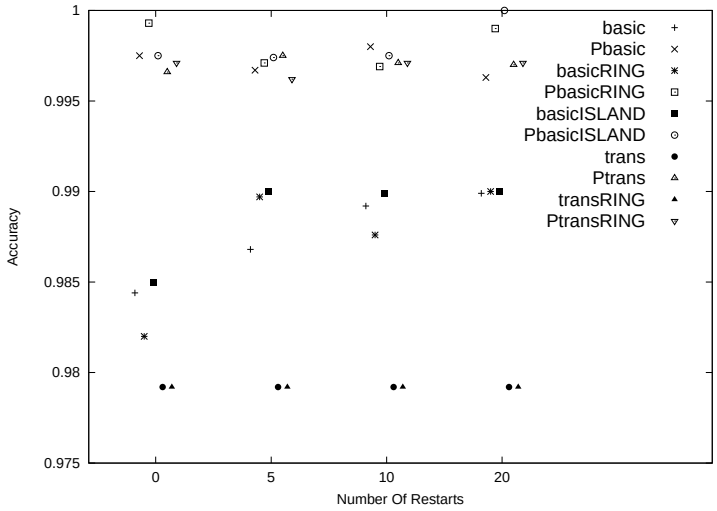



Figure B.195: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance x60189_7

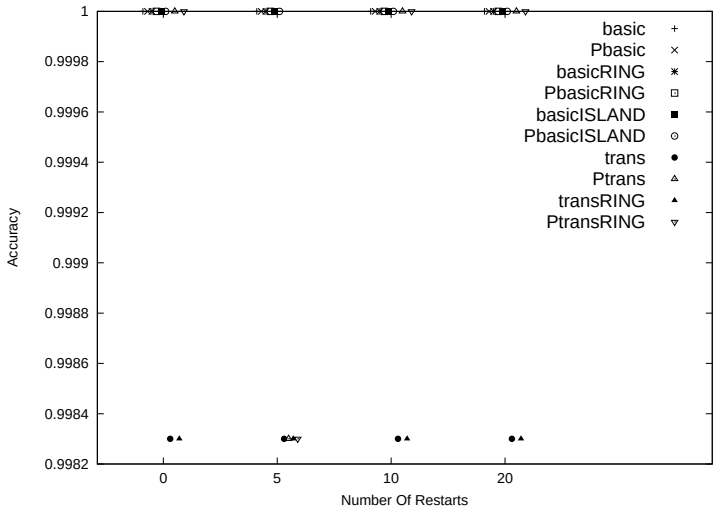



Figure B.196: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f25_305

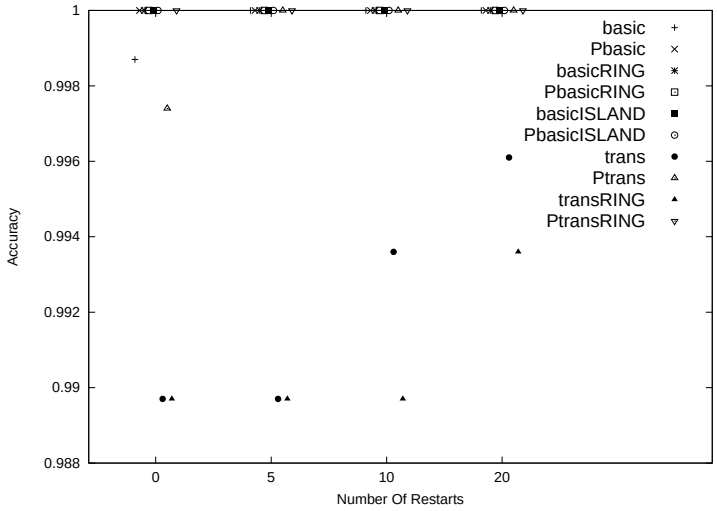



Figure B.197: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f25_400

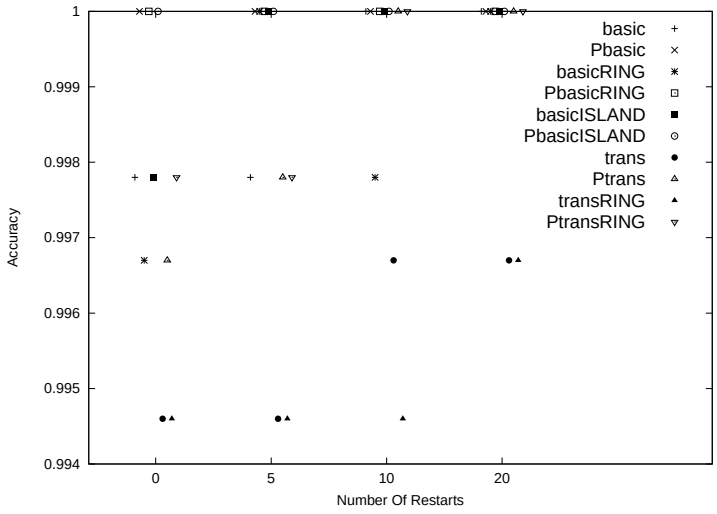



Figure B.198: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f25_500

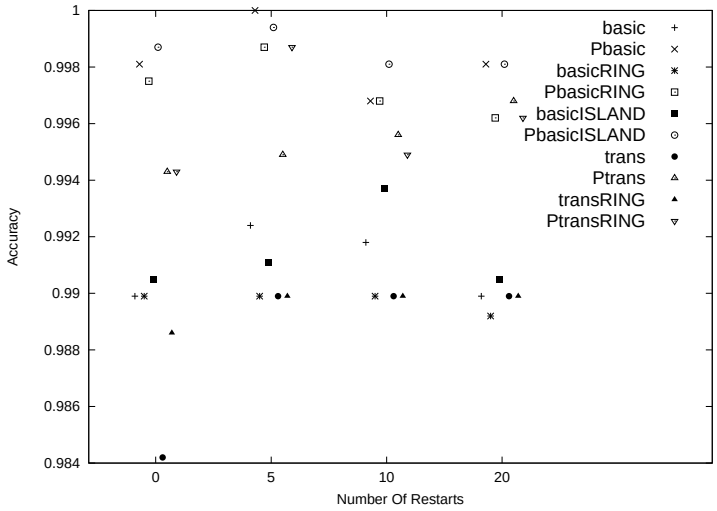



Figure B.199: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f50_315

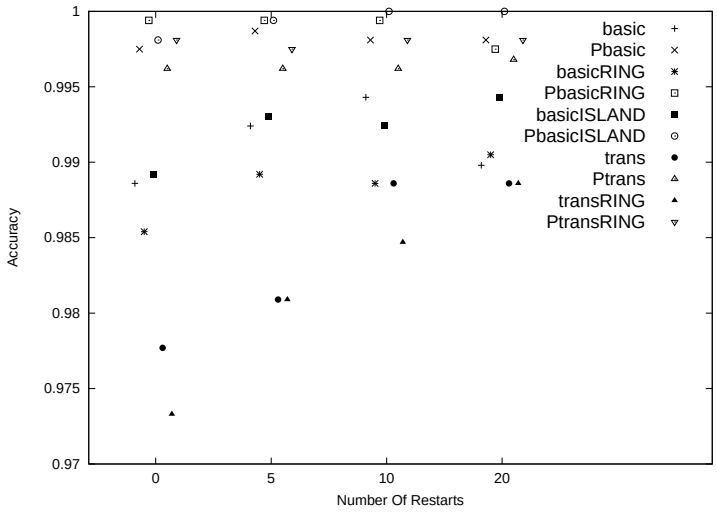



Figure B.200: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f50_412

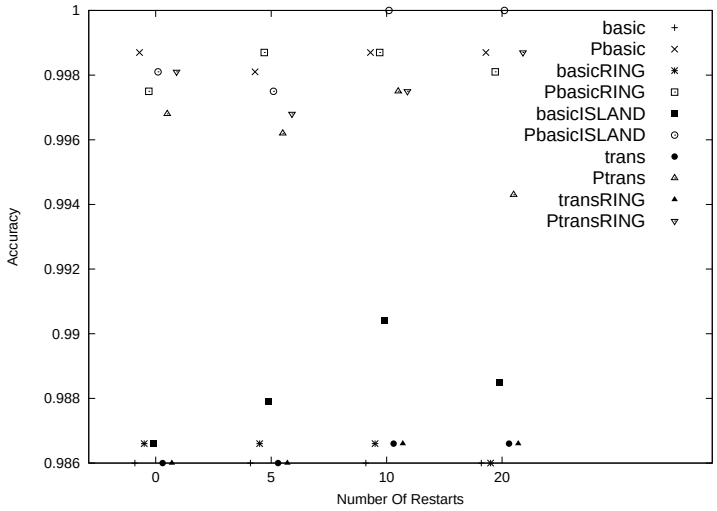



Figure B.201: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f50_498

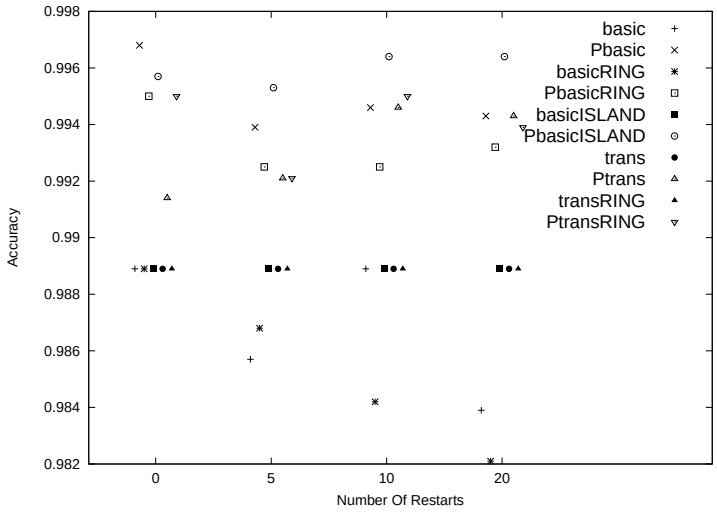



Figure B.202: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f100_307

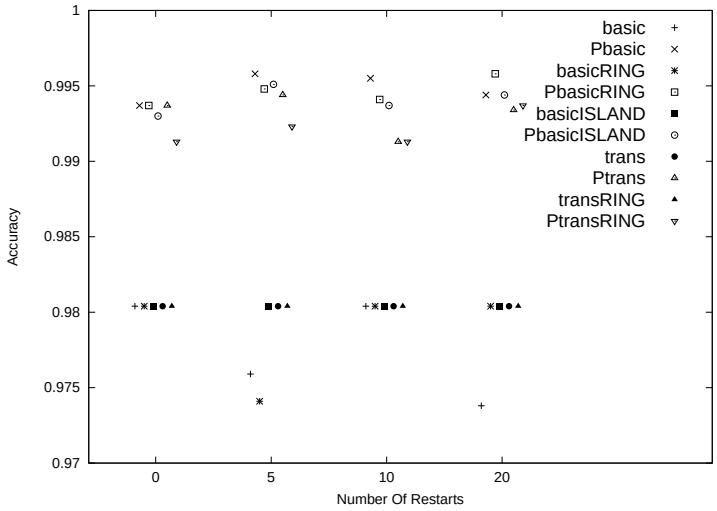



Figure B.203: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f100_415

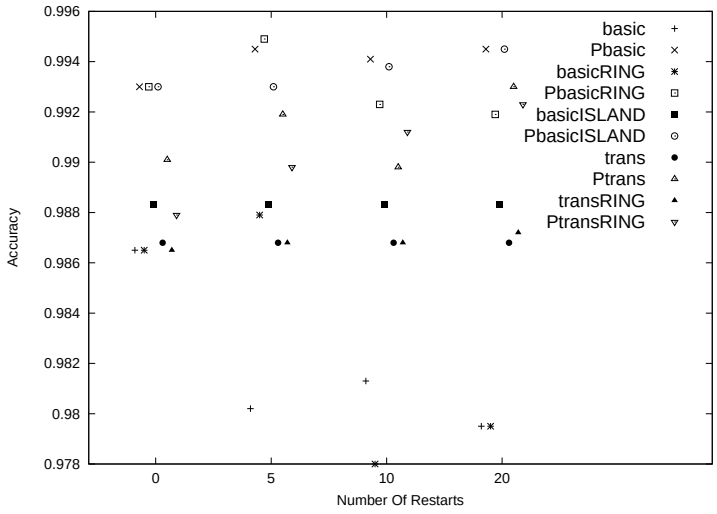



Figure B.204: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f100_512

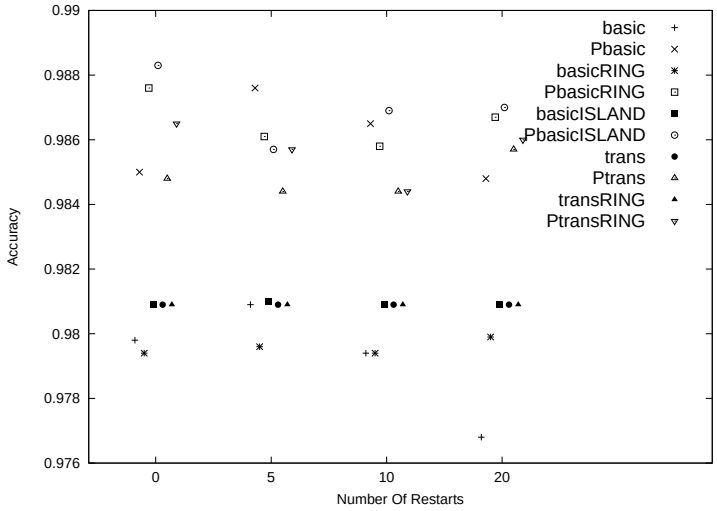



Figure B.205: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f508_354

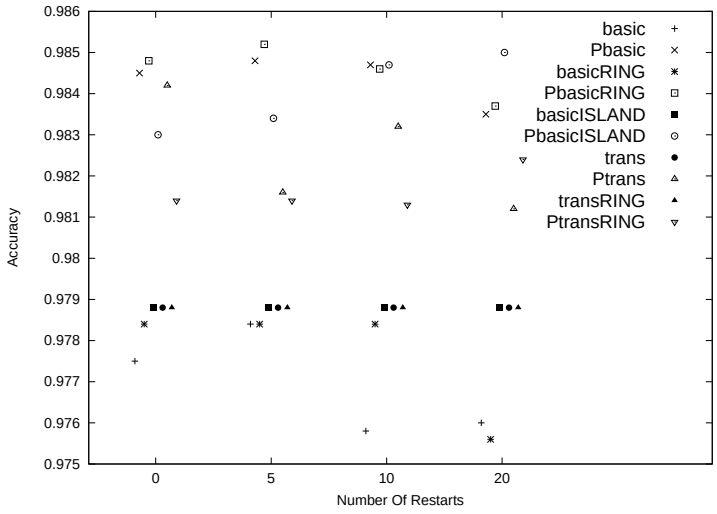



Figure B.206: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f635_350

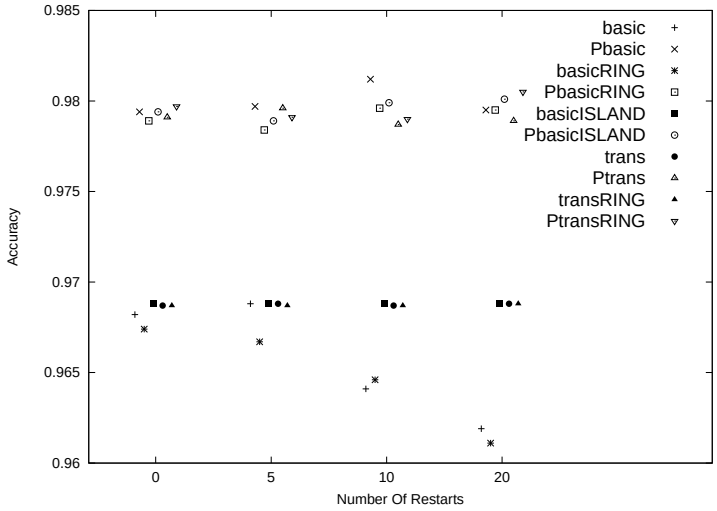



Figure B.207: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f737_355

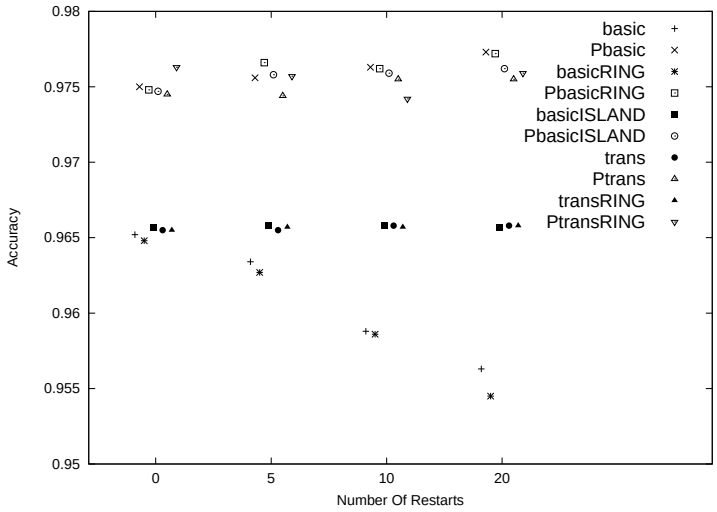



Figure B.208: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f1343_354

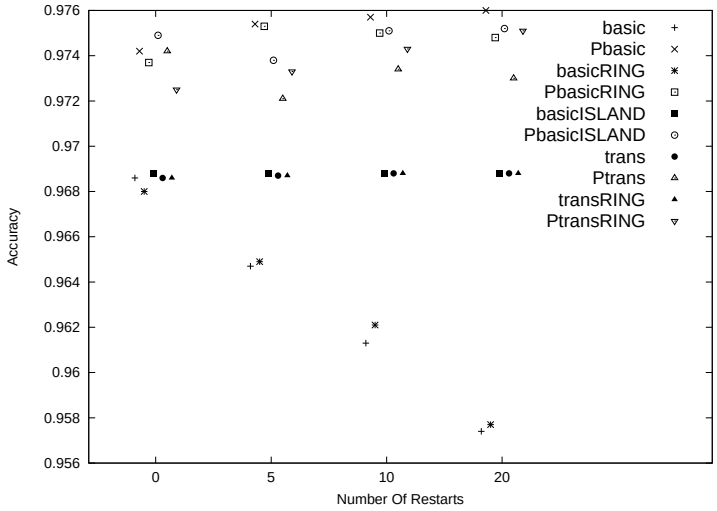



Figure B.209: Comparison of No Post Optimization Results and Post Optimization Results on Problem Instance f1577_354

### B.5.2 Second Set of Results

**Results With No Post Optimization and No Forced Recentre**

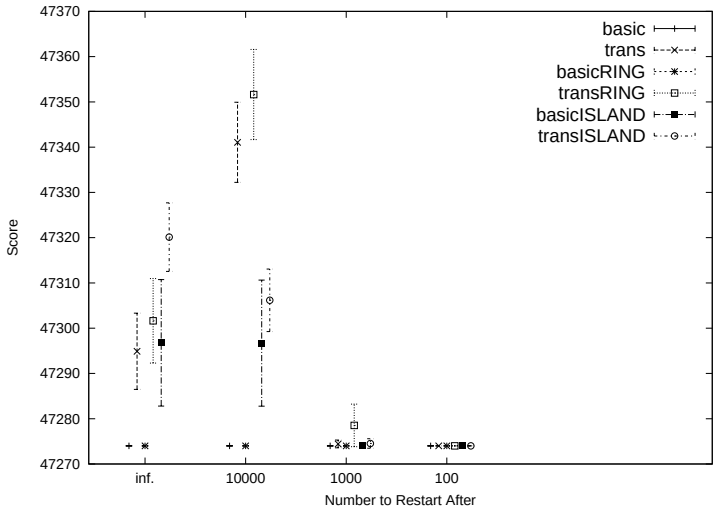



Figure B.210: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance acin1

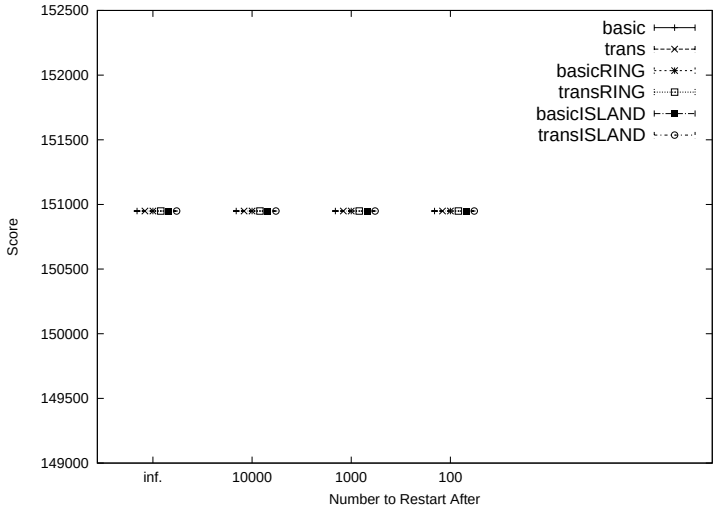



Figure B.211: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance acin2

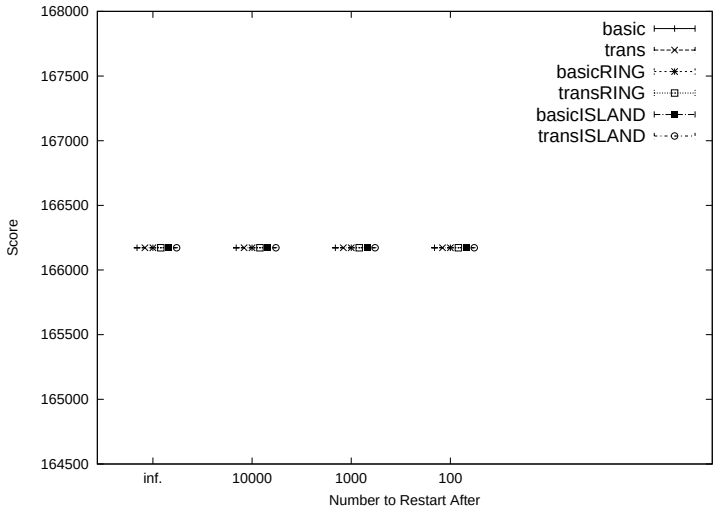



Figure B.212: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance acin3

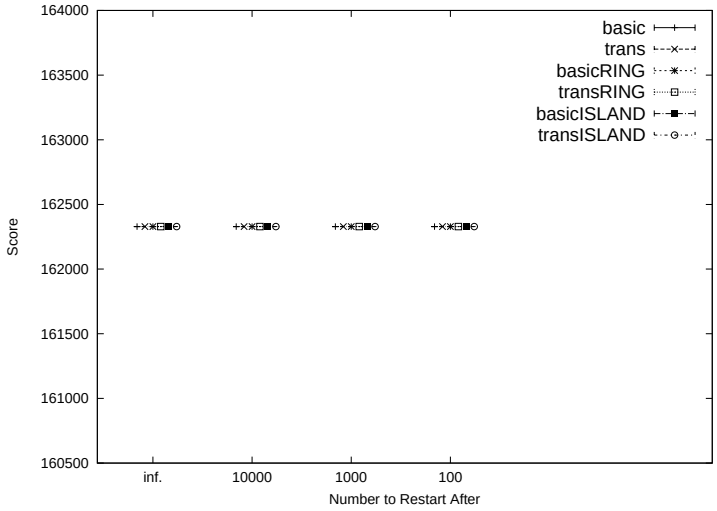



Figure B.213: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance acin5

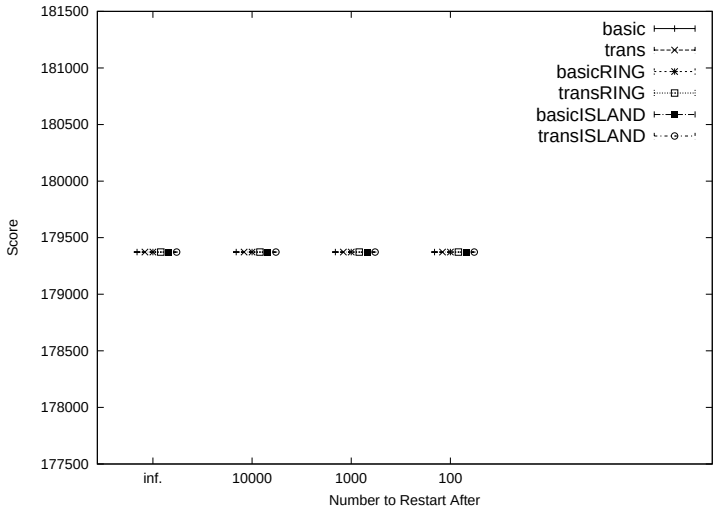



Figure B.214: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance acin7

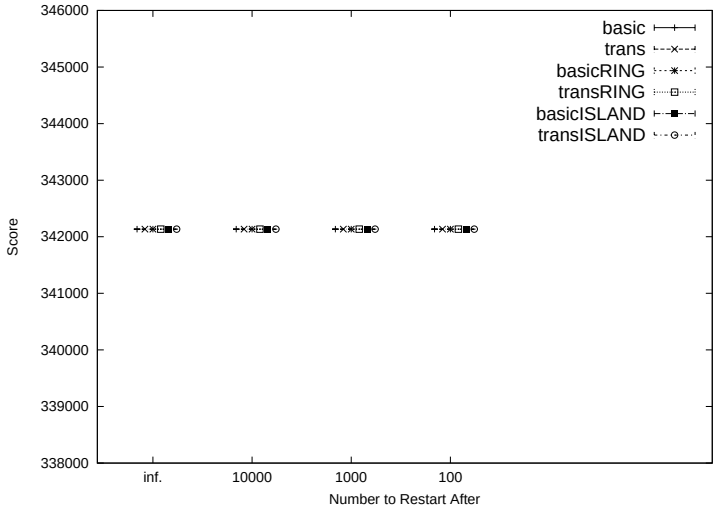



Figure B.215: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance acin9

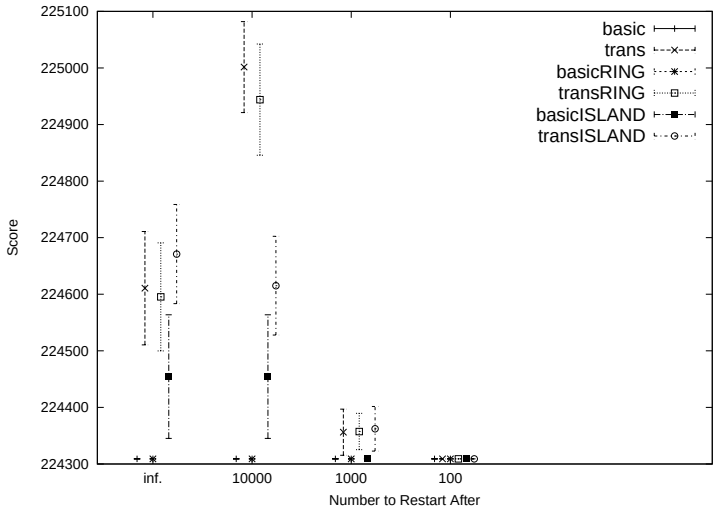



Figure B.216: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance bx842596_4

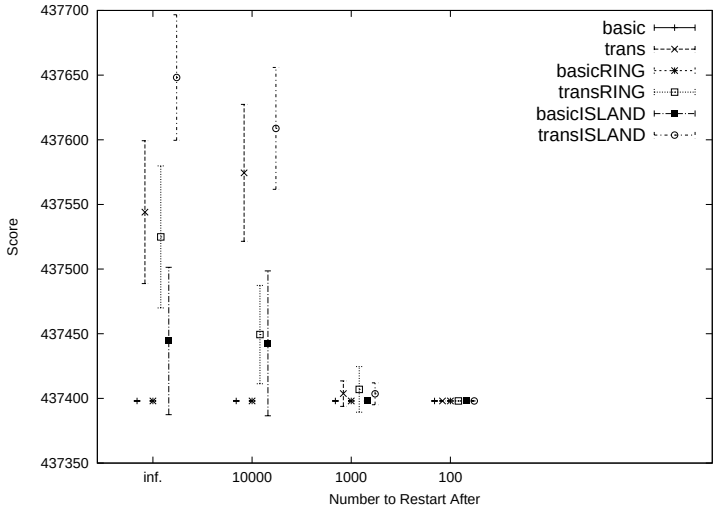



Figure B.217: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance bx842596_7

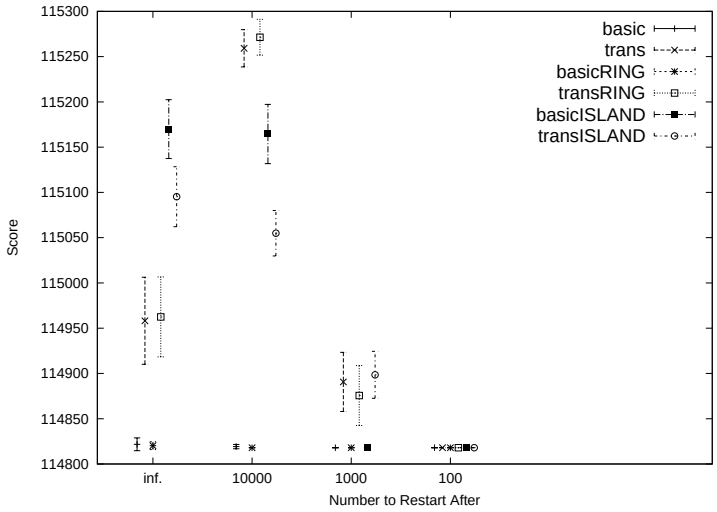



Figure B.218: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance j02459_7

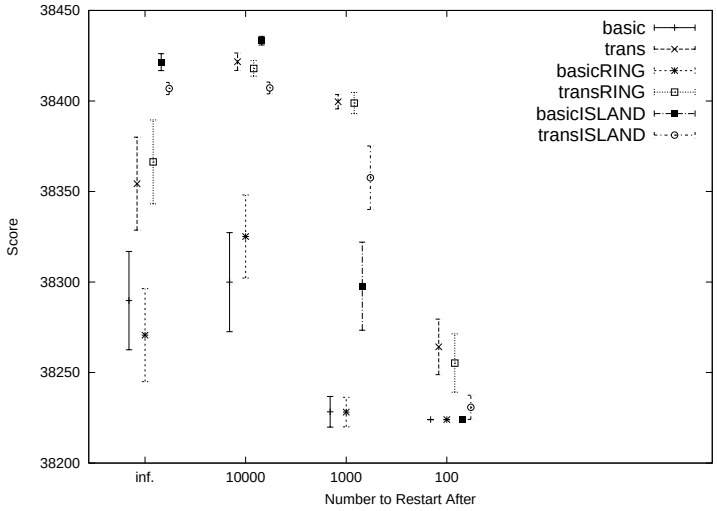



Figure B.219: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance m15421_5

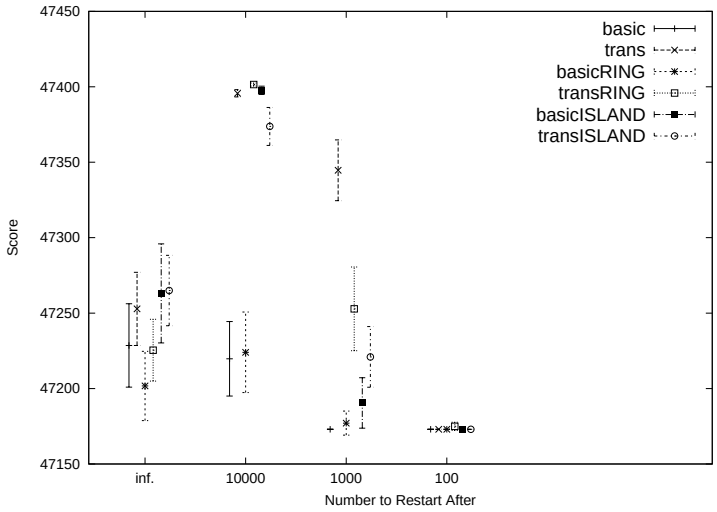



Figure B.220: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance m15421_6

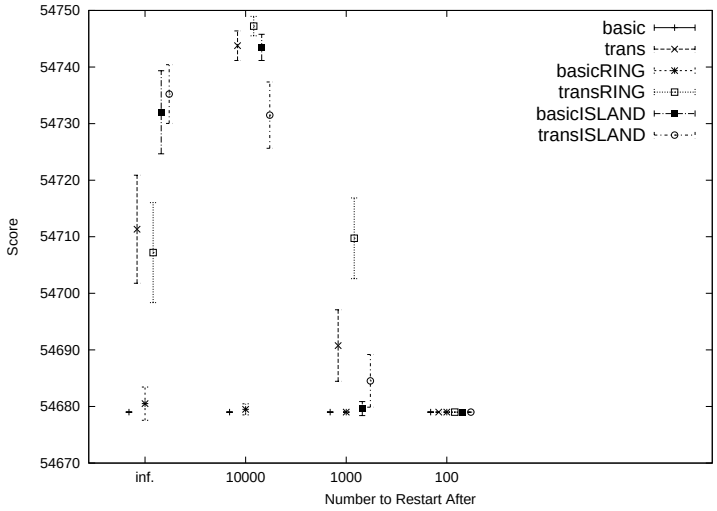



Figure B.221: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance m15421_7

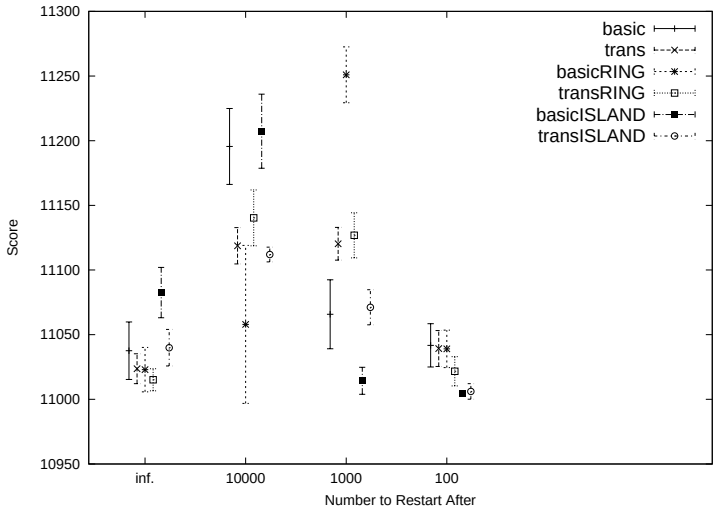



Figure B.222: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance x60189_4

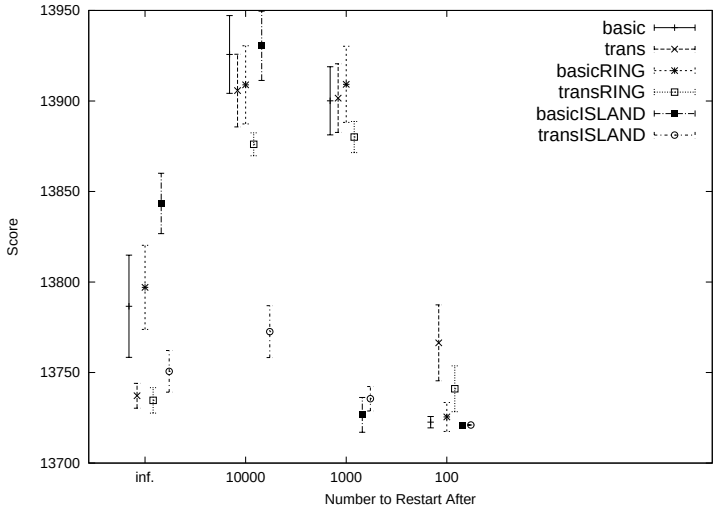



Figure B.223: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance x60189_5

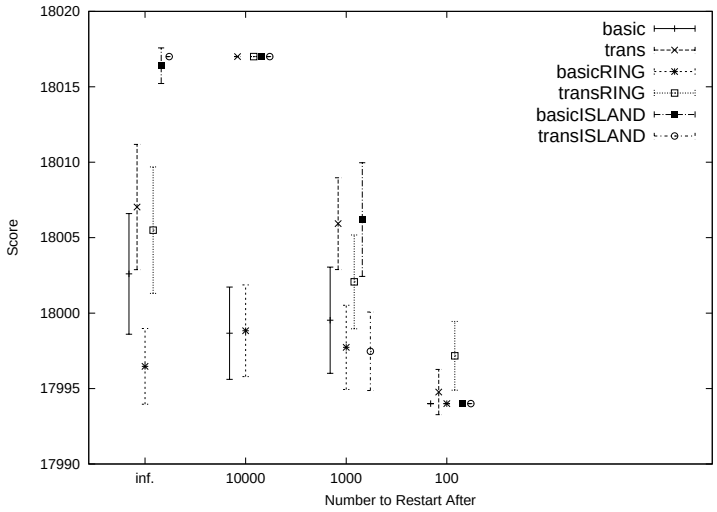



Figure B.224: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance x60189_6

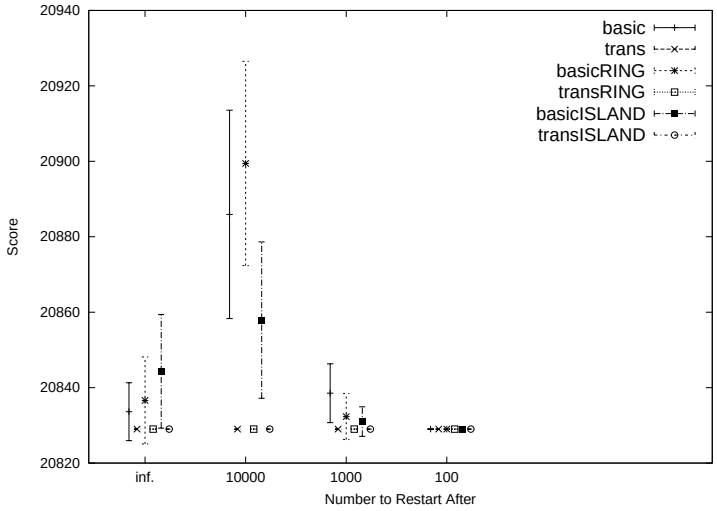



Figure B.225: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance x60189_7

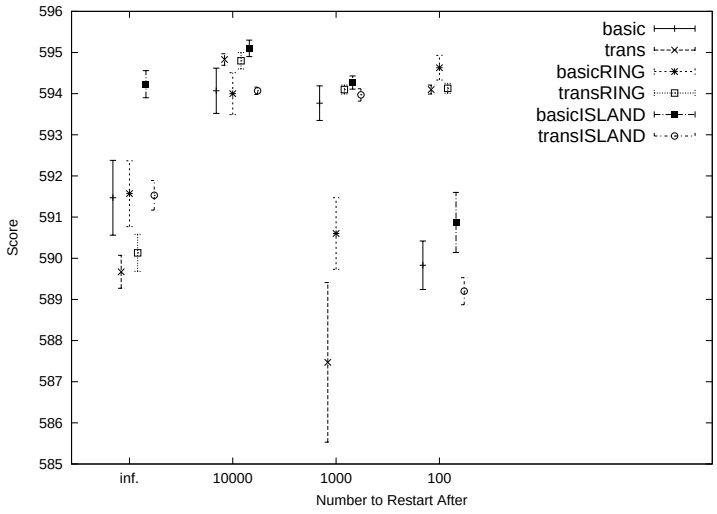



Figure B.226: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f25_305

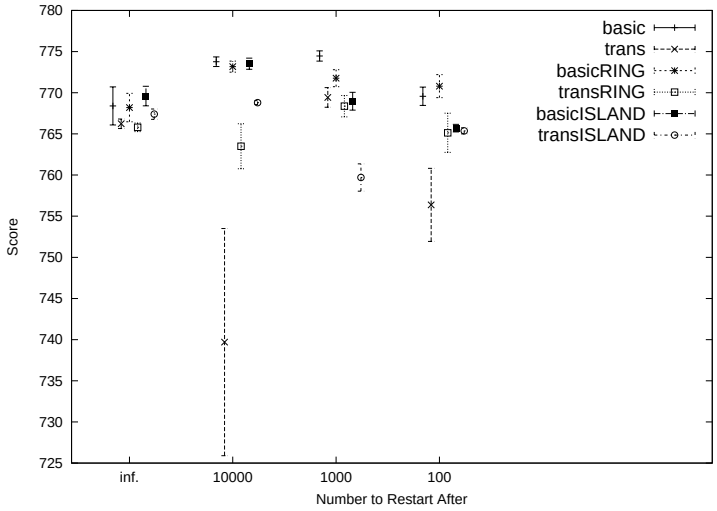



Figure B.227: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f25_400

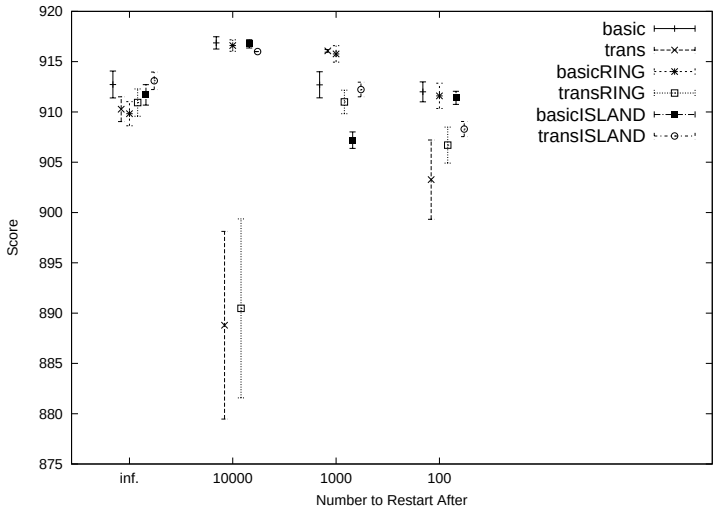



Figure B.228: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f25_500

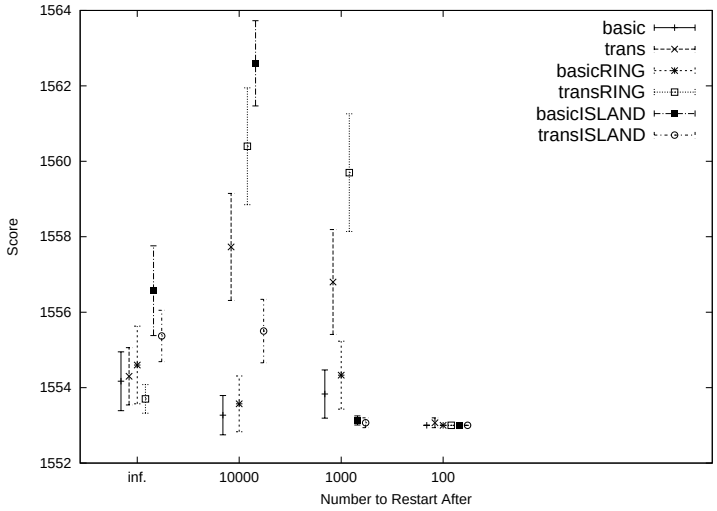



Figure B.229: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f50_315

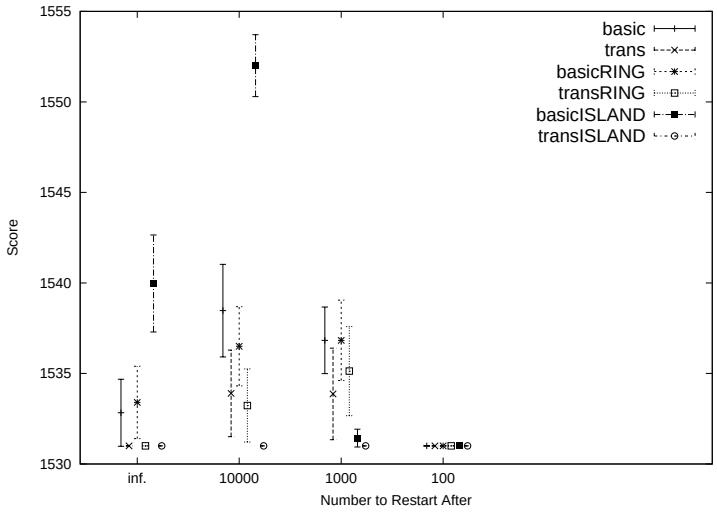



Figure B.230: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f50_412

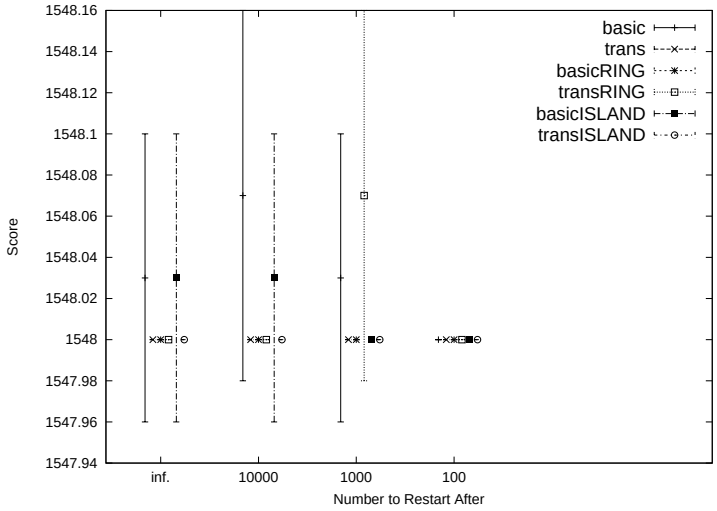



Figure B.231: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f50_498

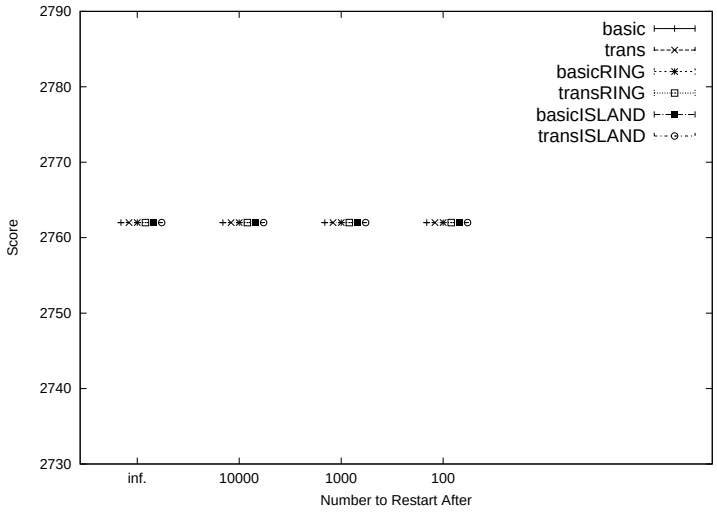



Figure B.232: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f100_307

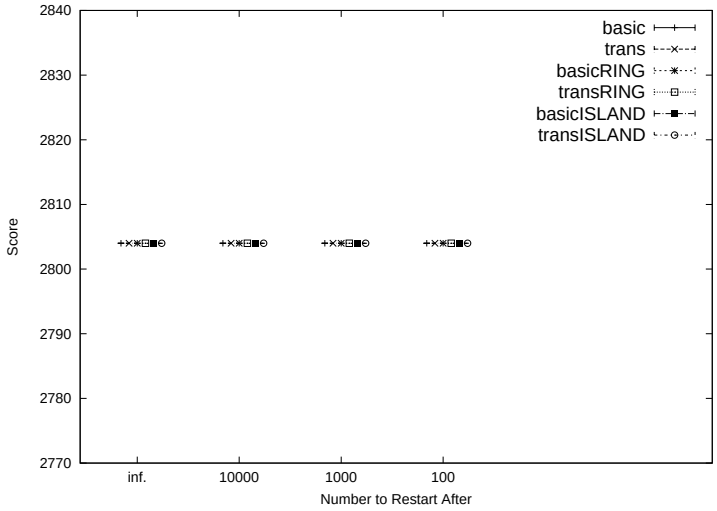



Figure B.233: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f100_415

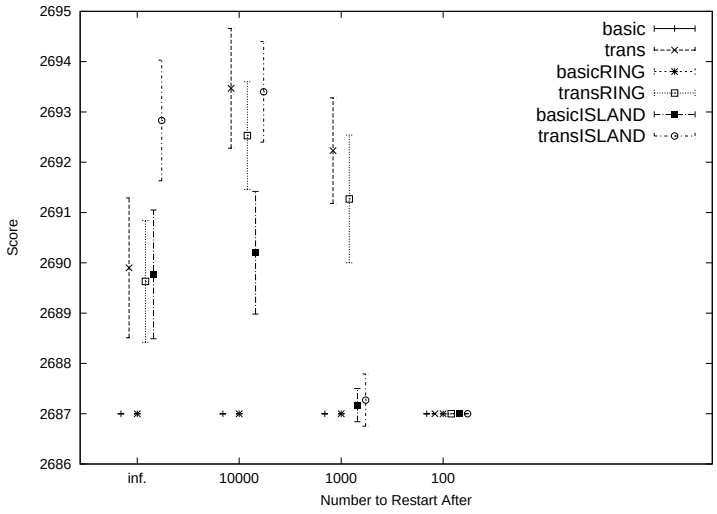



Figure B.234: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f100_512

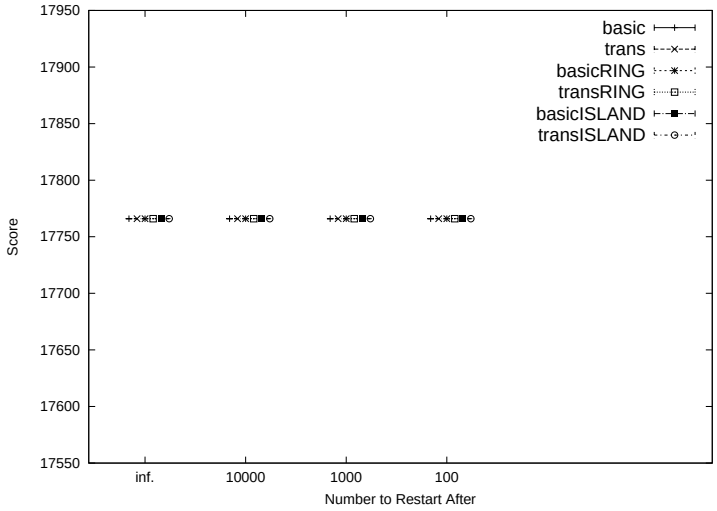



Figure B.235: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f508_354

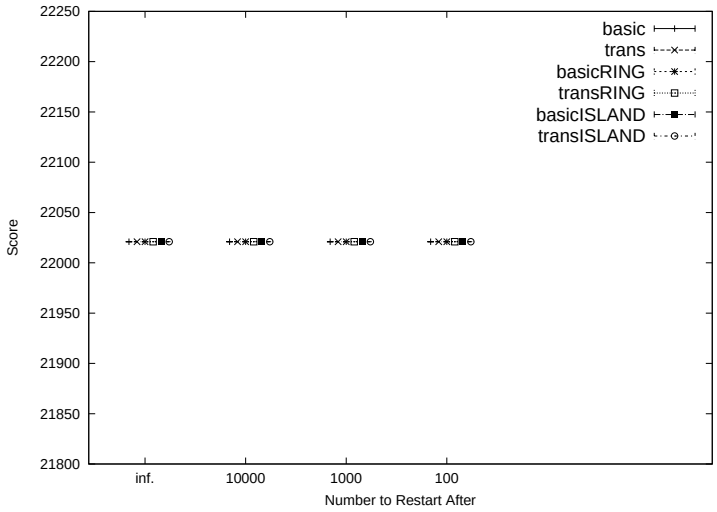



Figure B.236: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f635_350

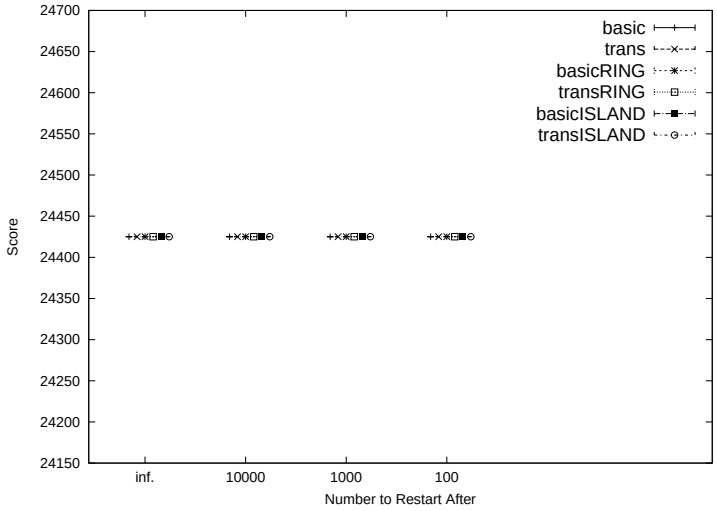



Figure B.237: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f737_355

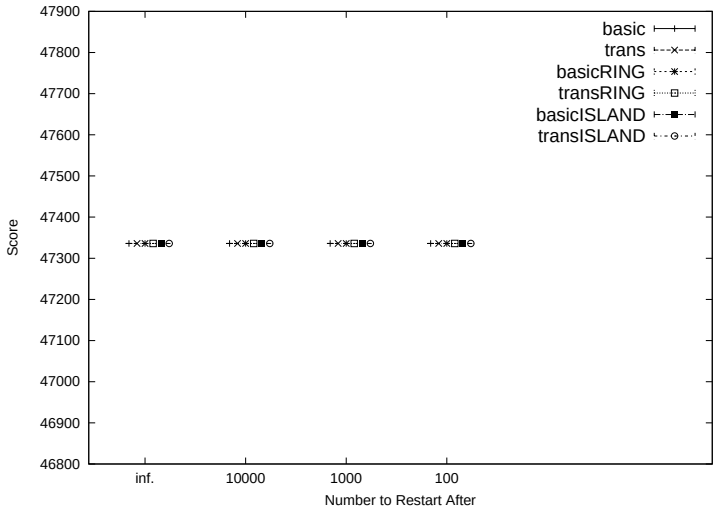



Figure B.238: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f1343_354

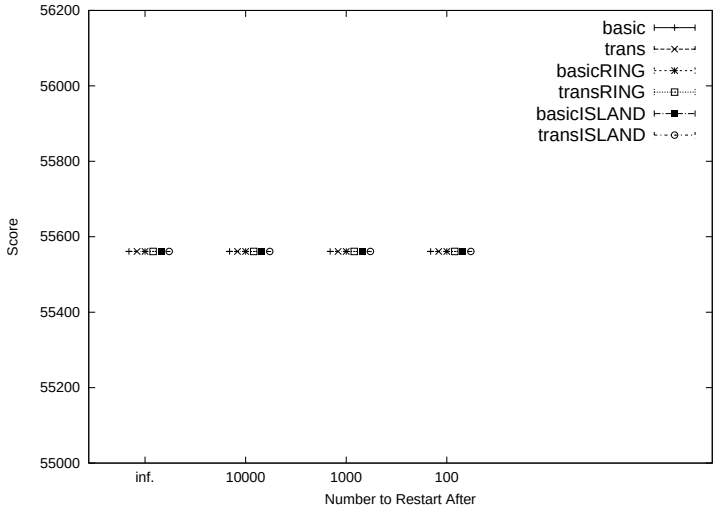



Figure B.239: Comparison of Best Results Between Algorithm Variaions and No Forced Recentre on Problem Instance f1577_354

**Results With Post Optimization and No Forced Recentre**

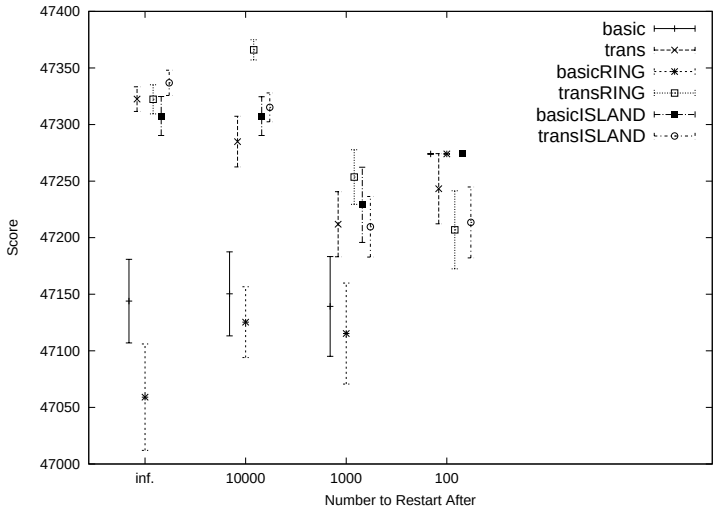



Figure B.240: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance acin1

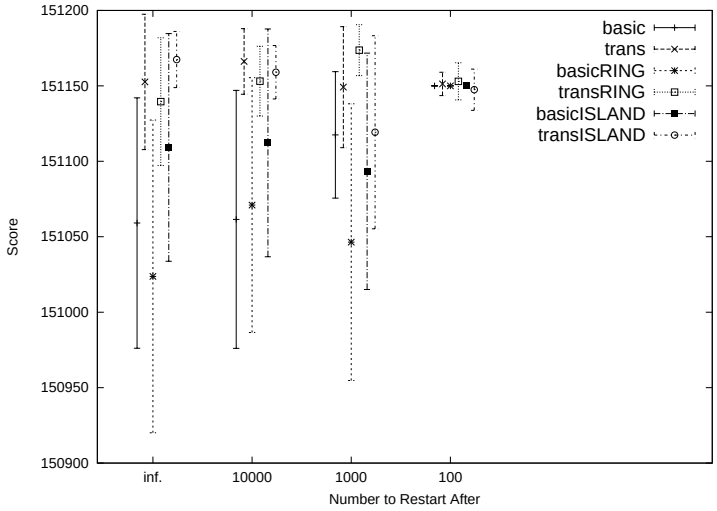



Figure B.241: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance acin2

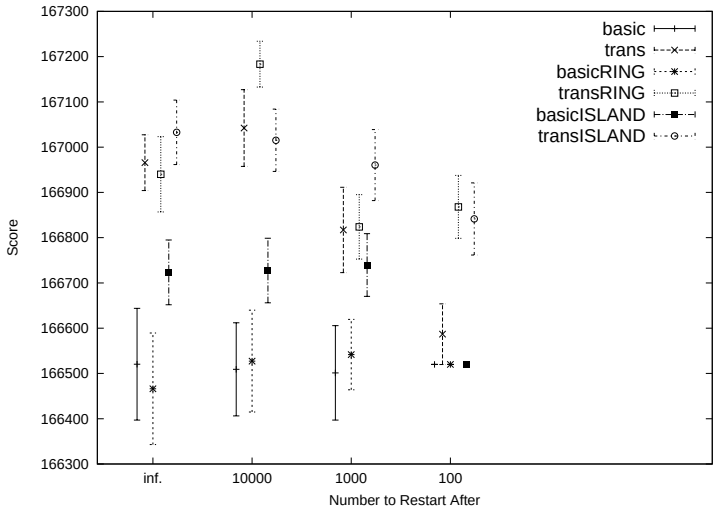



Figure B.242: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance acin3

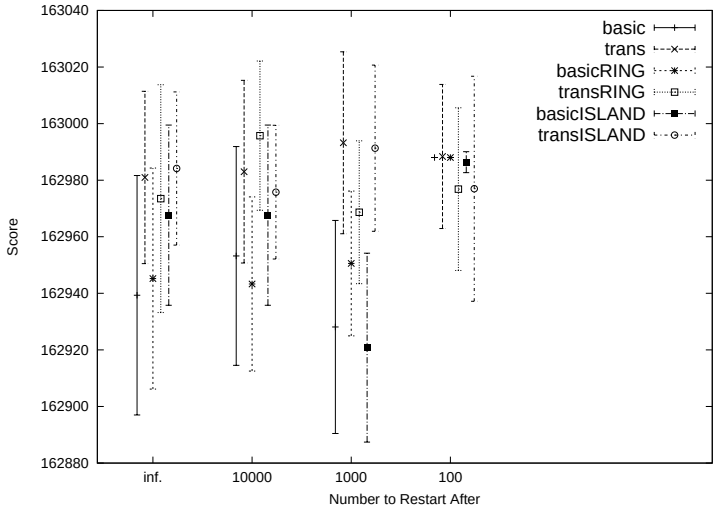



Figure B.243: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance acin5

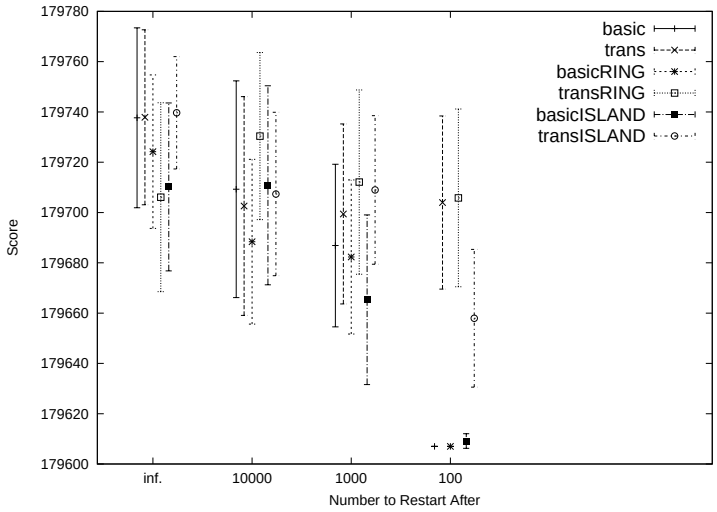



Figure B.244: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance acin7

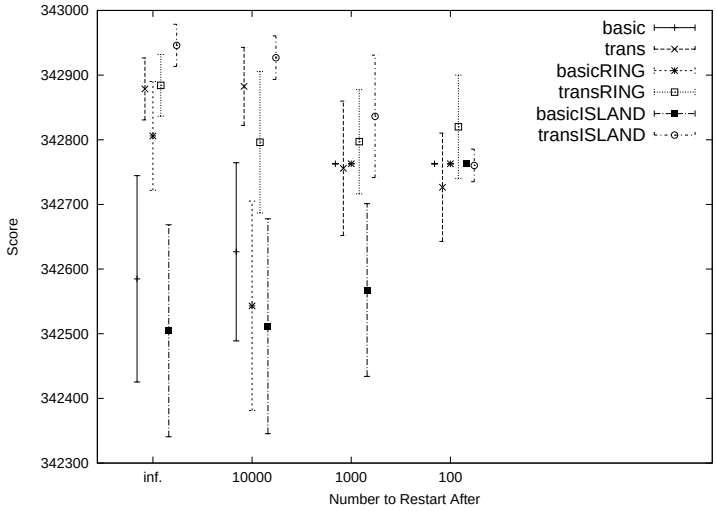



Figure B.245: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance acin9

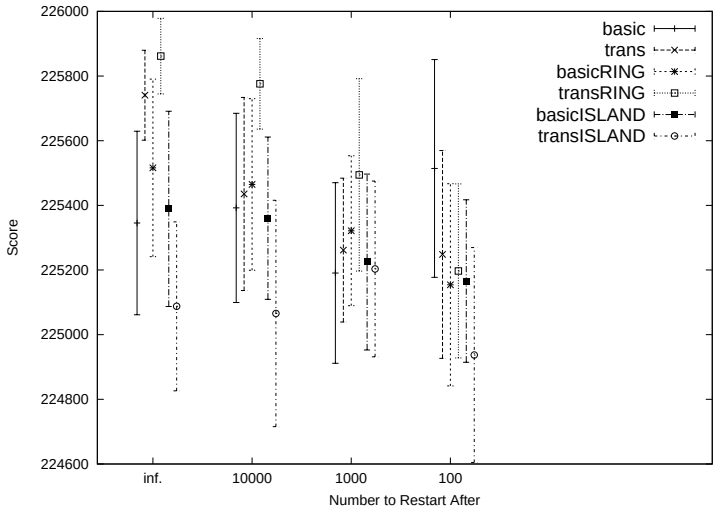



Figure B.246: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance bx842596_4

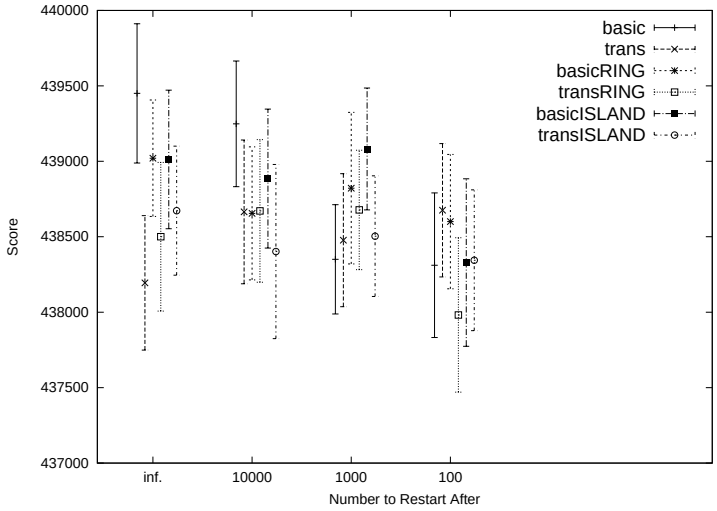



Figure B.247: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance bx842596_7

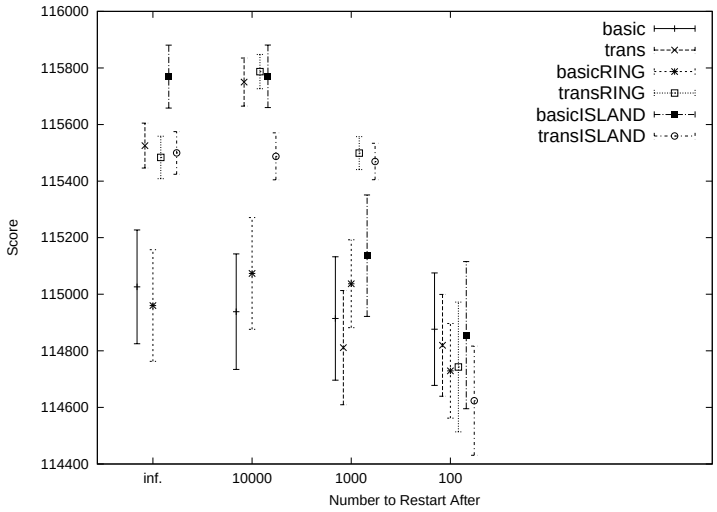



Figure B.248: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance j02459_7

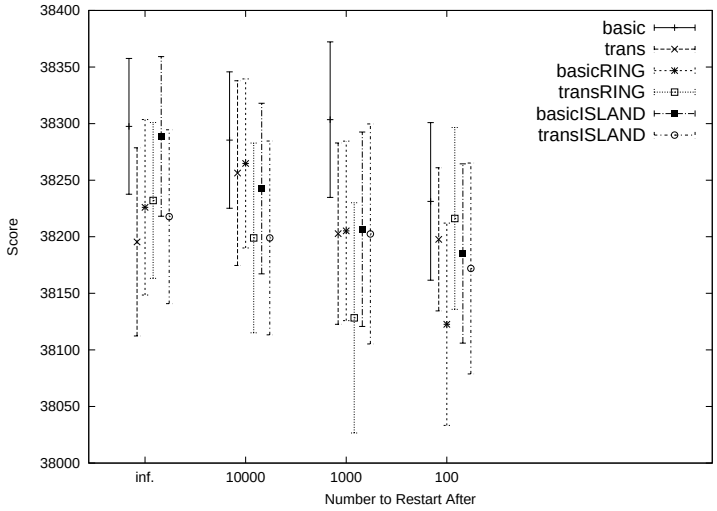



Figure B.249: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance m15421_5

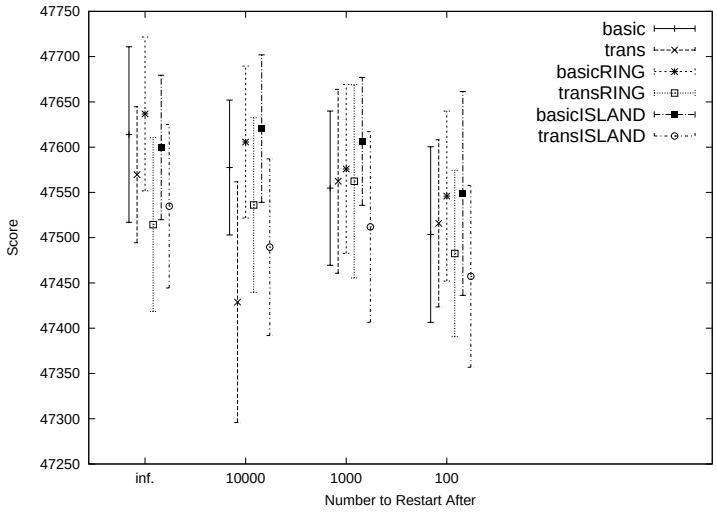



Figure B.250: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance m15421_6

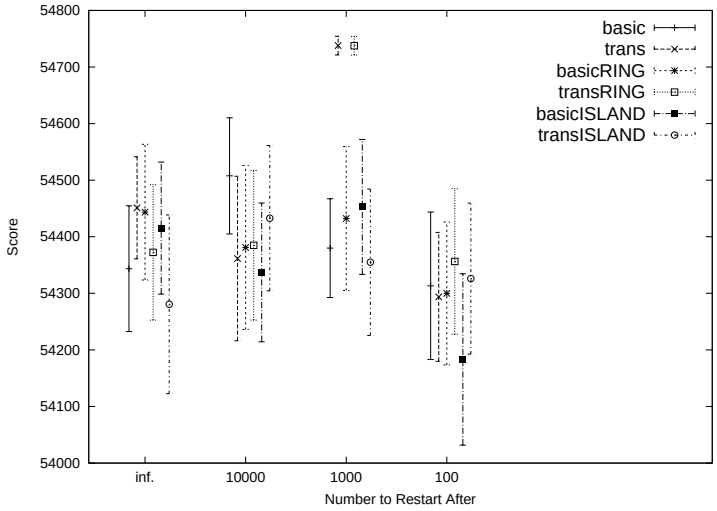



Figure B.251: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance m15421_7

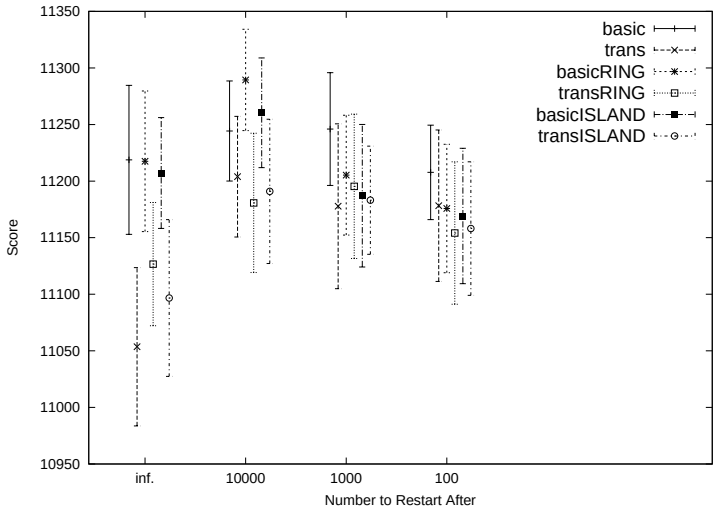



Figure B.252: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance x60189_4

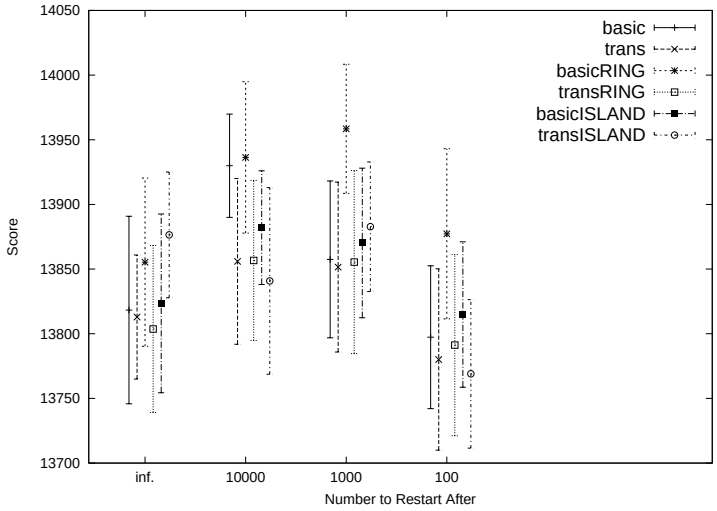



Figure B.253: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance x60189_5

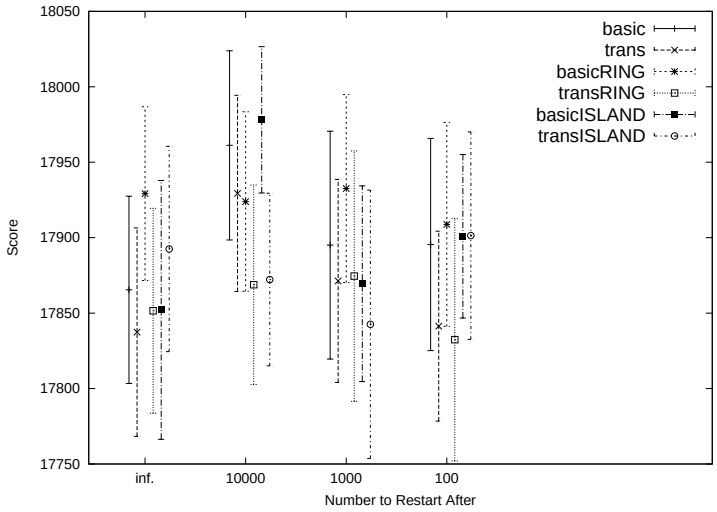



Figure B.254: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance x60189_6

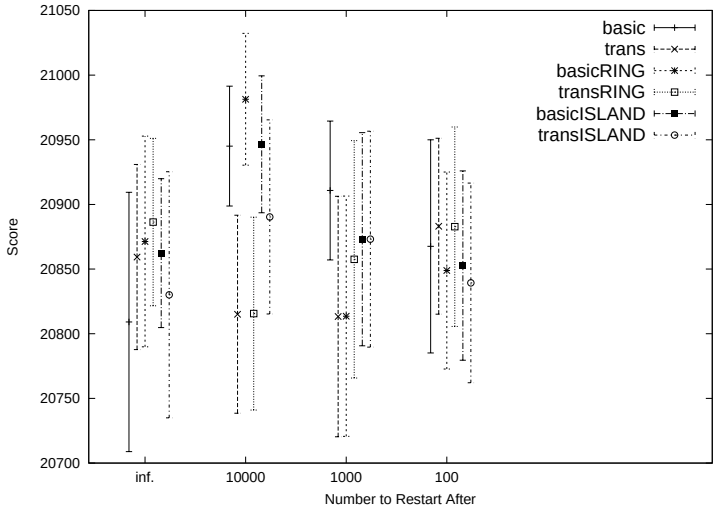



Figure B.255: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance x60189_7

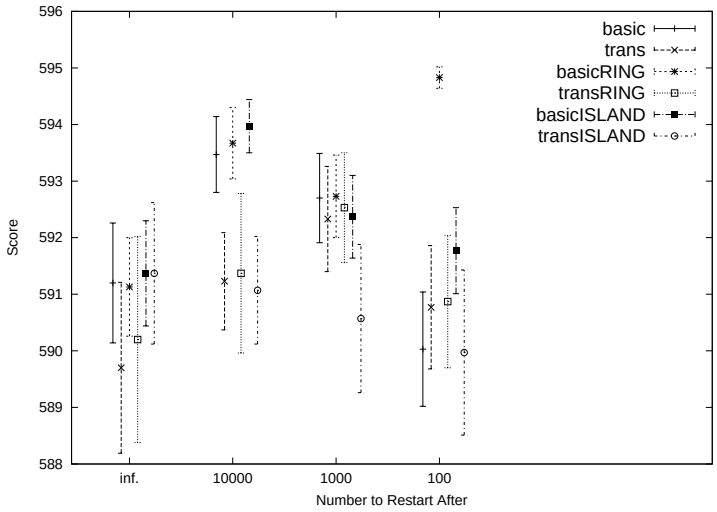



Figure B.256: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f25_305

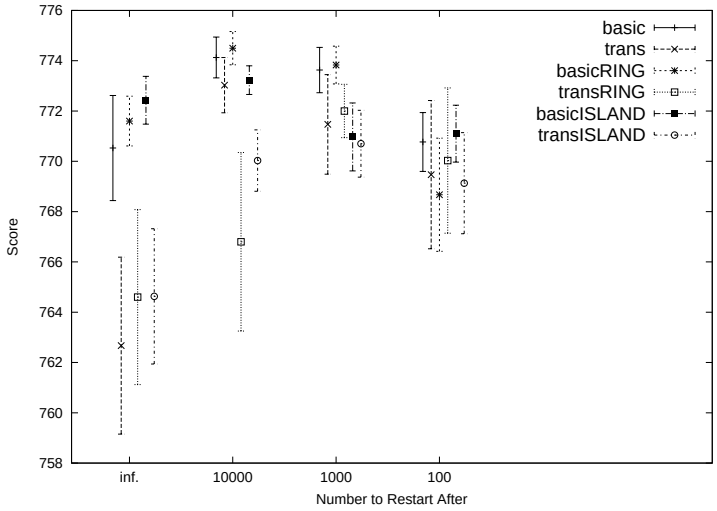



Figure B.257: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f25_400

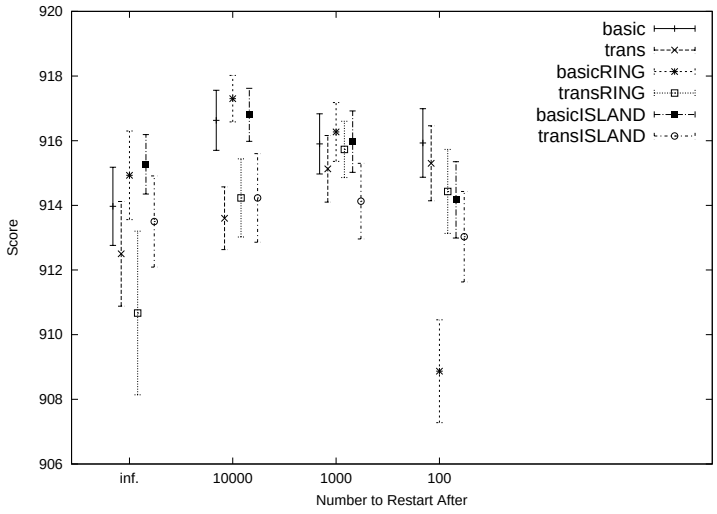



Figure B.258: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f25_500

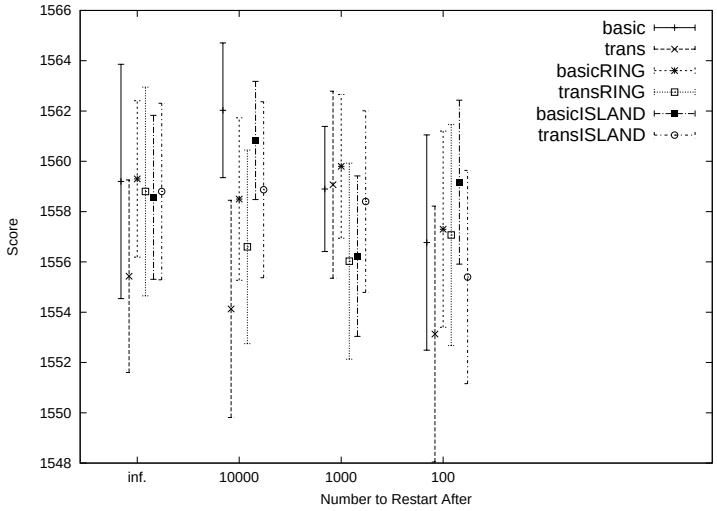



Figure B.259: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f50_315

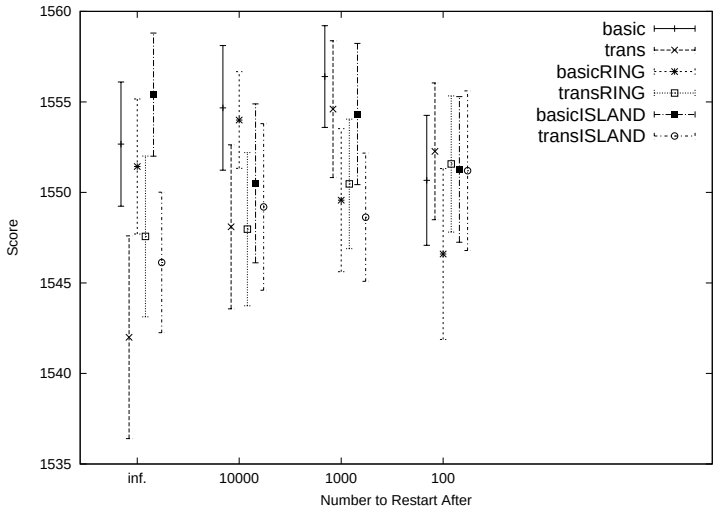



Figure B.260: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f50_412

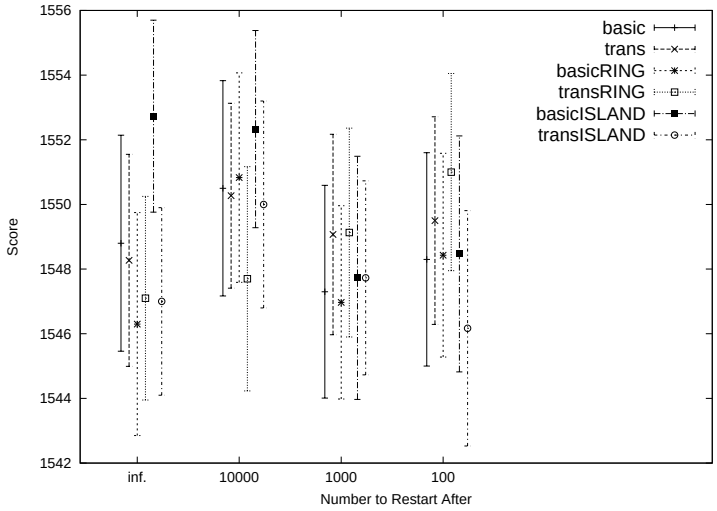



Figure B.261: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f50_498

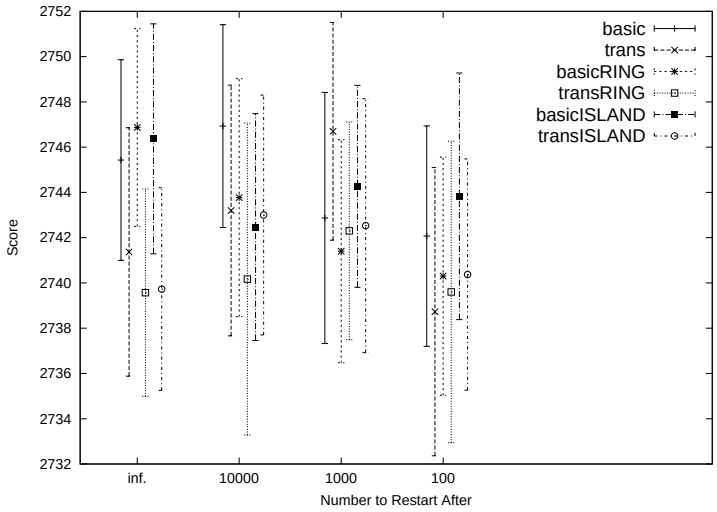



Figure B.262: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f100_307

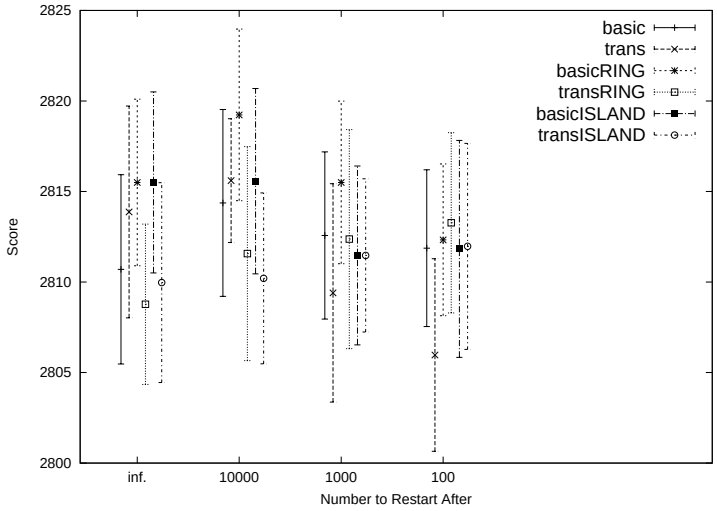



Figure B.263: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f100_415

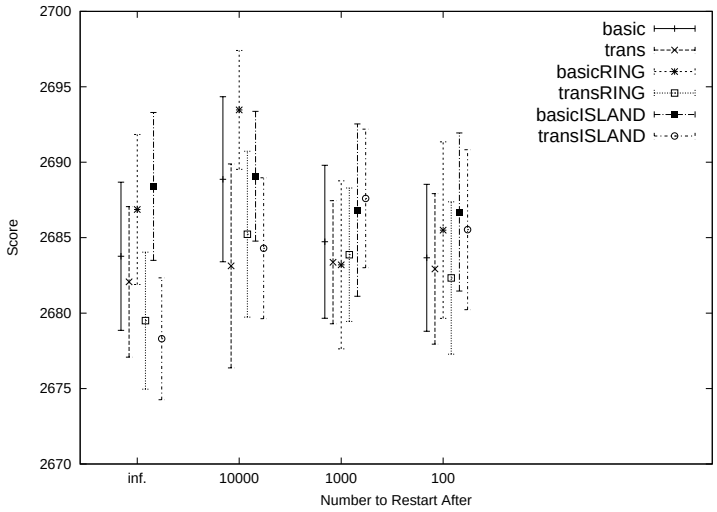



Figure B.264: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f100_512

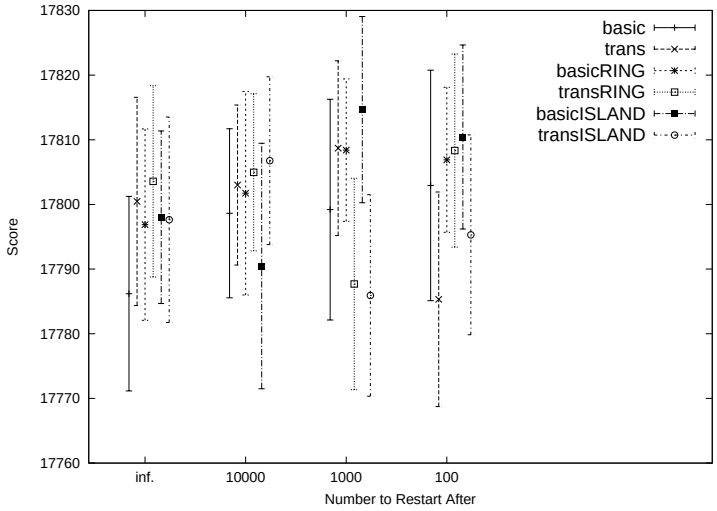



Figure B.265: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f508_354

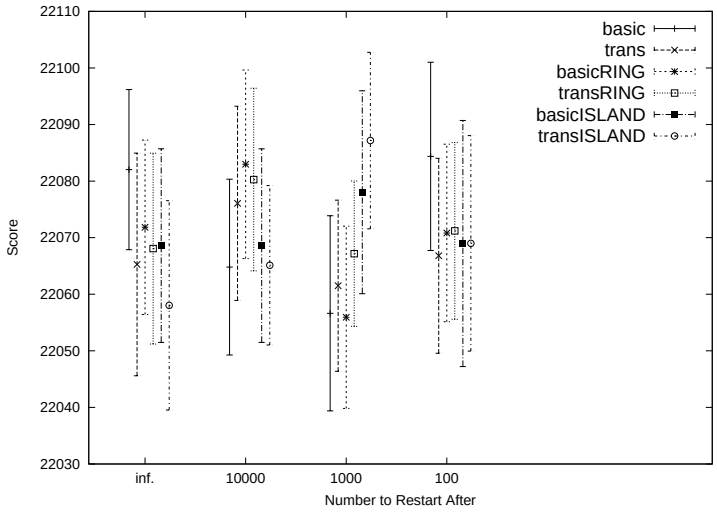



Figure B.266: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f635_350

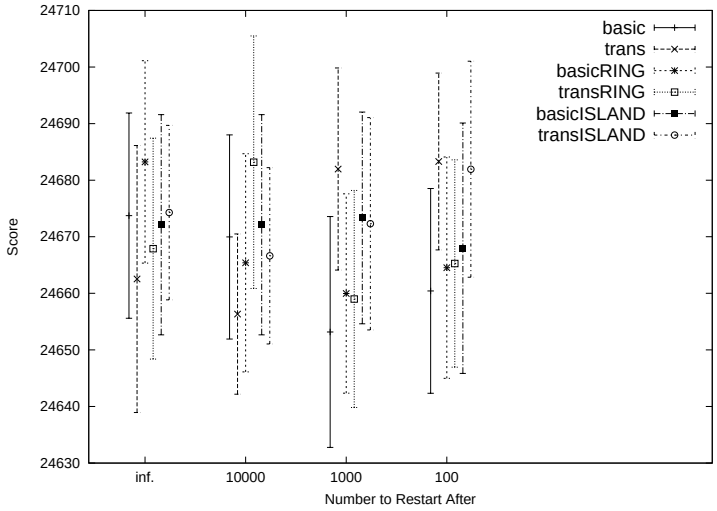



Figure B.267: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f737_355

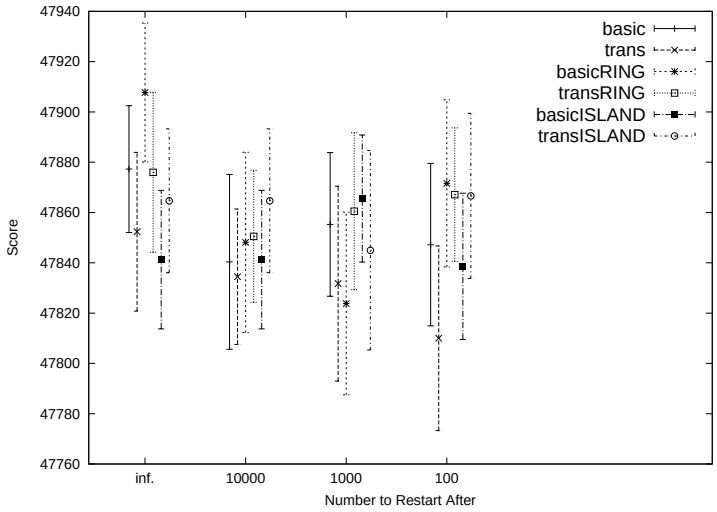



Figure B.268: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f1343_354

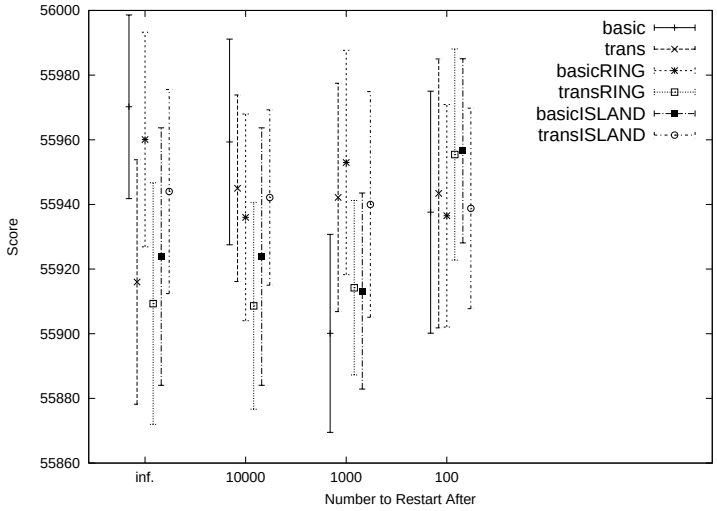



Figure B.269: Comparison of Best Results Between All Algorithm Variations and No Forced Recentre on Problem Instance f1577_354

**Results With No Post on Large Real World Problem Instances**

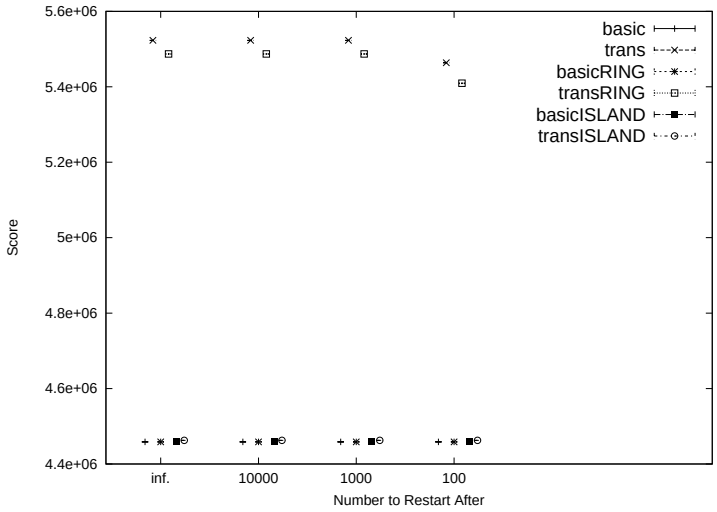



Figure B.270: Comparison of Best Results Between All Algorithm Variations on Instance COL

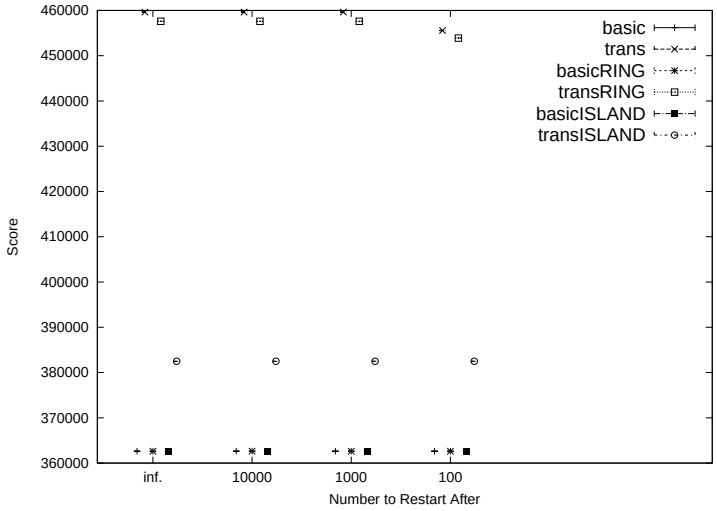



Figure B.271: Comparison of Best Results Between All Algorithm Variations on Instance MW2

**Comparison of First and Second Set of Results**

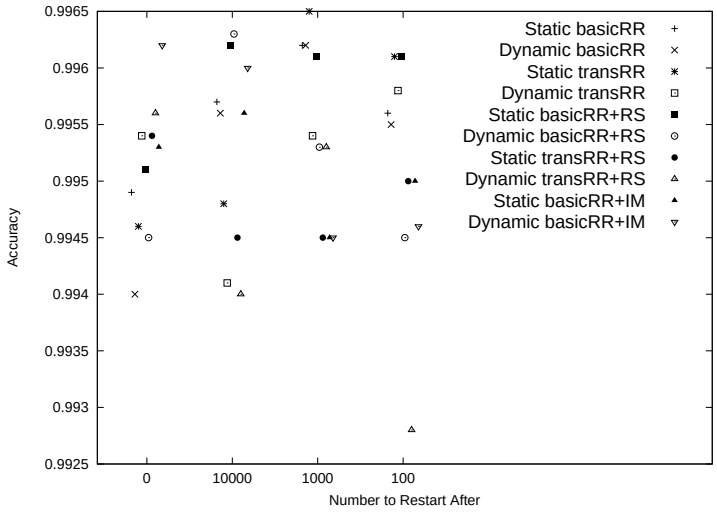



Figure B.272: Comparison of Best Results Between First and Second Set of Experiments on Instance acin1

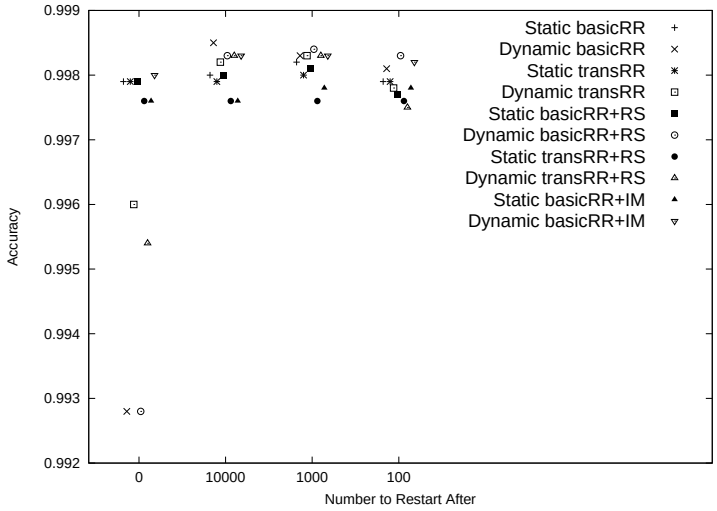



Figure B.273: Comparison of Best Results Between First and Second Set of Experiments on Instance acin2

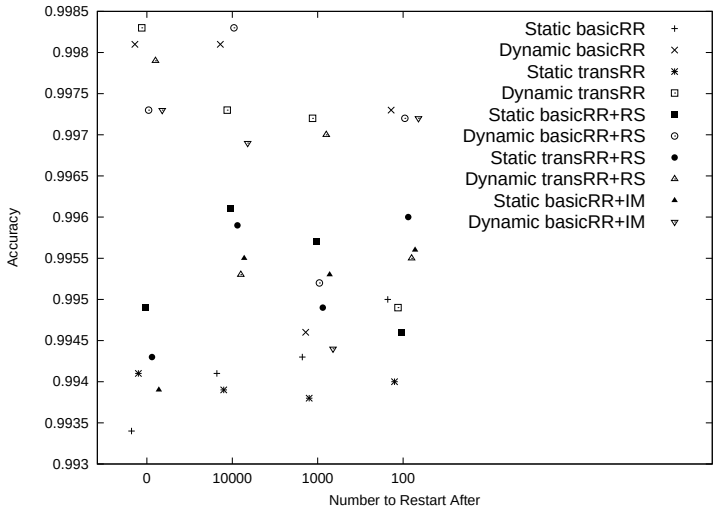



Figure B.274: Comparison of Best Results Between First and Second Set of Experiments on Instance acin3

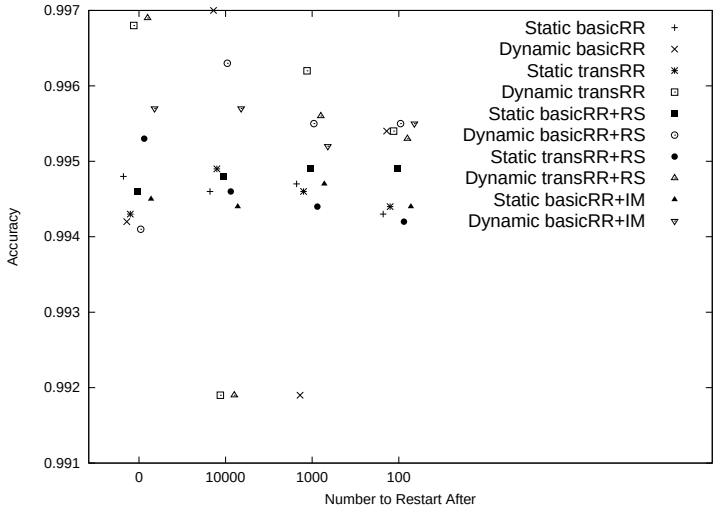



Figure B.275: Comparison of Best Results Between First and Second Set of Experiments on Instance acin5

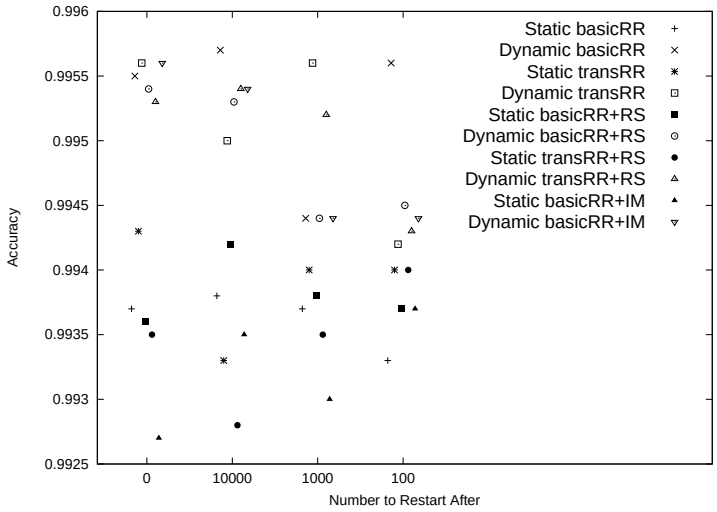



Figure B.276: Comparison of Best Results Between First and Second Set of Experiments on Instance acin7

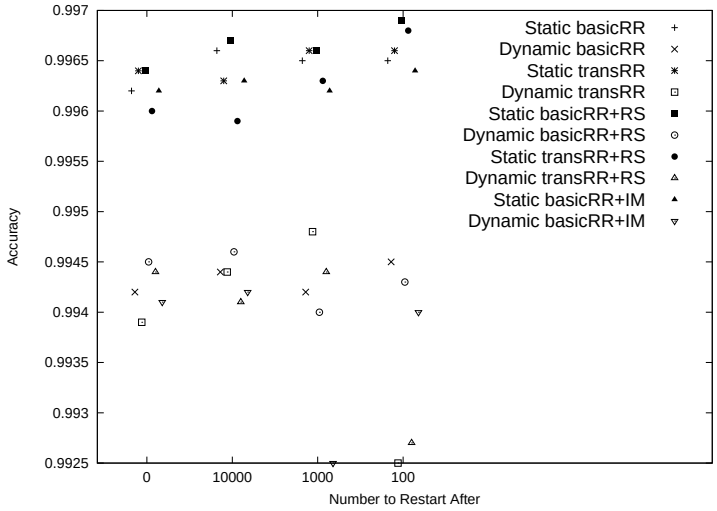



Figure B.277: Comparison of Best Results Between First and Second Set of Experiments on Instance acin9

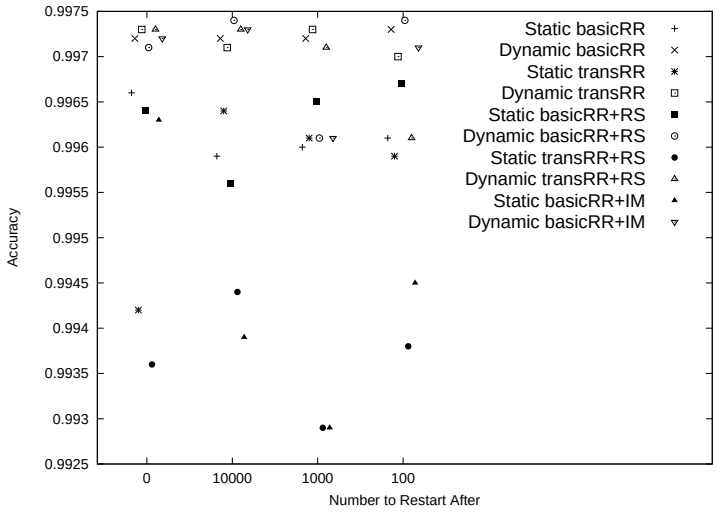



Figure B.278: Comparison of Best Results Between First and Second Set of Experiments on Instance bx842596_4

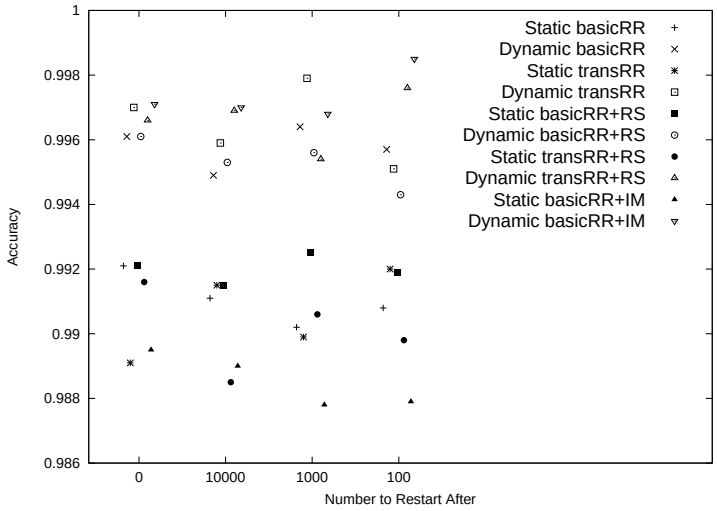



Figure B.279: Comparison of Best Results Between First and Second Set of Experiments on Instance bx842596_7

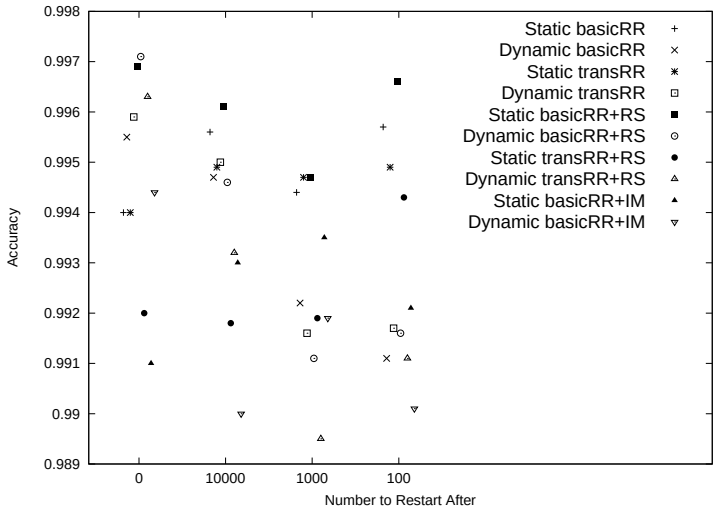



Figure B.280: Comparison of Best Results Between First and Second Set of Experiments on Instance j02459_7

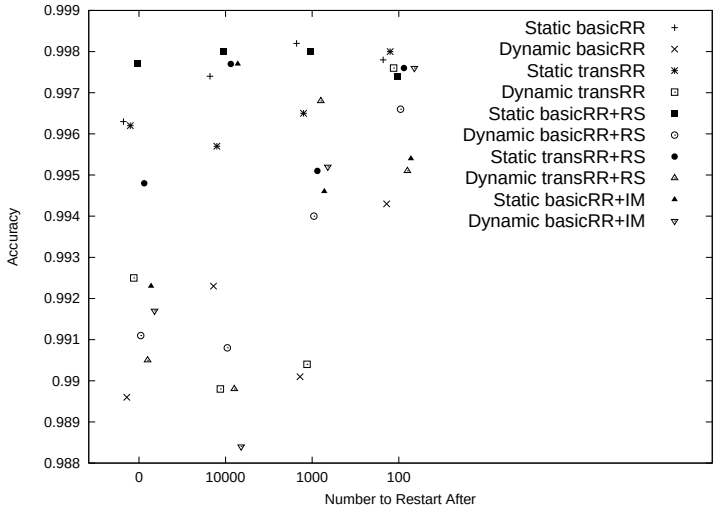



Figure B.281: Comparison of Best Results Between First and Second Set of Experiments on Instance m15421_5

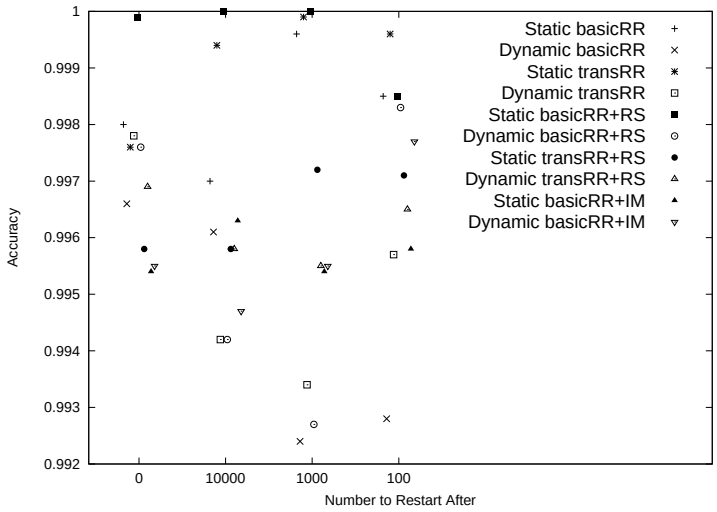



Figure B.282: Comparison of Best Results Between First and Second Set of Experiments on Instance m15421_6

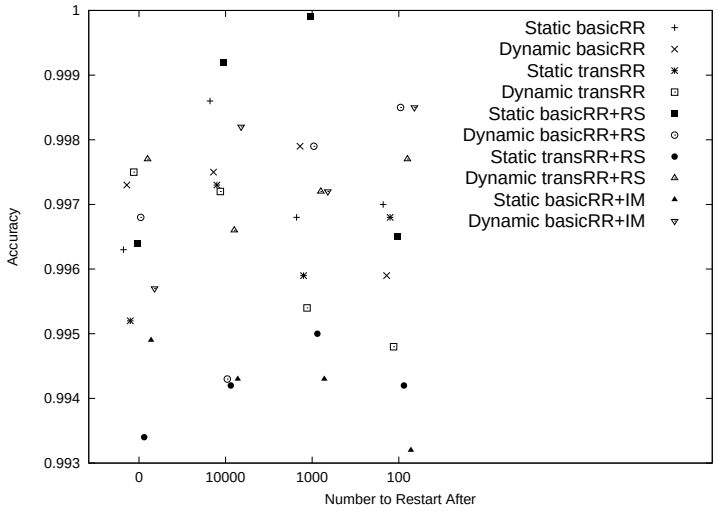



Figure B.283: Comparison of Best Results Between First and Second Set of Experiments on Instance m15421_7

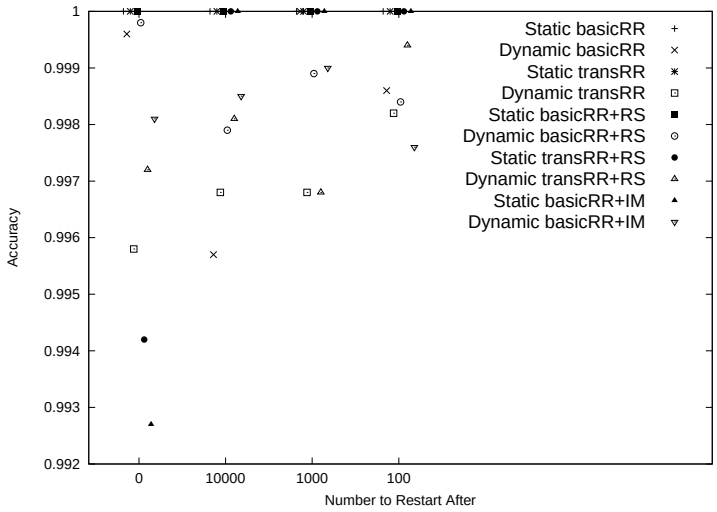



Figure B.284: Comparison of Best Results Between First and Second Set of Experiments on Instance x60189_4

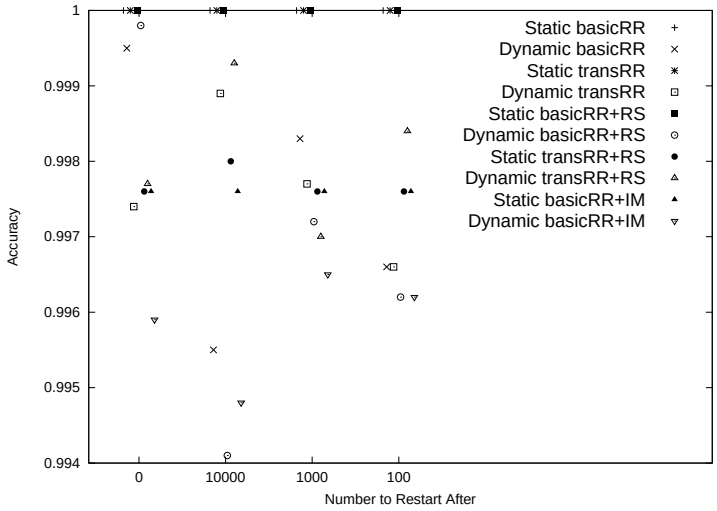



Figure B.285: Comparison of Best Results Between First and Second Set of Experiments on Instance x60189_5

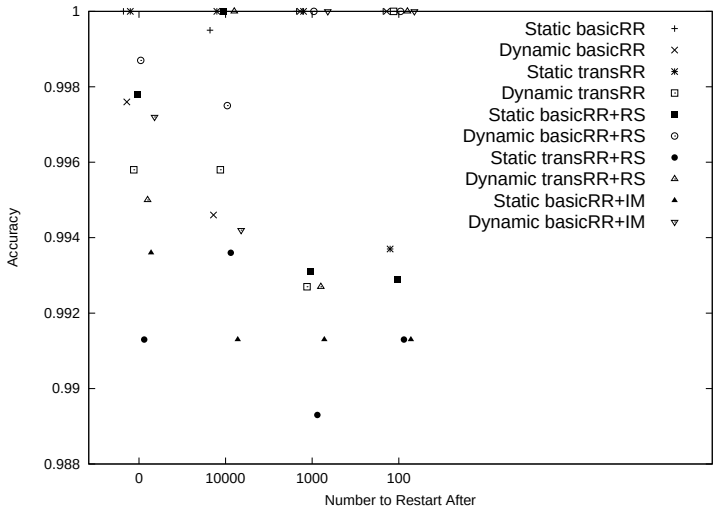



Figure B.286: Comparison of Best Results Between First and Second Set of Experiments on Instance x60189_6

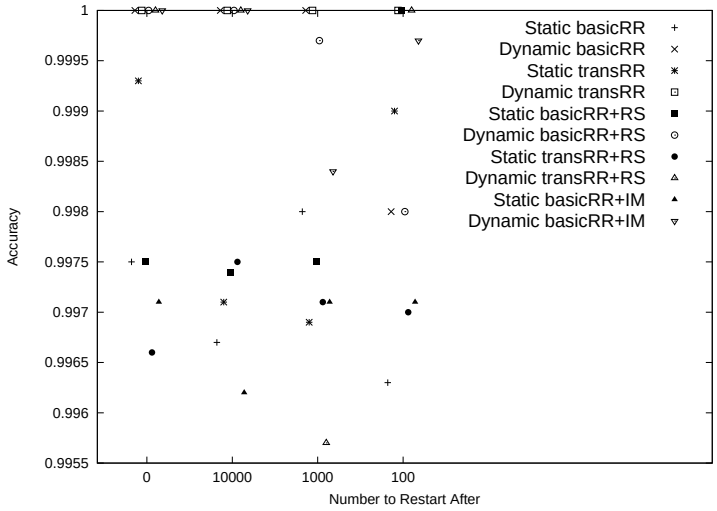



Figure B.287: Comparison of Best Results Between First and Second Set of Experiments on Instance x60189_7

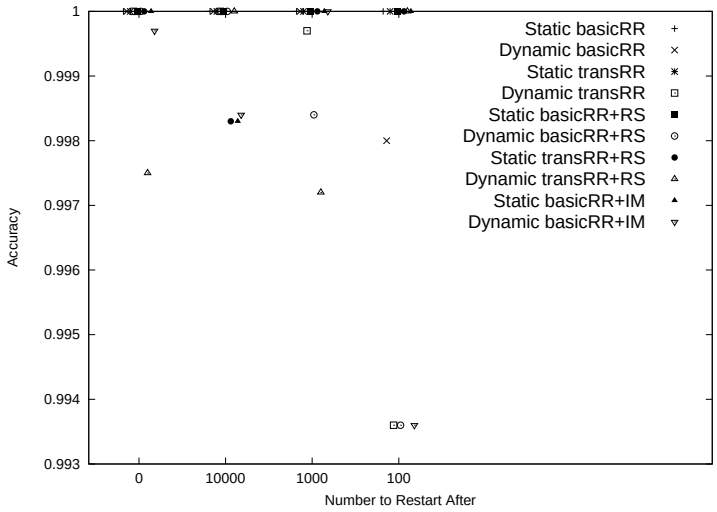



Figure B.288: Comparison of Best Results Between First and Second Set of Experiments on Instance f25_305

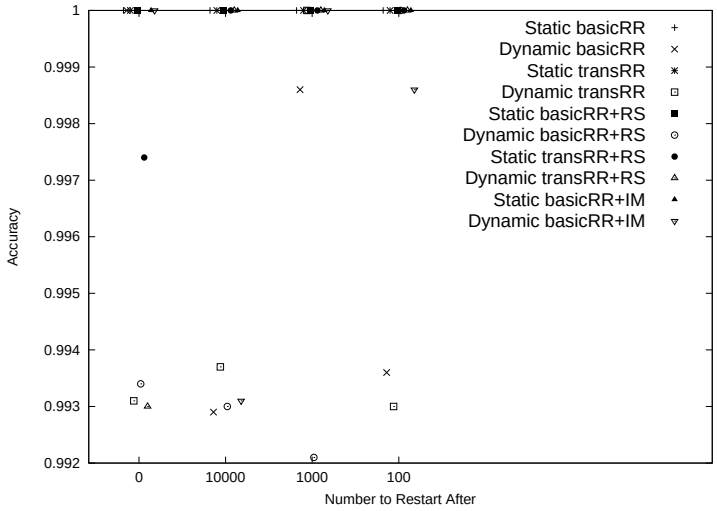



Figure B.289: Comparison of Best Results Between First and Second Set of Experiments on Instance f25_400

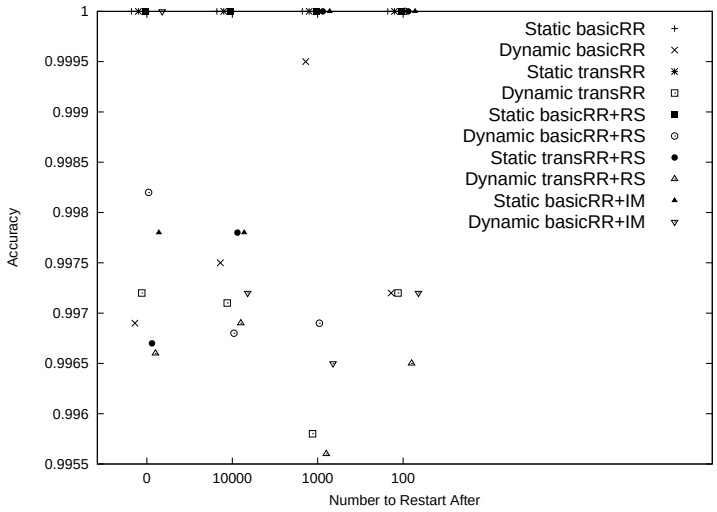



Figure B.290: Comparison of Best Results Between First and Second Set of Experiments on Instance f25_500

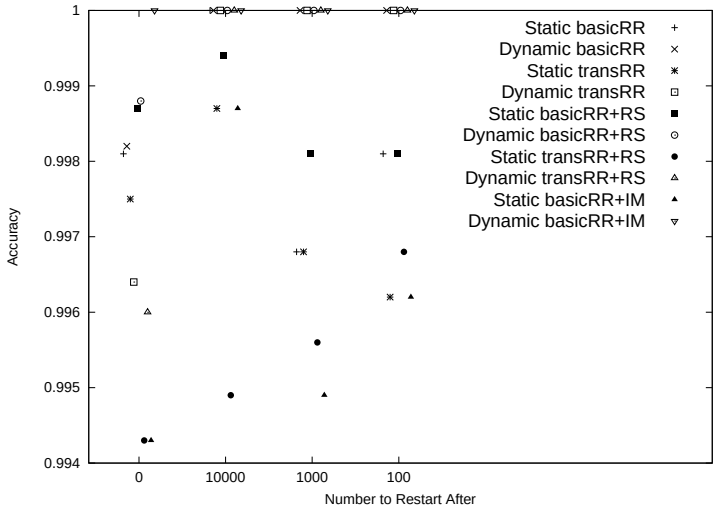



Figure B.291: Comparison of Best Results Between First and Second Set of Experiments on Instance f50_315

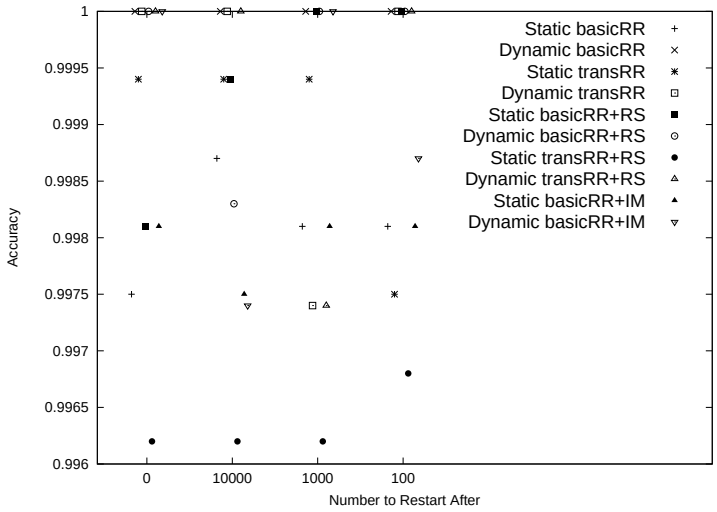



Figure B.292: Comparison of Best Results Between First and Second Set of Experiments on Instance f50_412

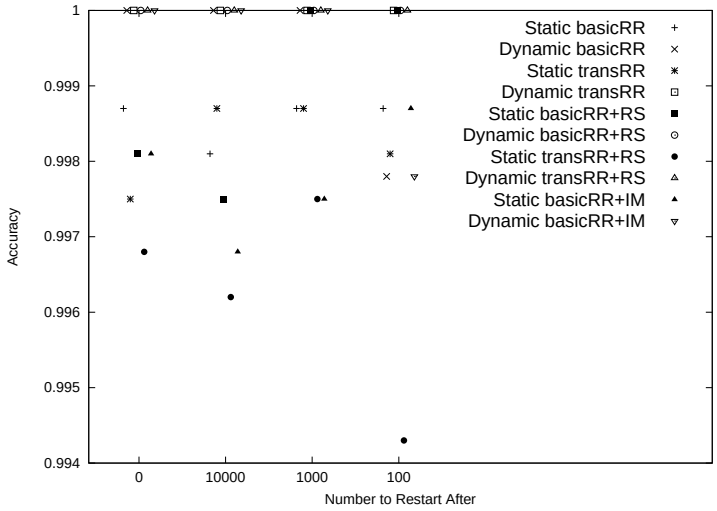



Figure B.293: Comparison of Best Results Between First and Second Set of Experiments on Instance f50_498

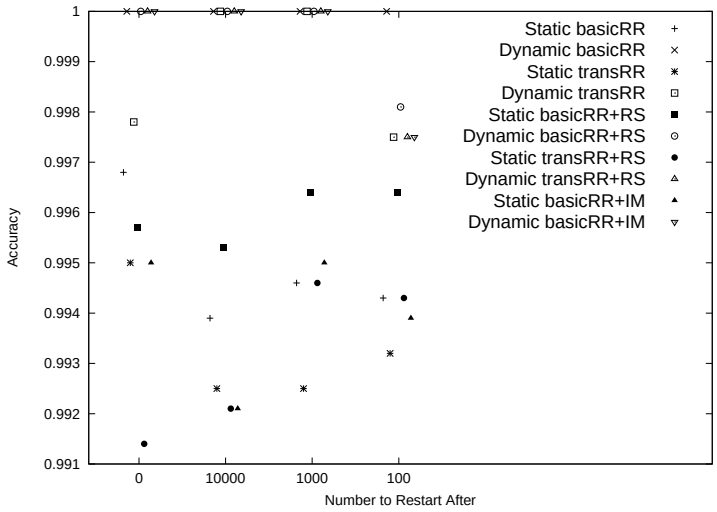



Figure B.294: Comparison of Best Results Between First and Second Set of Experiments on Instance f100_307

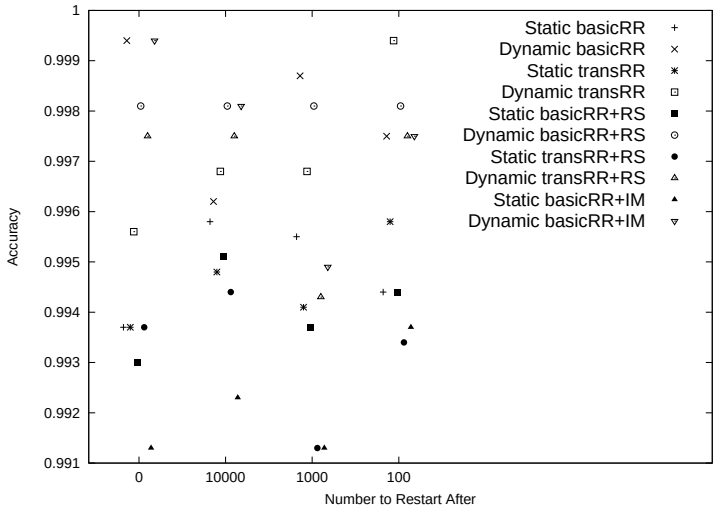



Figure B.295: Comparison of Best Results Between First and Second Set of Experiments on Instance f100_415

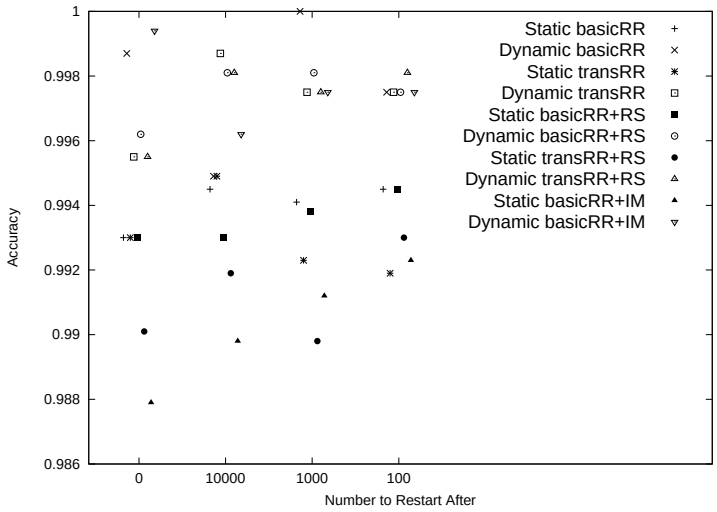



Figure B.296: Comparison of Best Results Between First and Second Set of Experiments on Instance f100_512

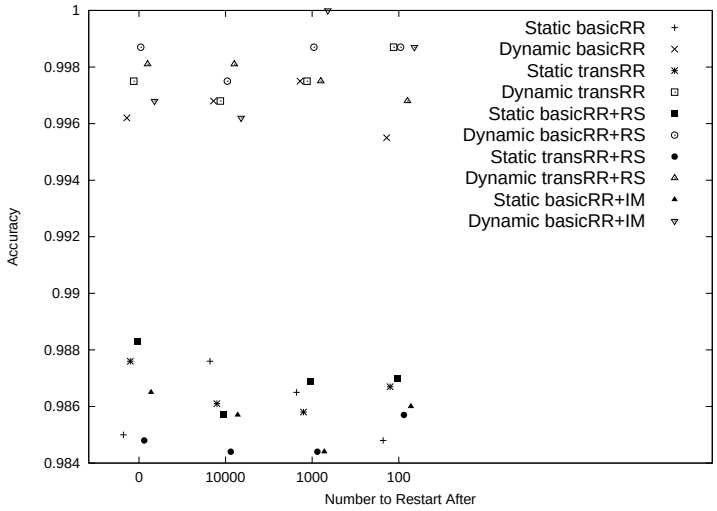



Figure B.297: Comparison of Best Results Between First and Second Set of Experiments on Instance f508_354

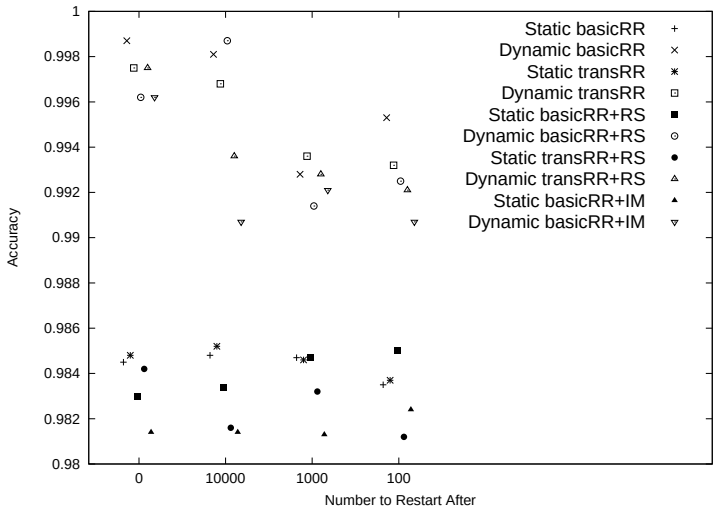



Figure B.298: Comparison of Best Results Between First and Second Set of Experiments on Instance f635_350

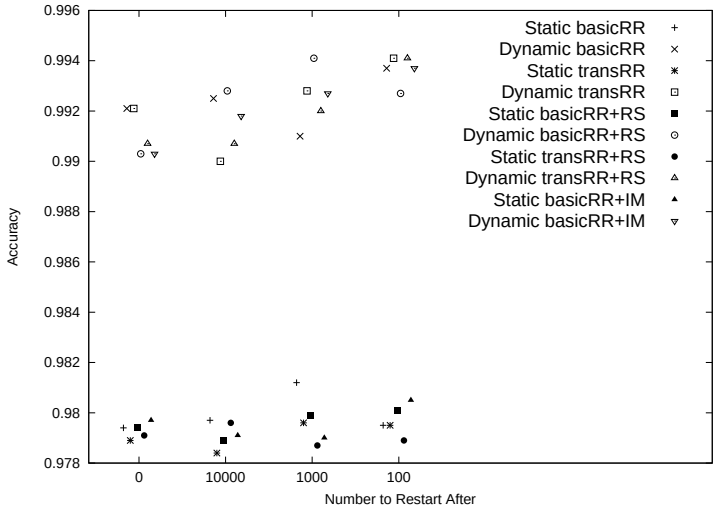



Figure B.299: Comparison of Best Results Between First and Second Set of Experiments on Instance f737_355

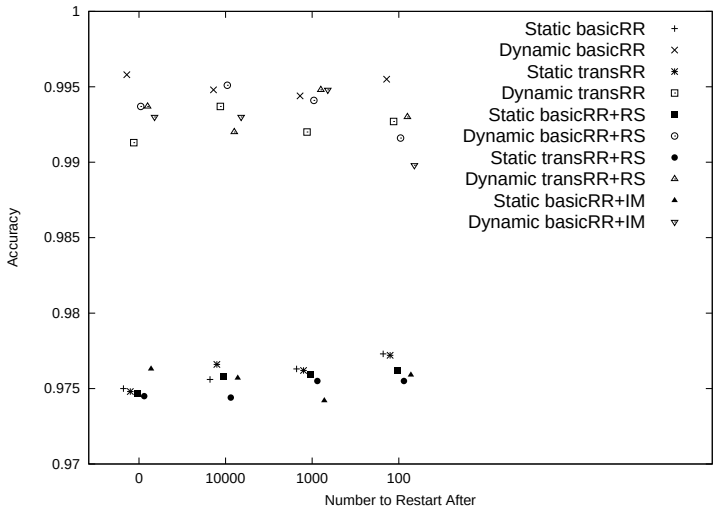



Figure B.300: Comparison of Best Results Between First and Second Set of Experiments on Instance f1343_354

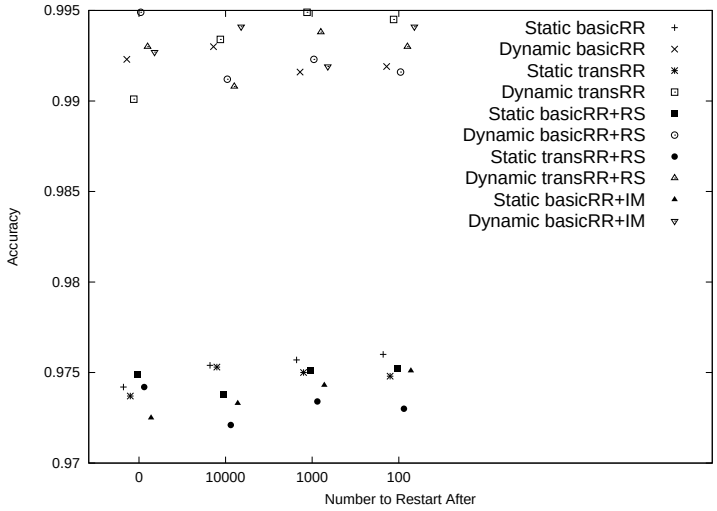



Figure B.301: Comparison of Best Results Between First and Second Set of Experiments on Instance f1577_354

**Results With No Post Optimization and Forced Recentre**

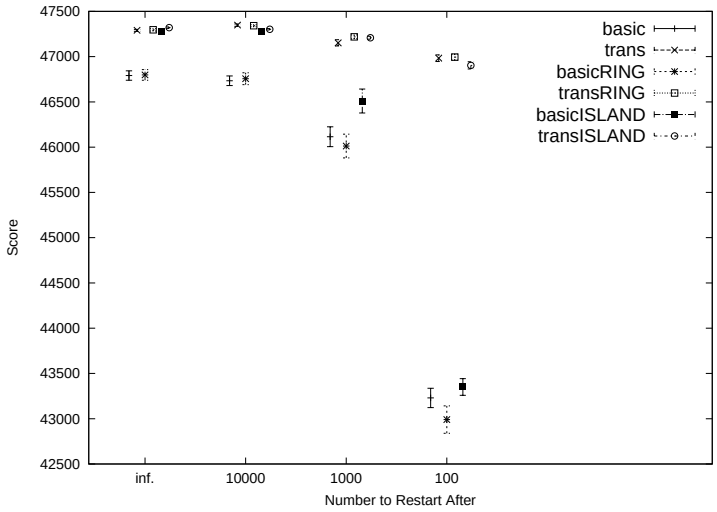



Figure B.302: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance acin1

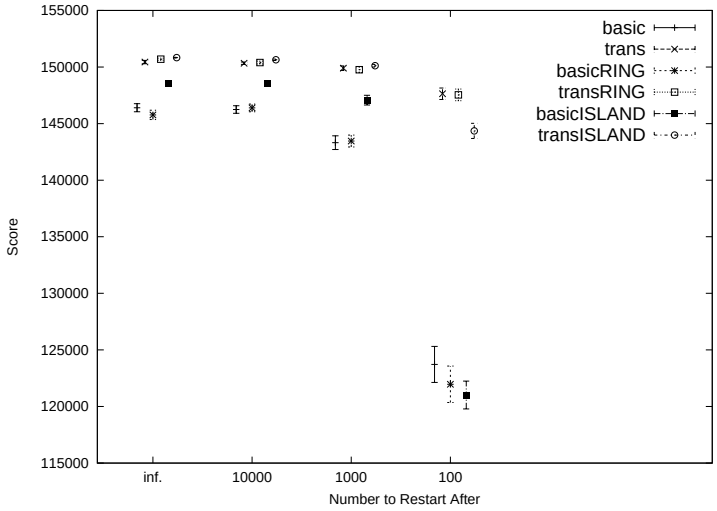



Figure B.303: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance acin2

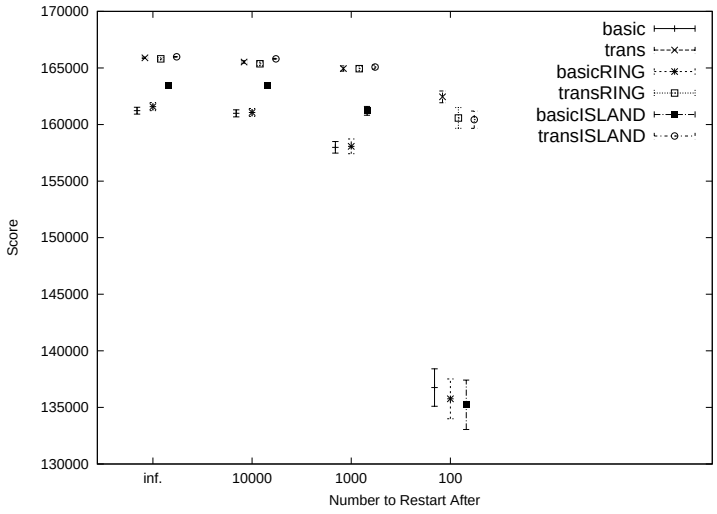



Figure B.304: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance acin3

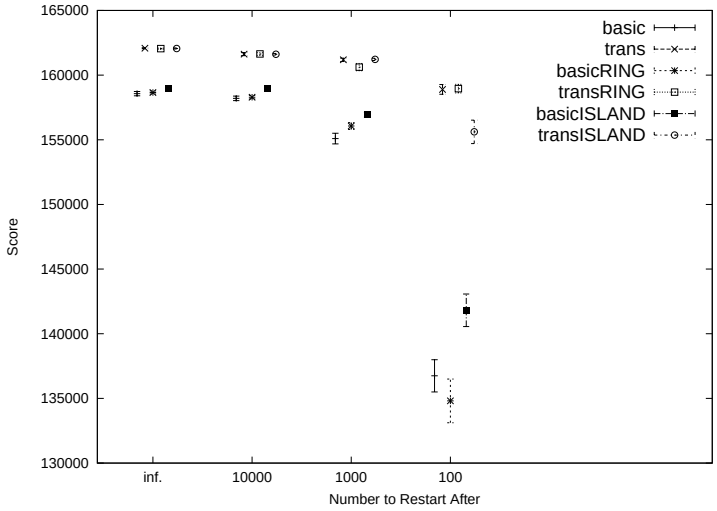



Figure B.305: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance acin5

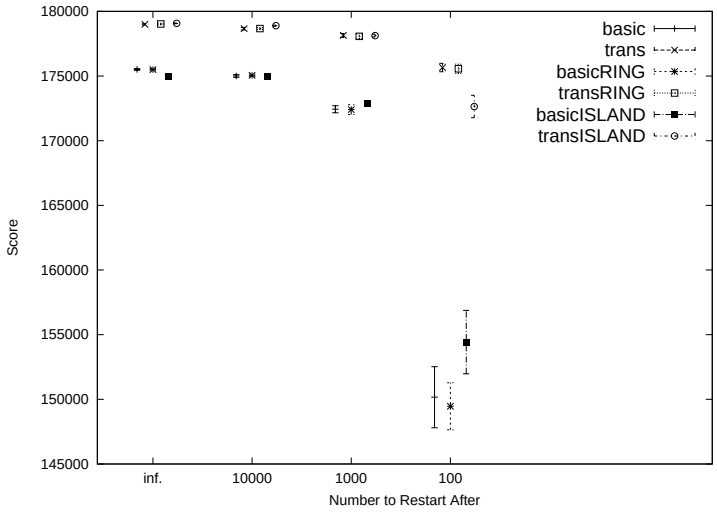



Figure B.306: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance acin7

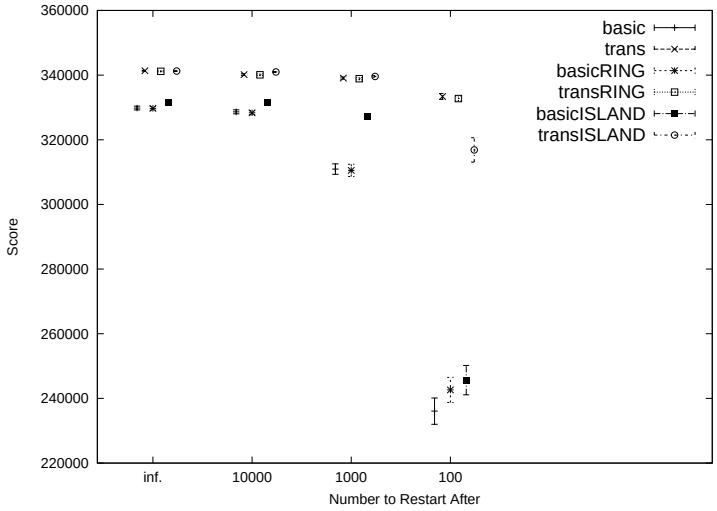



Figure B.307: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance acin9

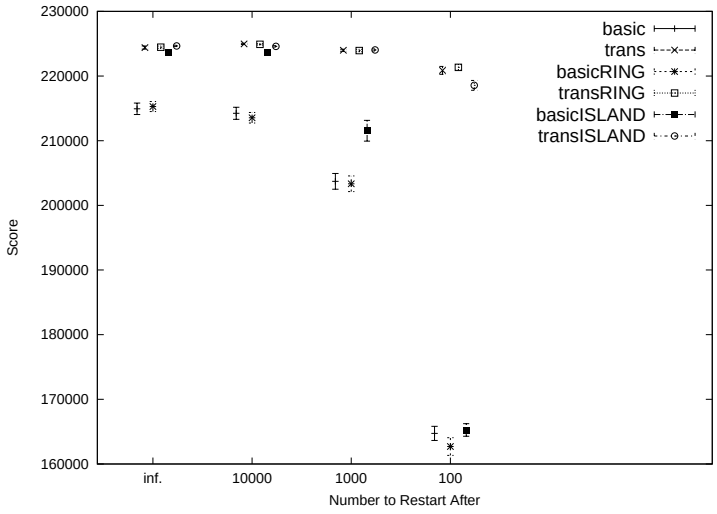



Figure B.308: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance bx842596_4

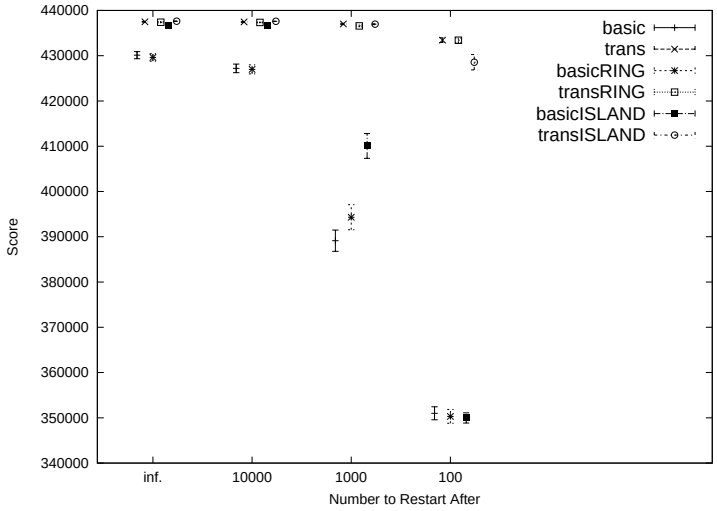



Figure B.309: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance bx842596_7

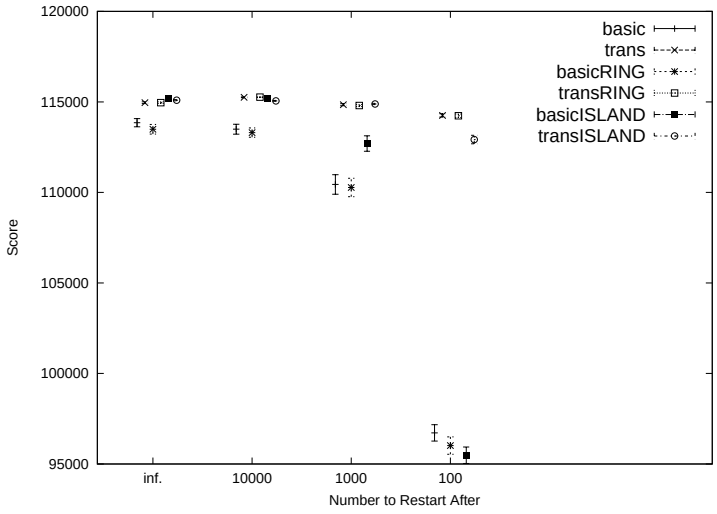



Figure B.310: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance j02459_7

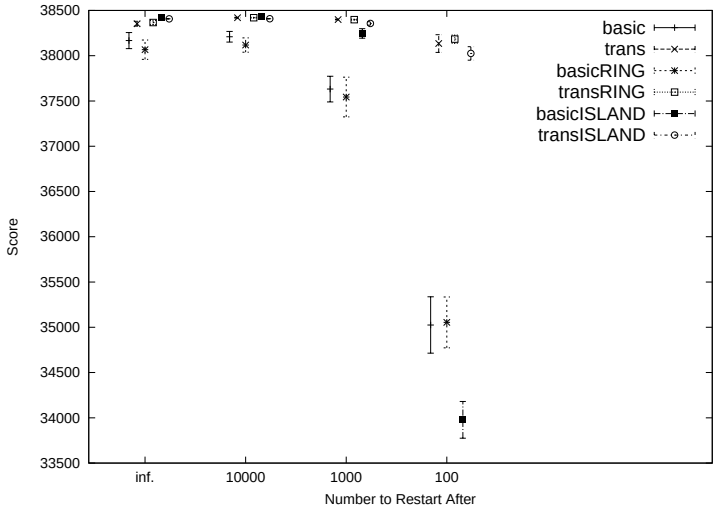



Figure B.311: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance m15421_5

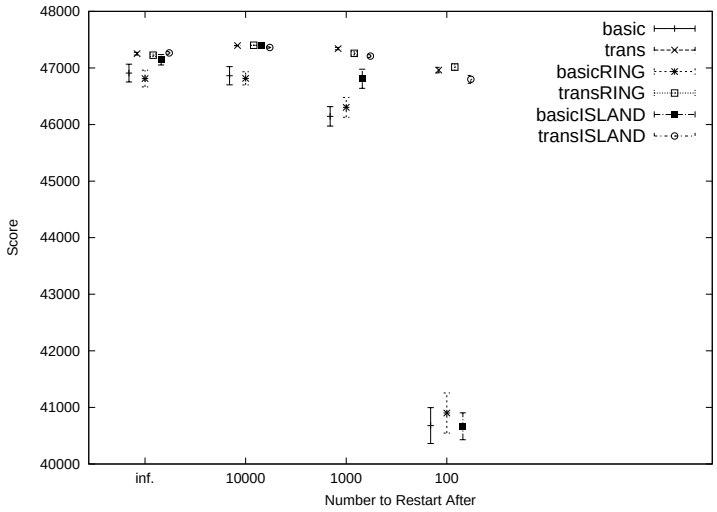



Figure B.312: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance m15421_6

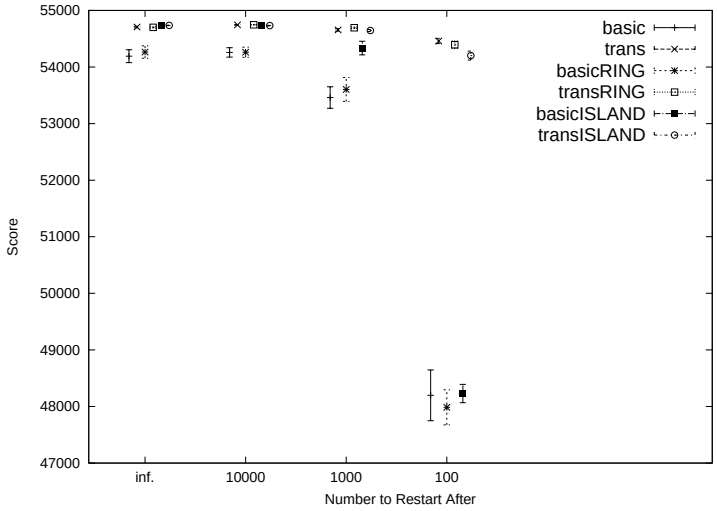



Figure B.313: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance m15421_7

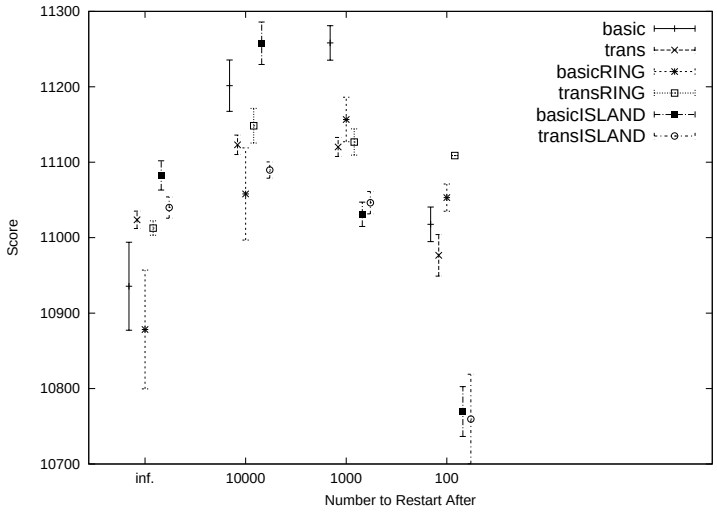



Figure B.314: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance x60189_4

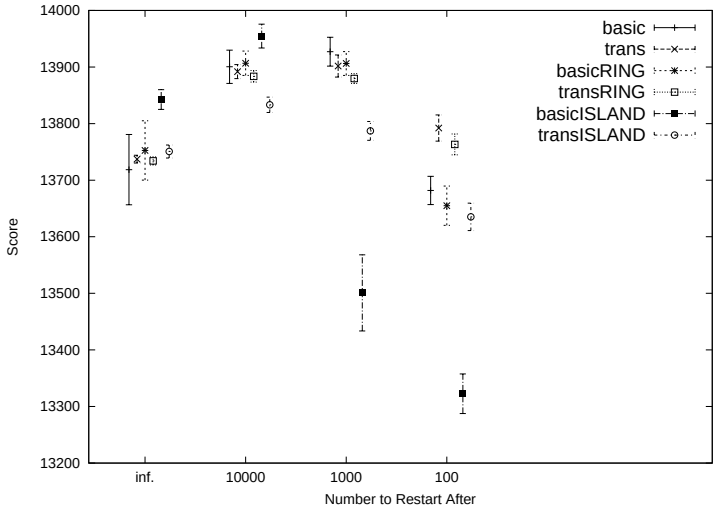



Figure B.315: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance x60189_5

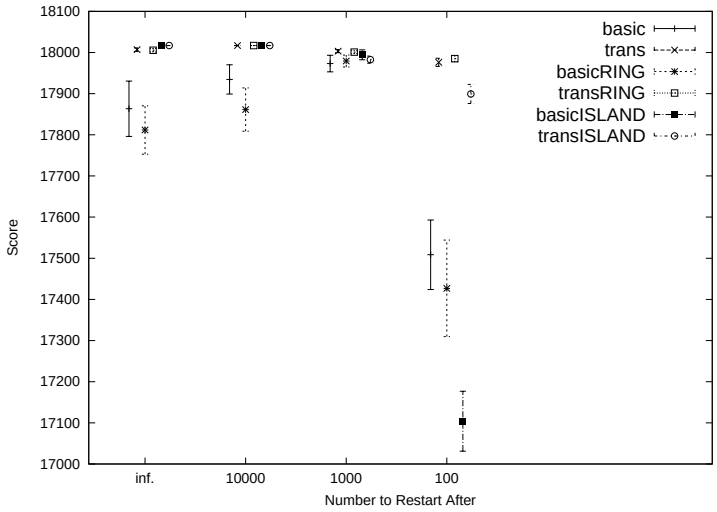



Figure B.316: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance x60189_6

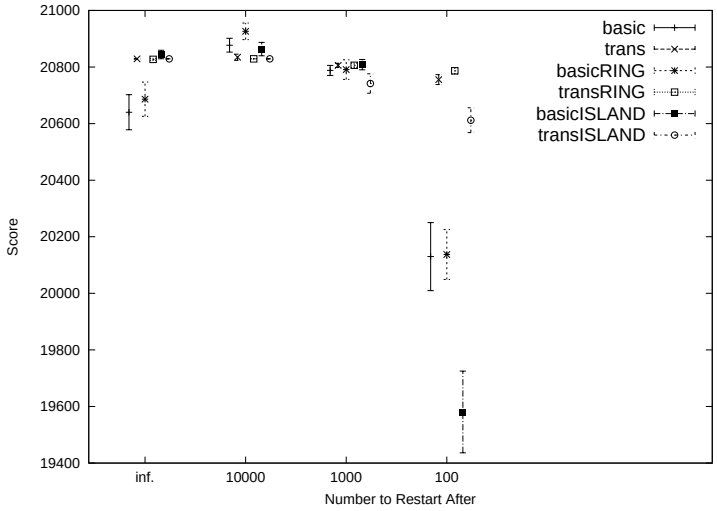



Figure B.317: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance x60189_7

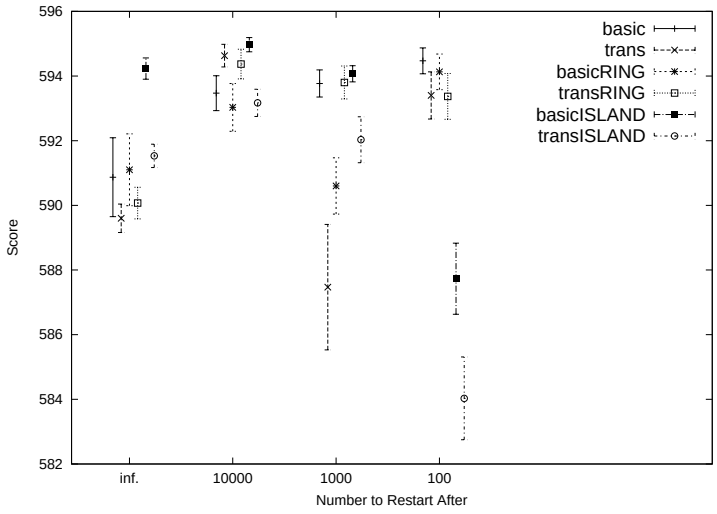



Figure B.318: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f25_305

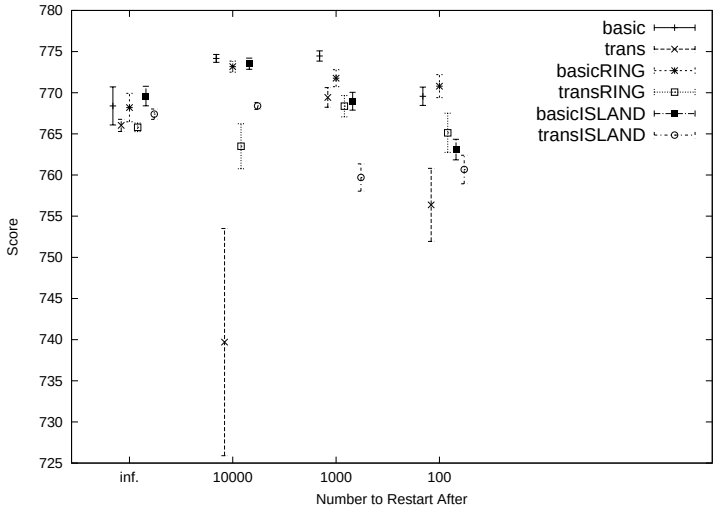



Figure B.319: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f25_400

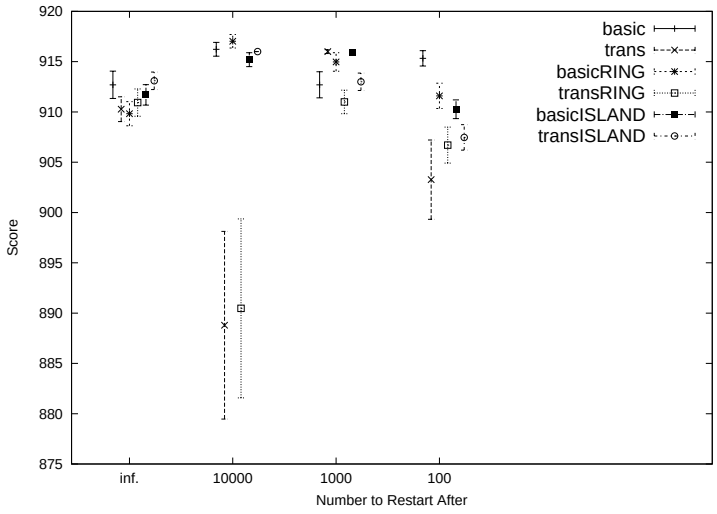



Figure B.320: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f25_500

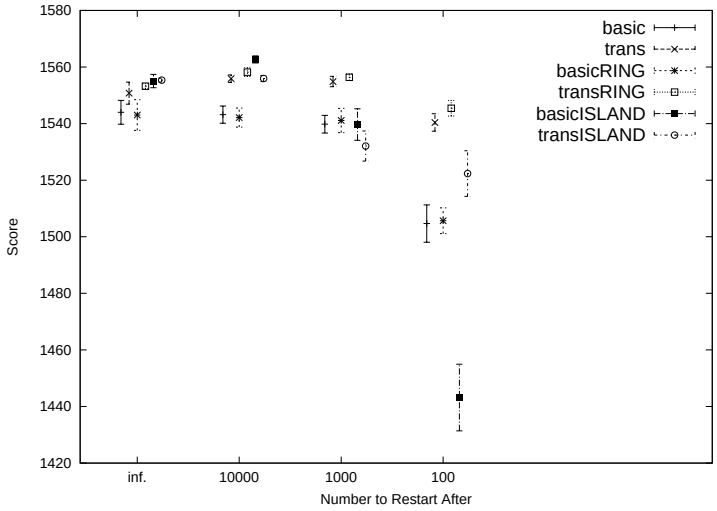



Figure B.321: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f50_315

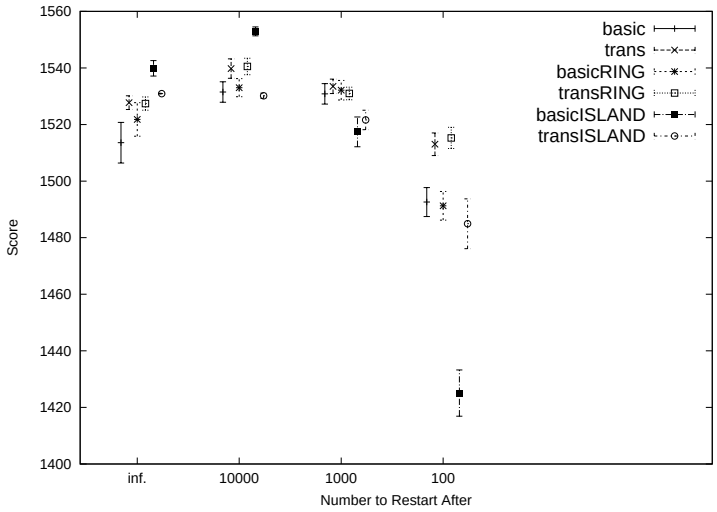



Figure B.322: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f50_412

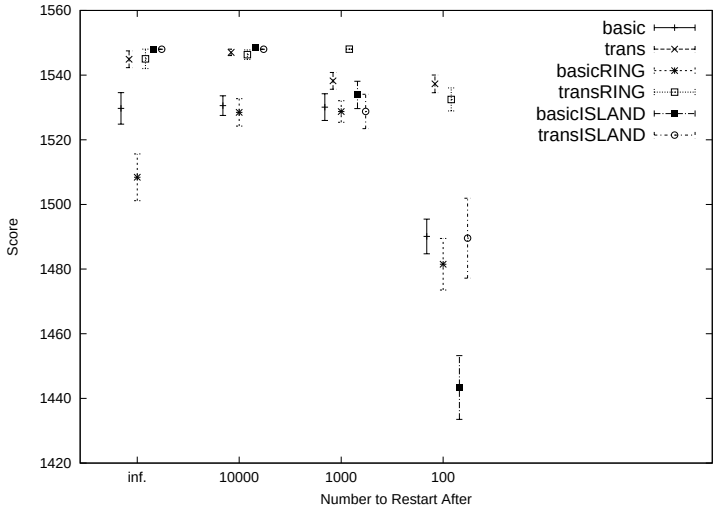



Figure B.323: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f50_498

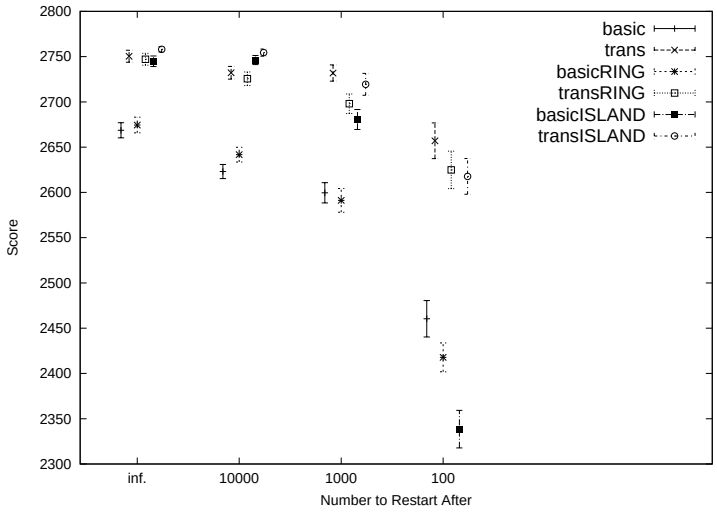



Figure B.324: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f100_307

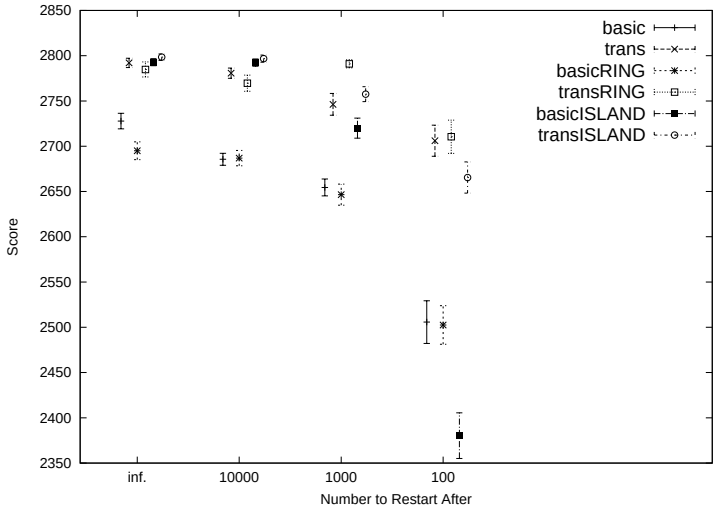



Figure B.325: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f100_415

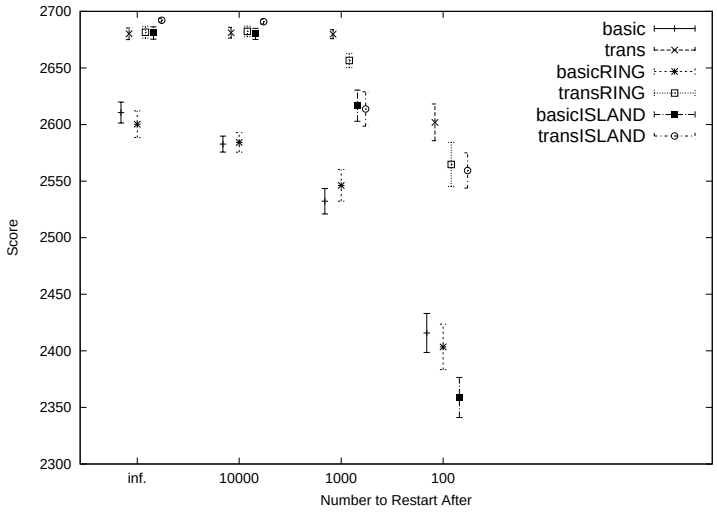



Figure B.326: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f100_512

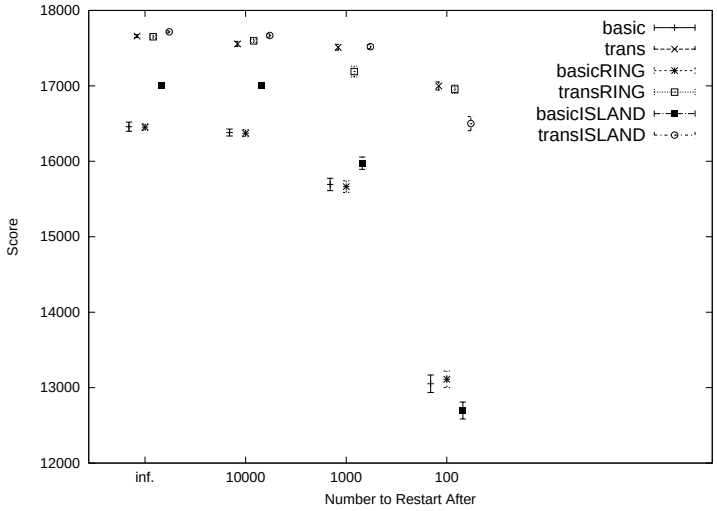



Figure B.327: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f508_354

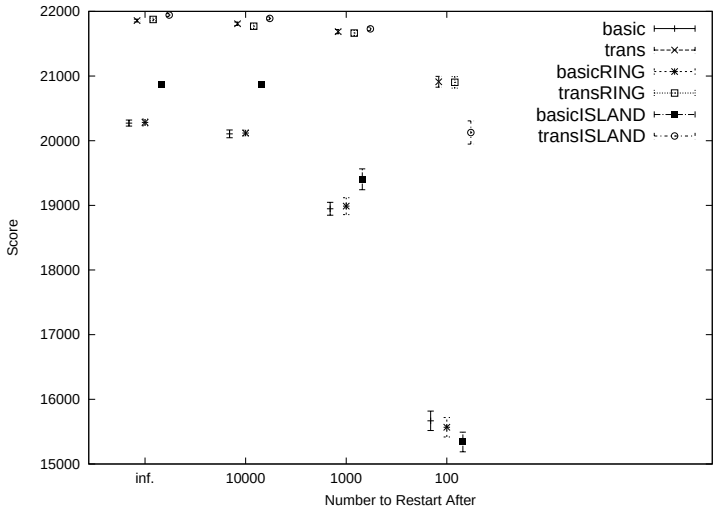



Figure B.328: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f635_350

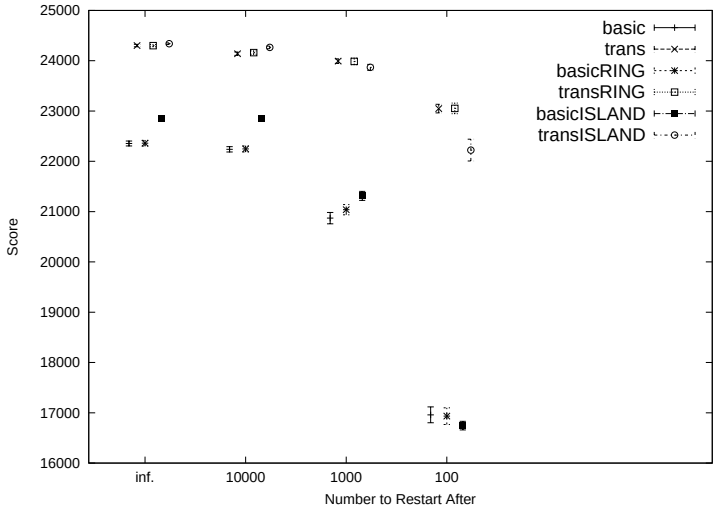



Figure B.329: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f737_355

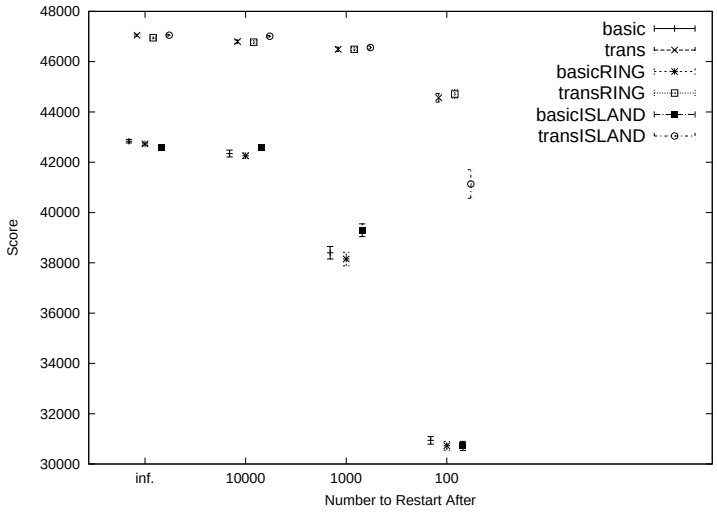



Figure B.330: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f1343_354

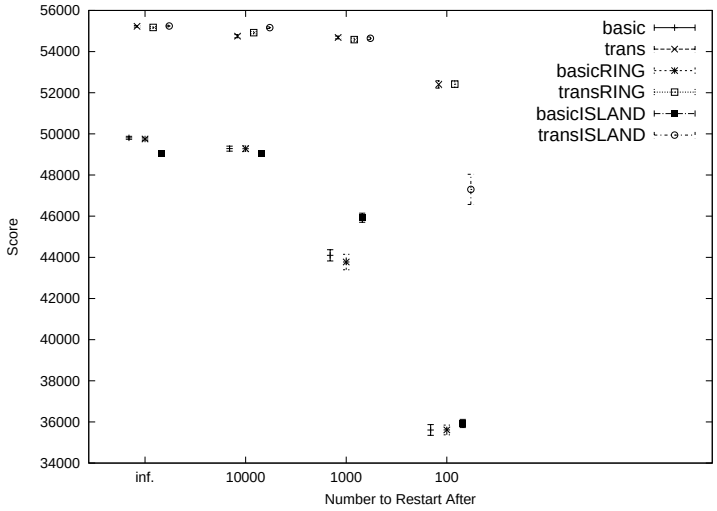



Figure B.331: Comparison of Best Results Between Algorithm Variaions and Forced Recentre on Problem Instance f1577_354

**Results With Post Optimization and Forced Recentre**

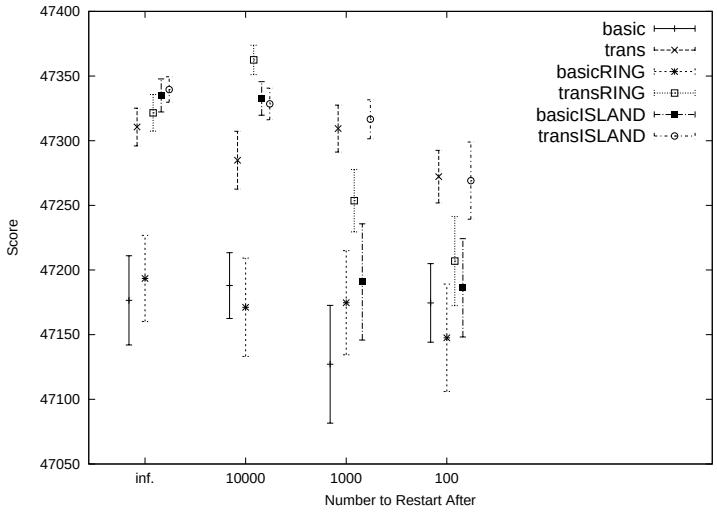



Figure B.332: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance acin1

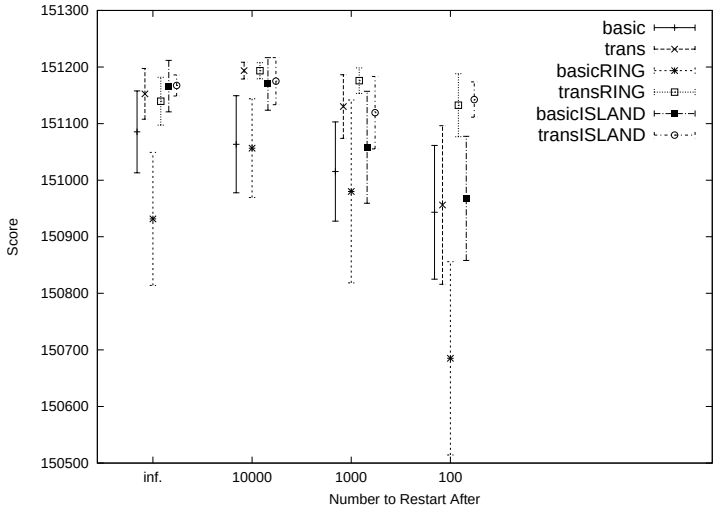



Figure B.333: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance acin2

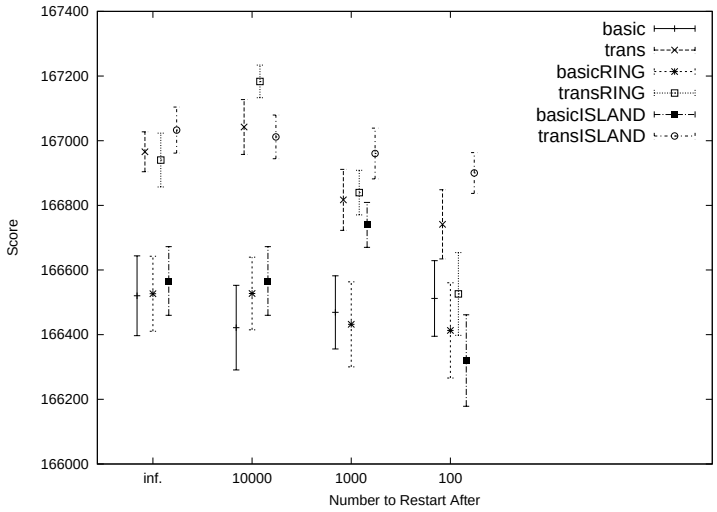



Figure B.334: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance acin3

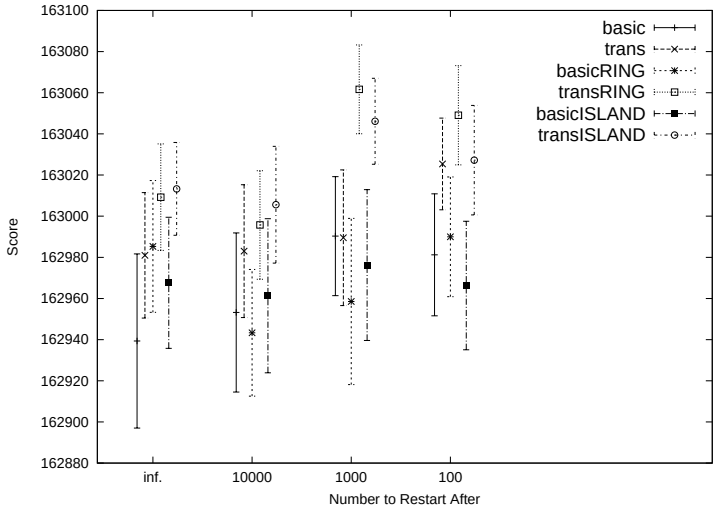



Figure B.335: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance acin5

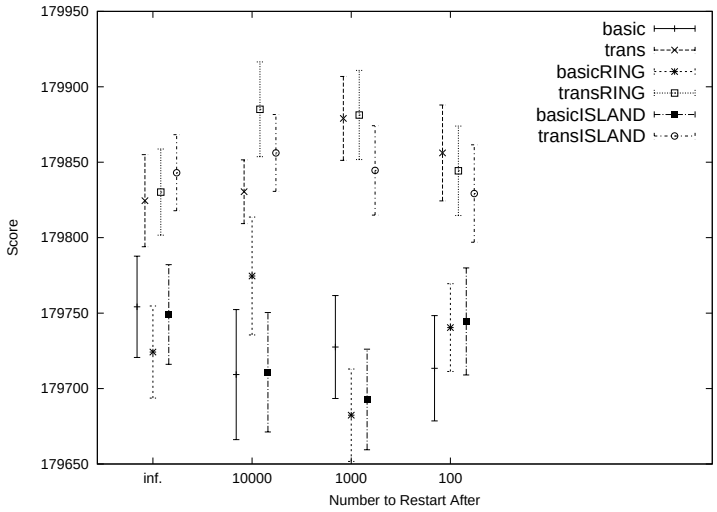



Figure B.336: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance acin7

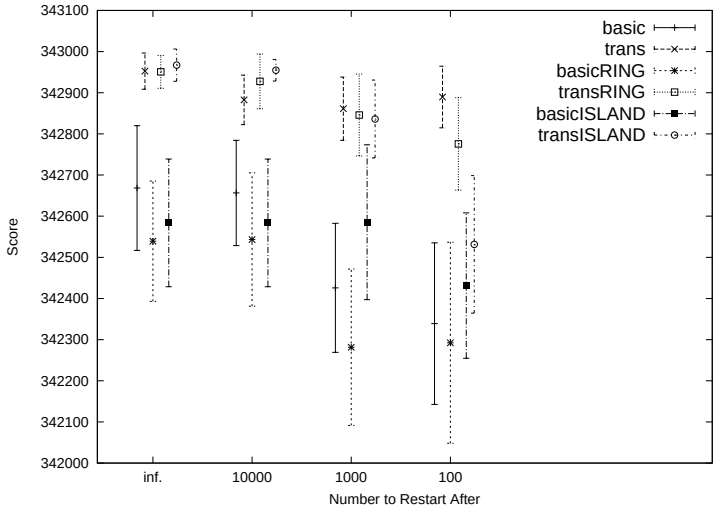



Figure B.337: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance acin9

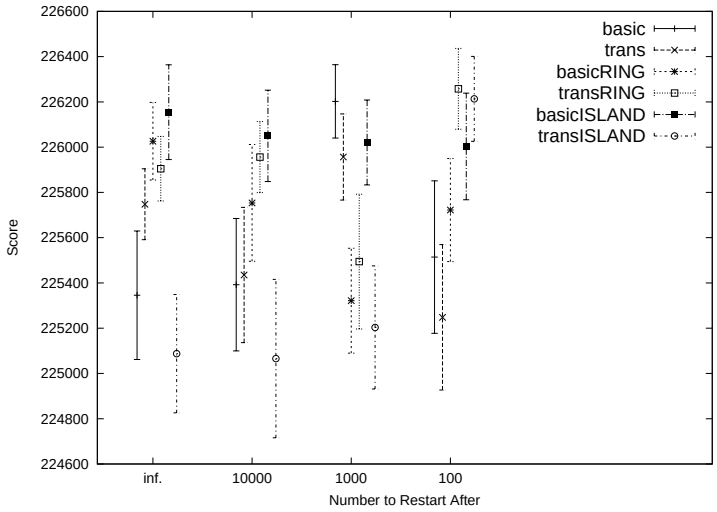



Figure B.338: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance bx842596_4

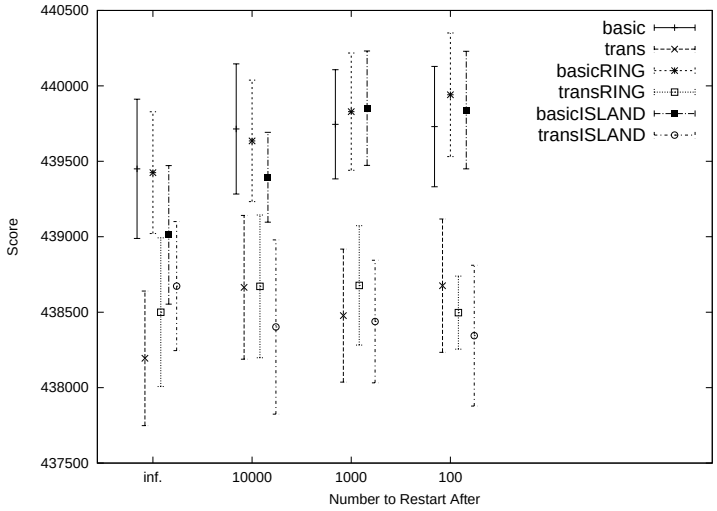



Figure B.339: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance bx842596_7

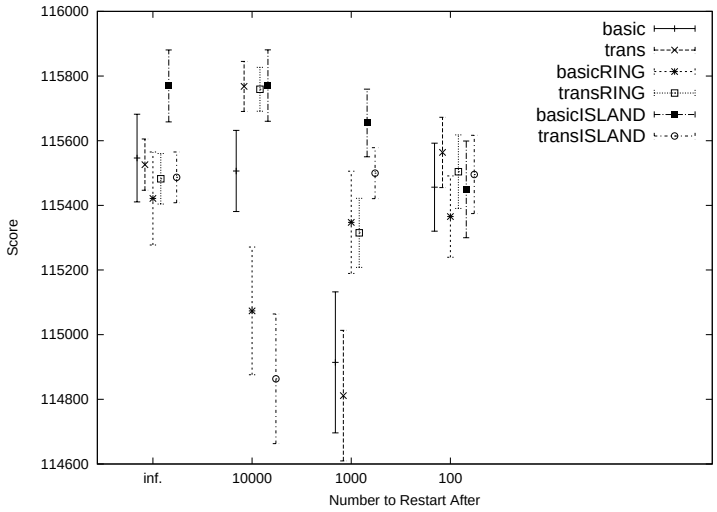



Figure B.340: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance j02459_7

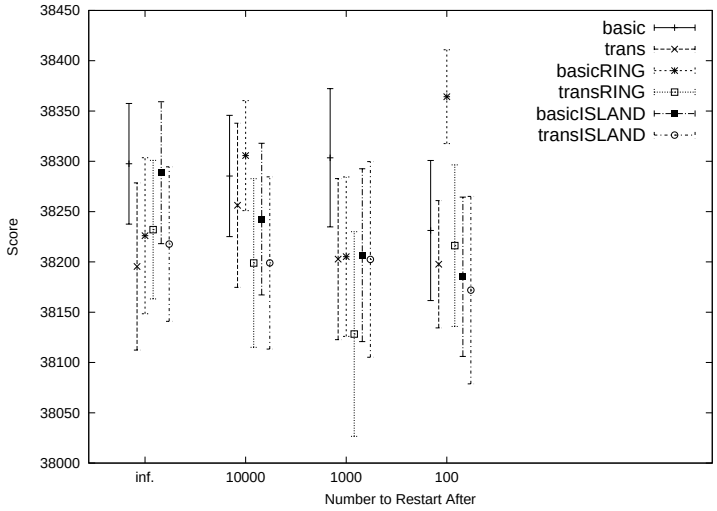



Figure B.341: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance m15421_5

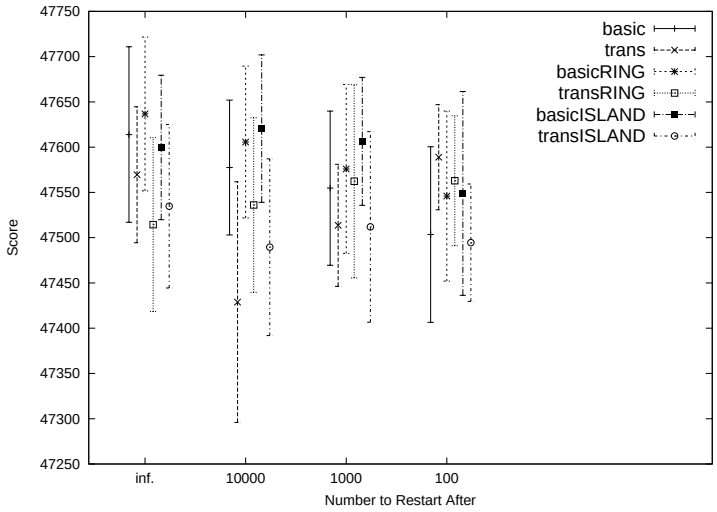



Figure B.342: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance m15421_6

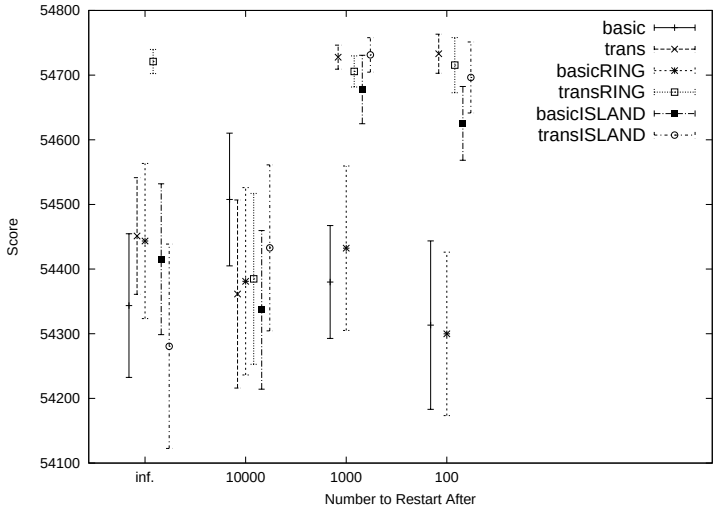



Figure B.343: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance m15421_7

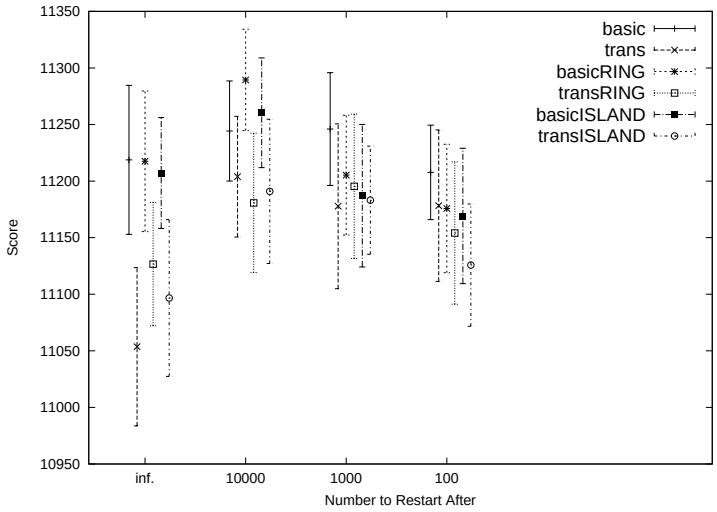



Figure B.344: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance x60189_4

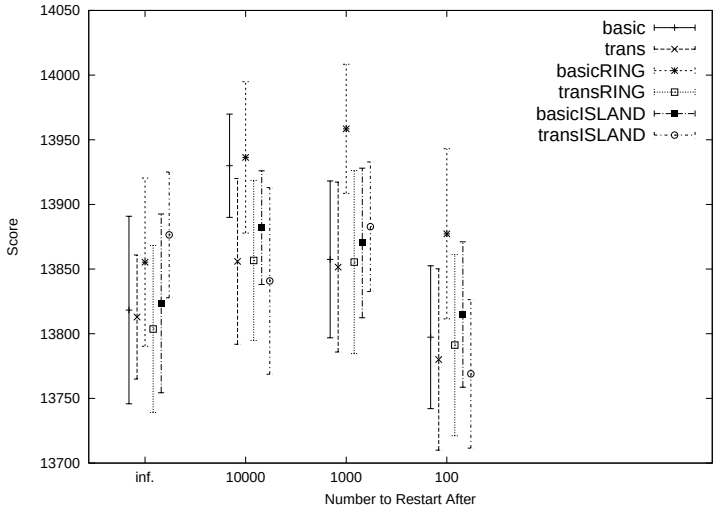



Figure B.345: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance x60189_5

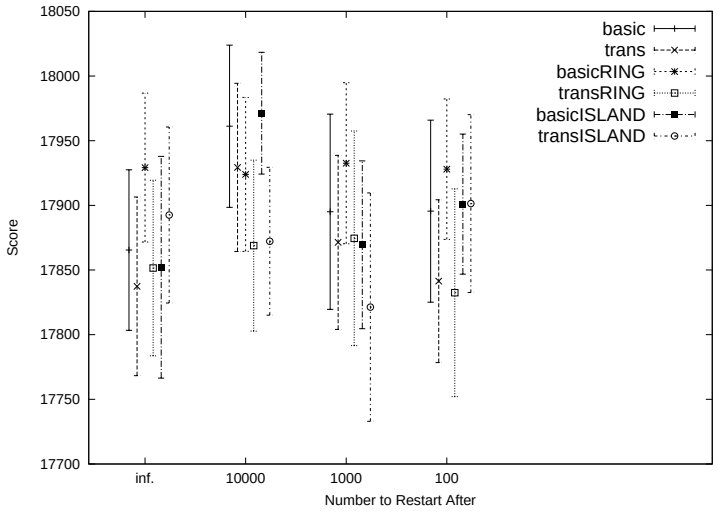



Figure B.346: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance x60189_6

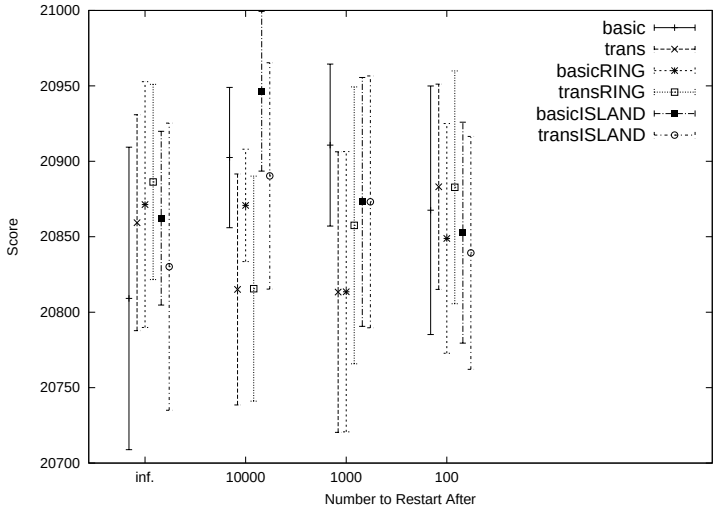



Figure B.347: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance x60189_7

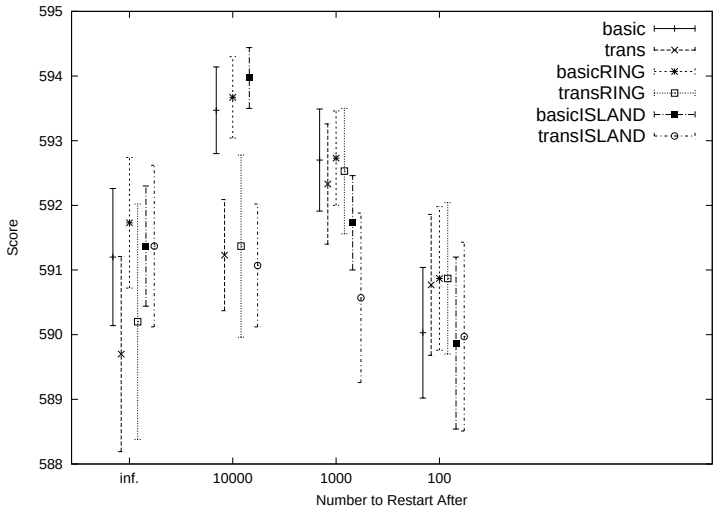



Figure B.348: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f25_305

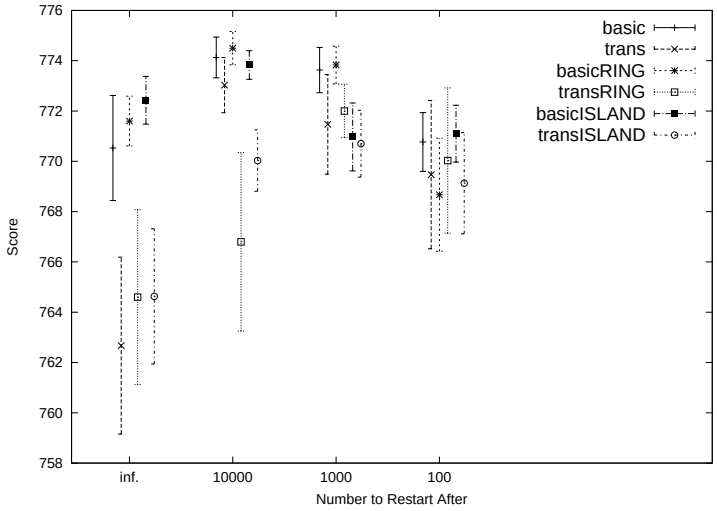



Figure B.349: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f25_400

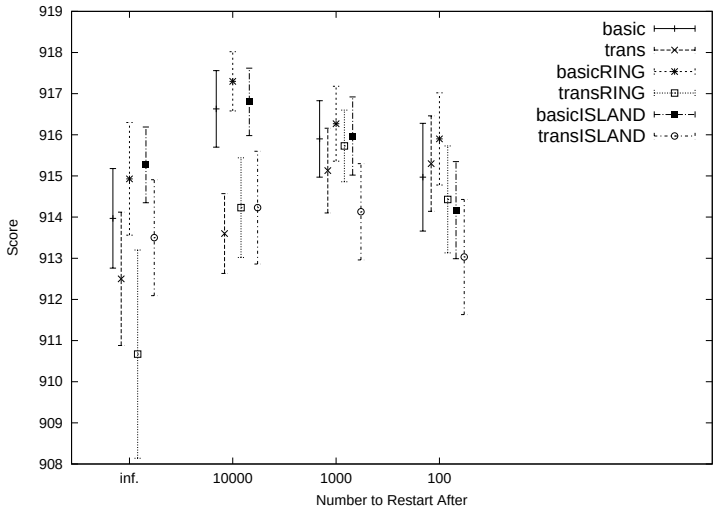



Figure B.350: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f25_500

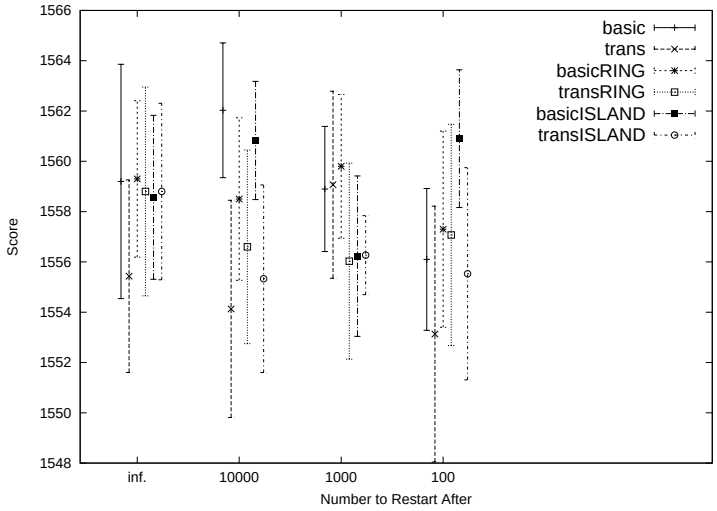



Figure B.351: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f50_315

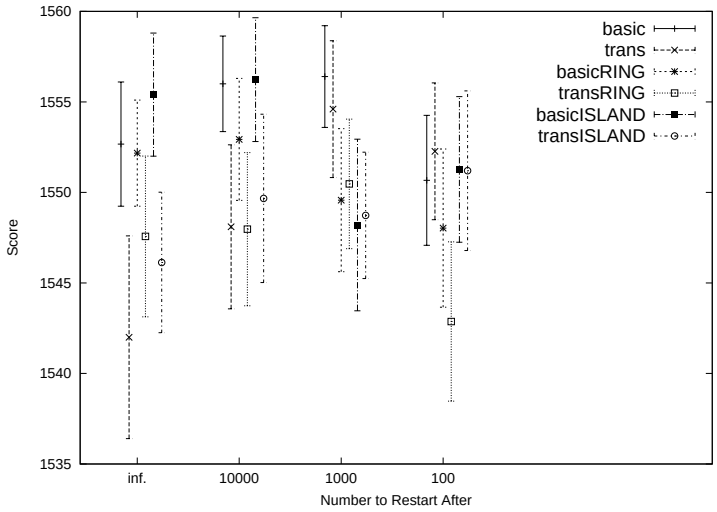



Figure B.352: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f50_412

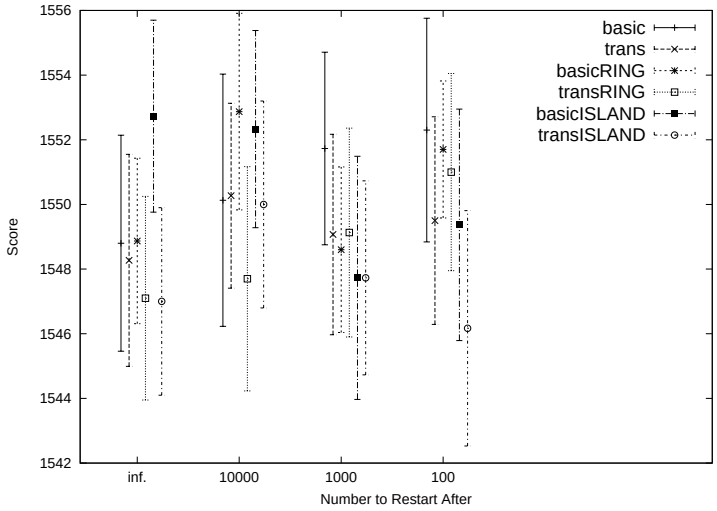



Figure B.353: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f50_498

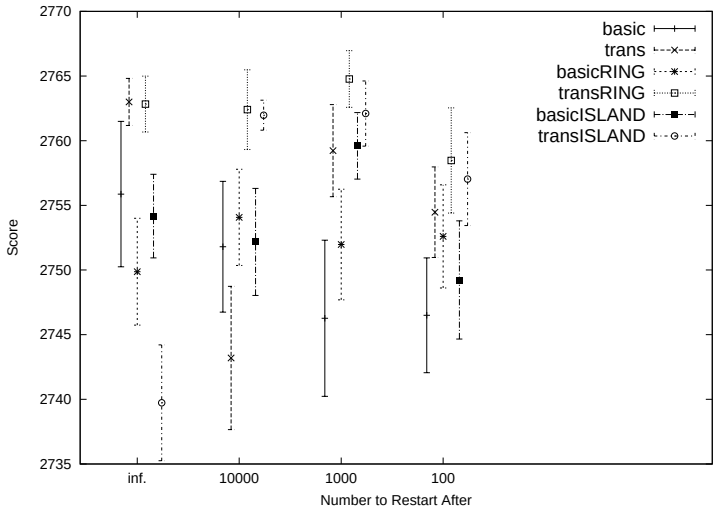



Figure B.354: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f100_307

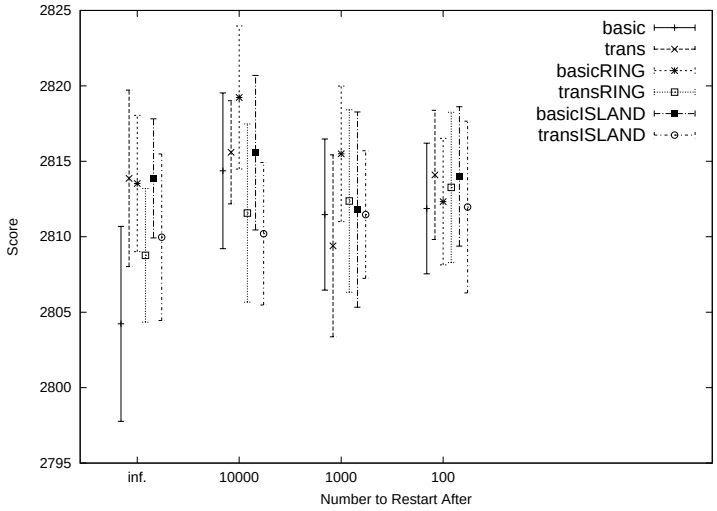



Figure B.355: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f100_415

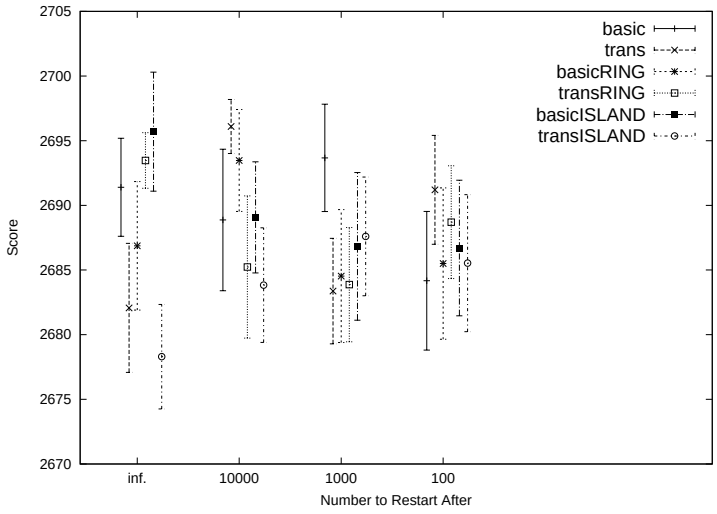



Figure B.356: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f100_512

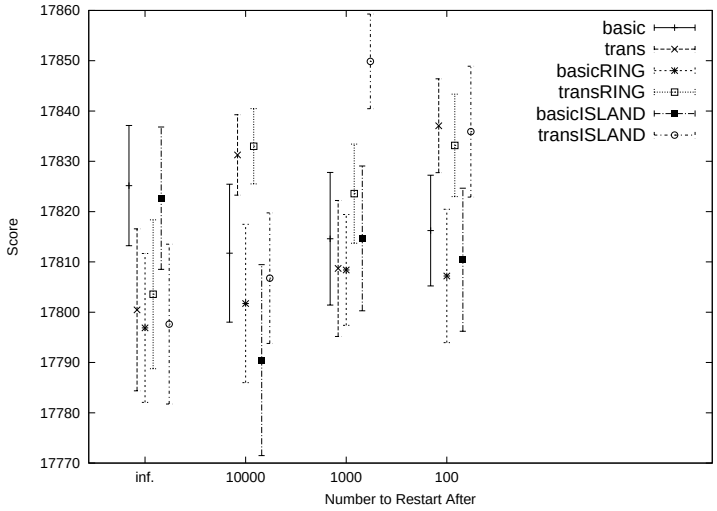



Figure B.357: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f508_354

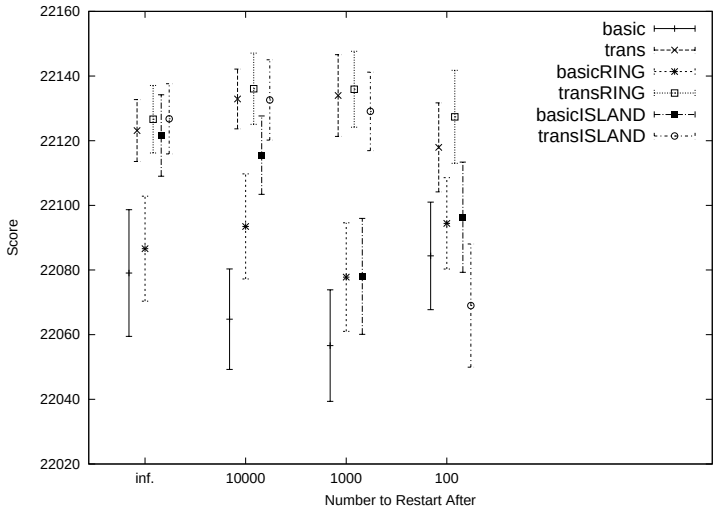



Figure B.358: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f635_350

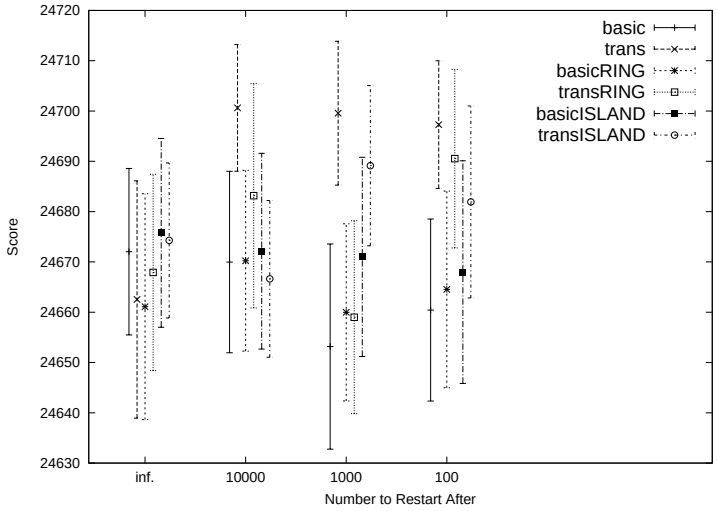



Figure B.359: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f737_355

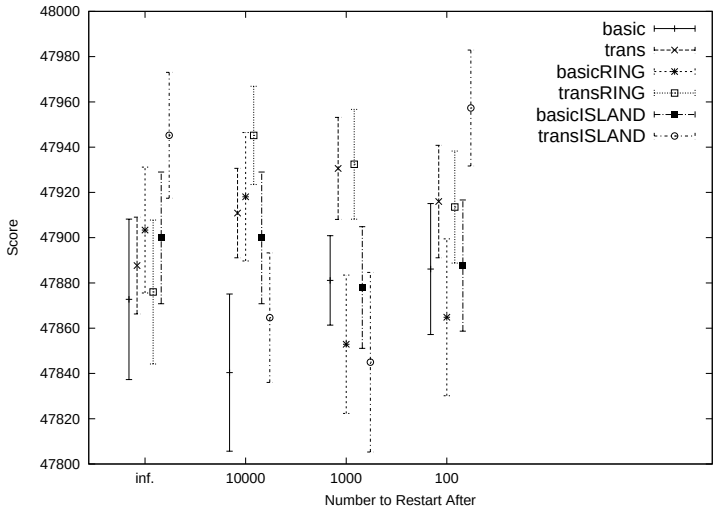



Figure B.360: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f1343_354

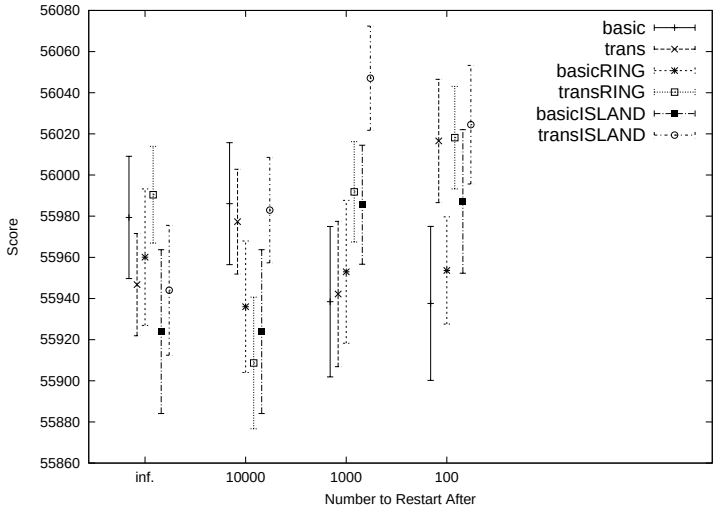



Figure B.361: Comparison of Best Results Between All Algorithm Variations and Forced Recentre on Problem Instance f1577_354

**Comparison Between No Forced Recentre and Forced Recentre**

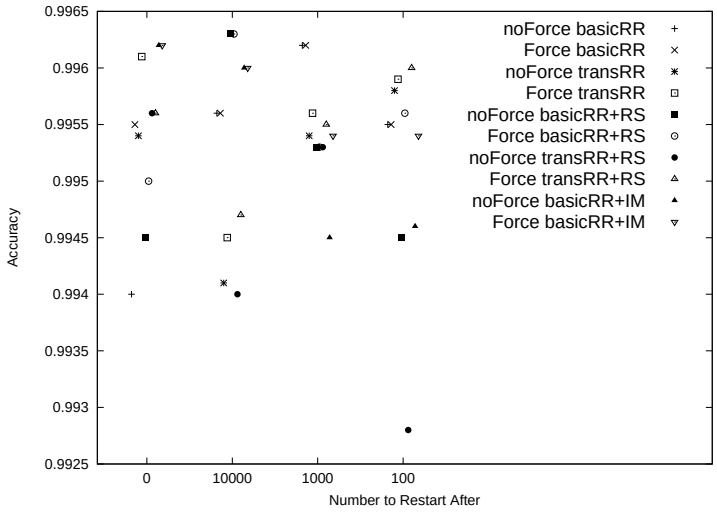



Figure B.362: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin1

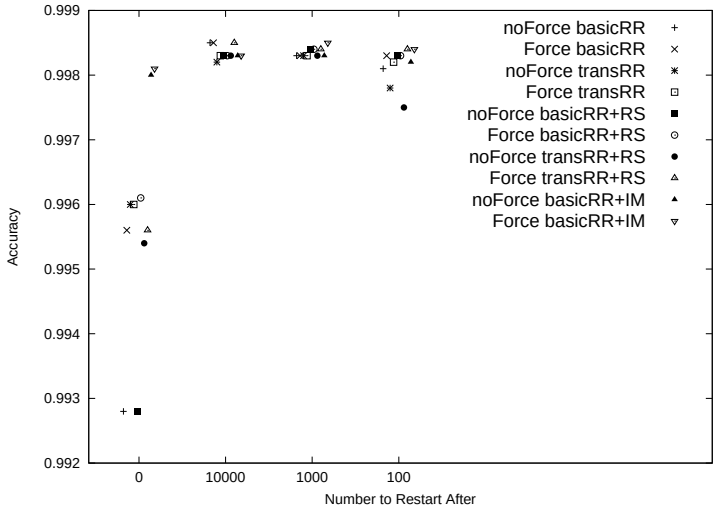



Figure B.363: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin2

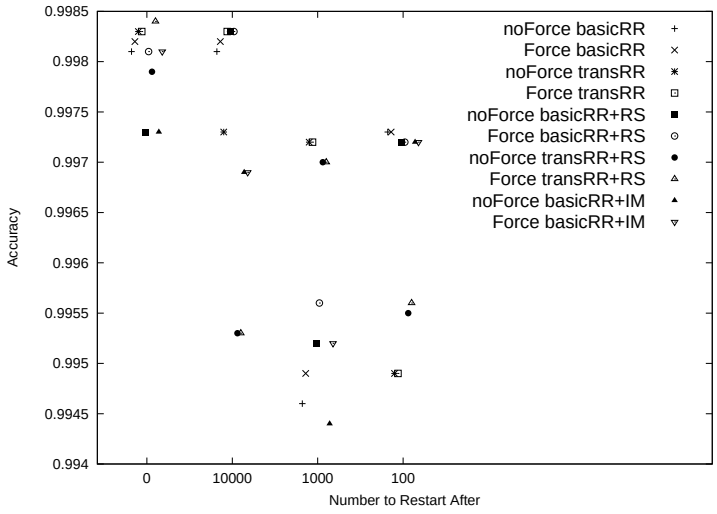



Figure B.364: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin3

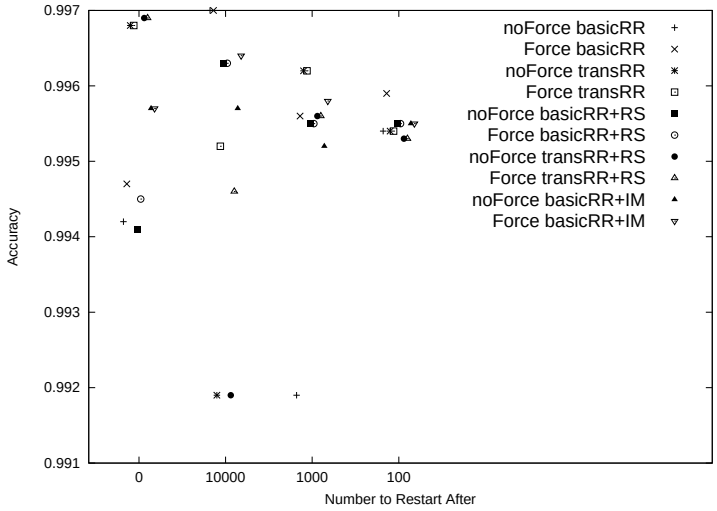



Figure B.365: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin5

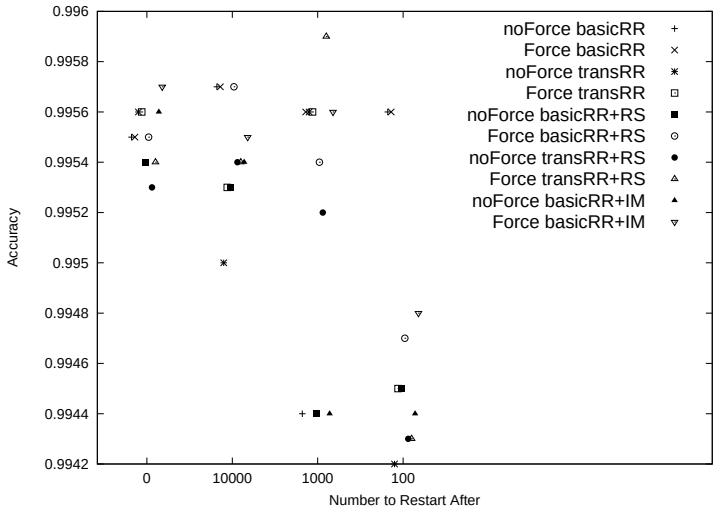



Figure B.366: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin7

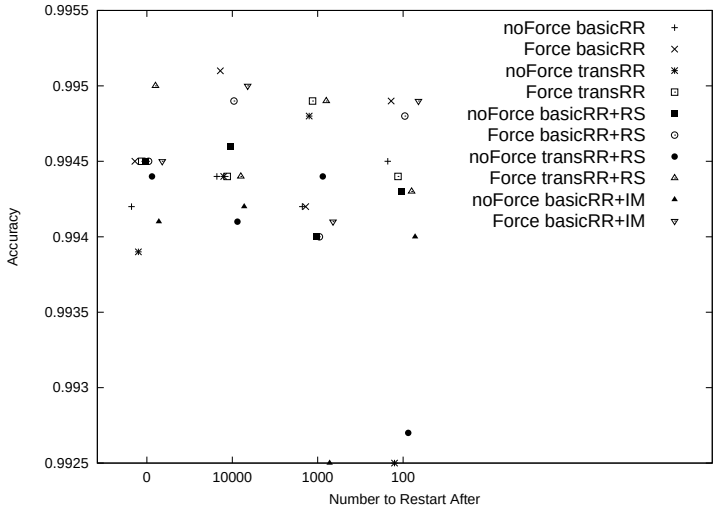



Figure B.367: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin9

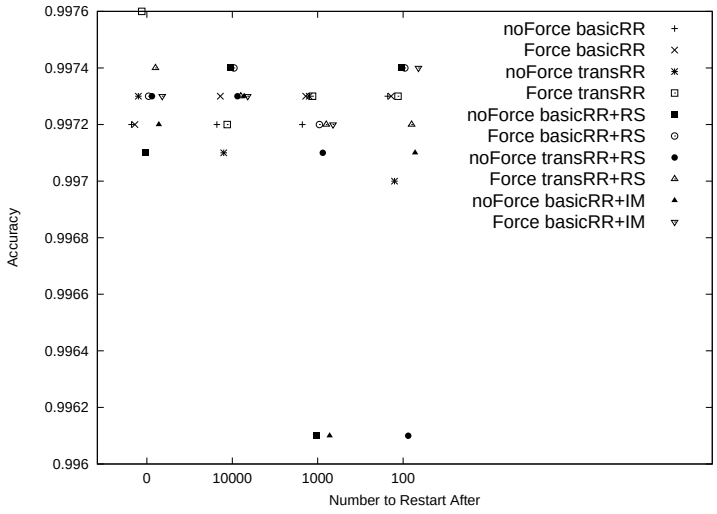



Figure B.368: Comparison of No Forced Recentre and Forced Recentre on Problem Instance bx842596_4

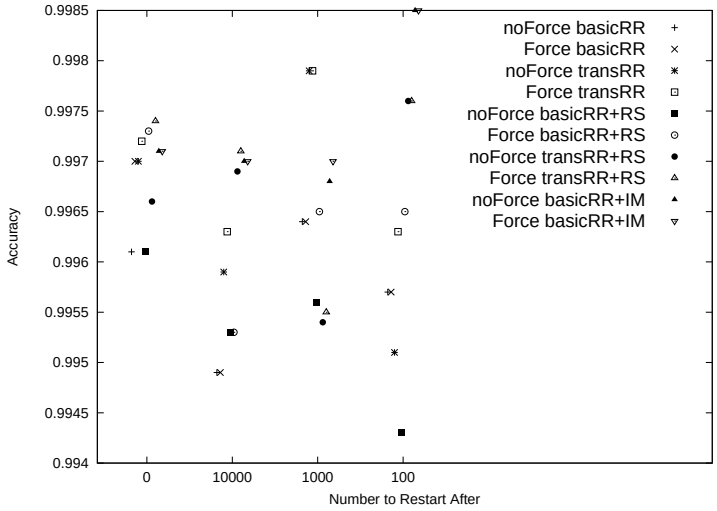



Figure B.369: Comparison of No Forced Recentre and Forced Recentre on Problem Instance bx842596_7

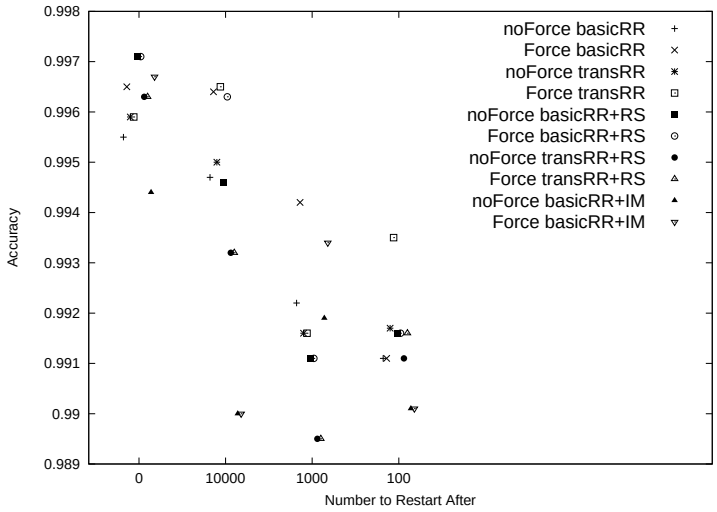



Figure B.370: Comparison of No Forced Recentre and Forced Recentre on Problem Instance j02459_7

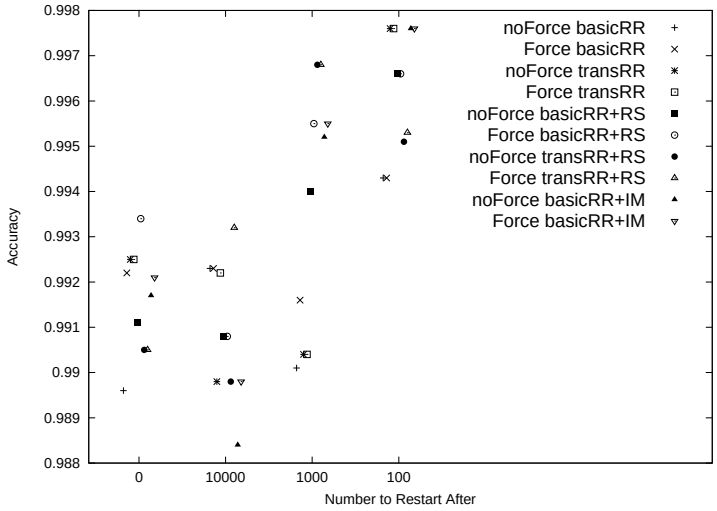



Figure B.371: Comparison of No Forced Recentre and Forced Recentre on Problem Instance m15421_5

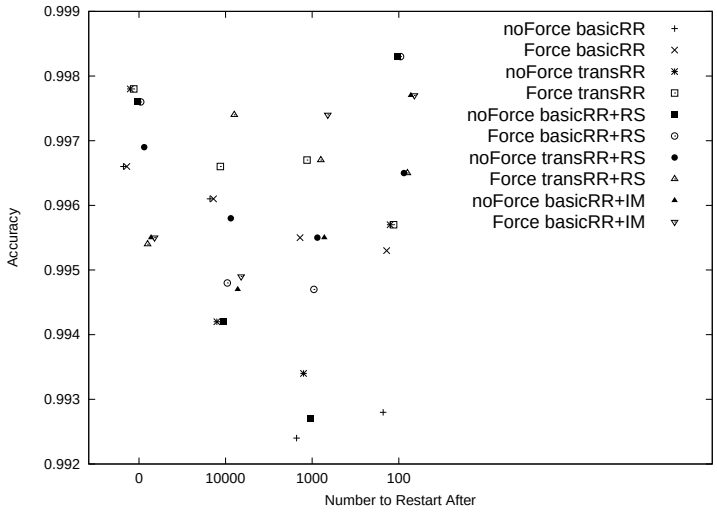



Figure B.372: Comparison of No Forced Recentre and Forced Recentre on Problem Instance m15421_6

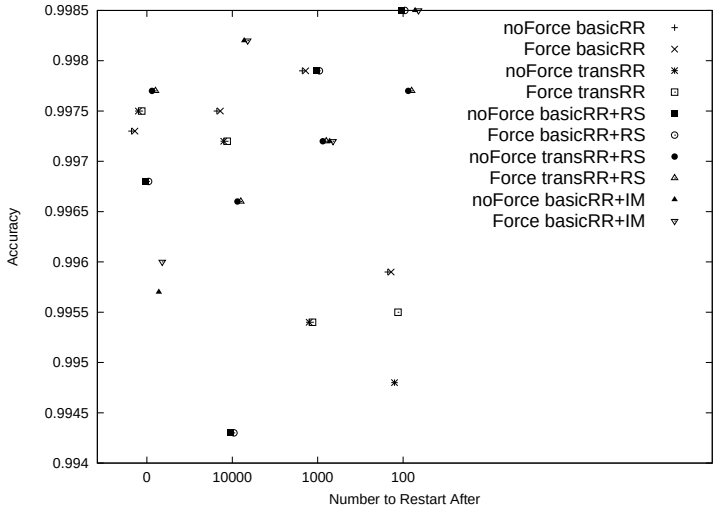



Figure B.373: Comparison of No Forced Recentre and Forced Recentre on Problem Instance m15421_7

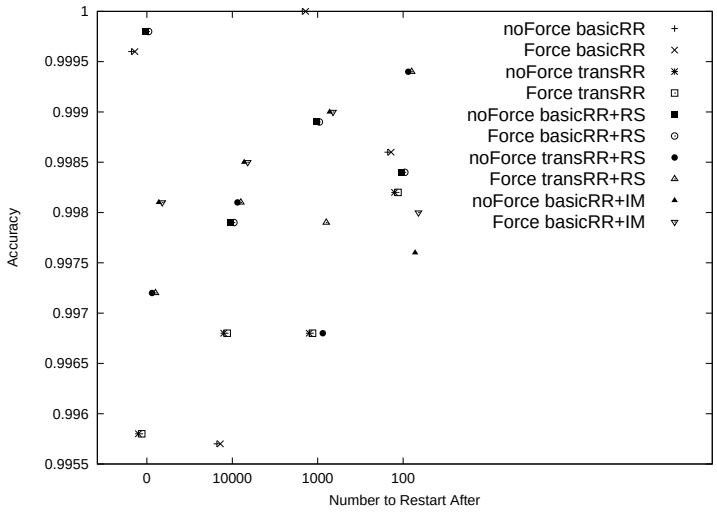



Figure B.374: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_4

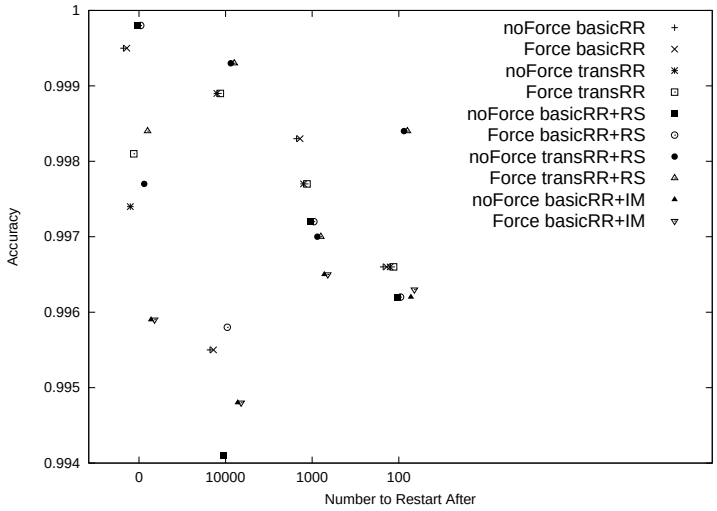



Figure B.375: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_5

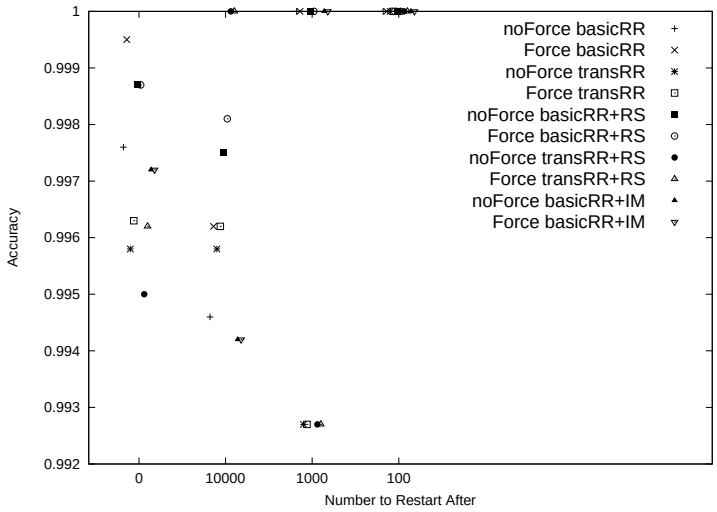



Figure B.376: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_6

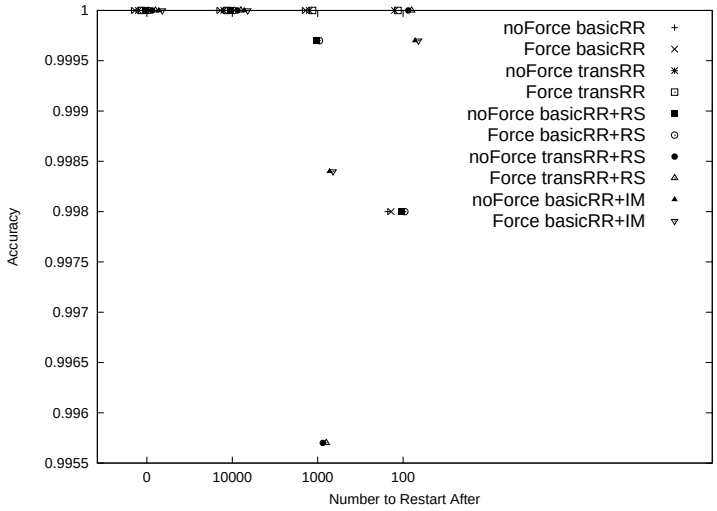



Figure B.377: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_7

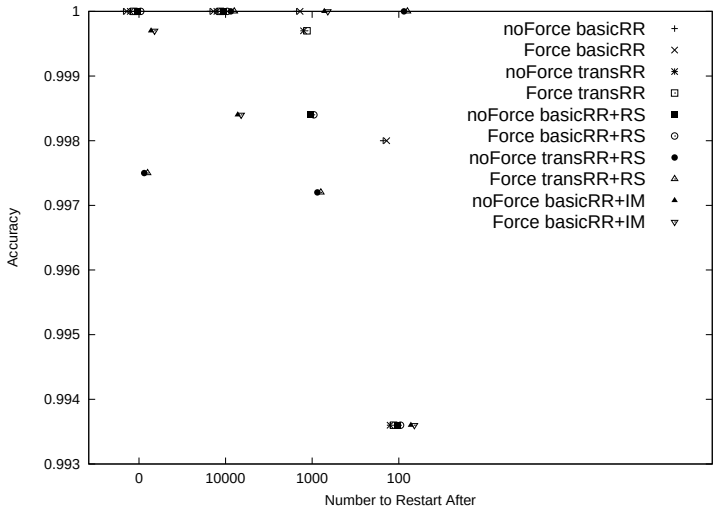



Figure B.378: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f25_305

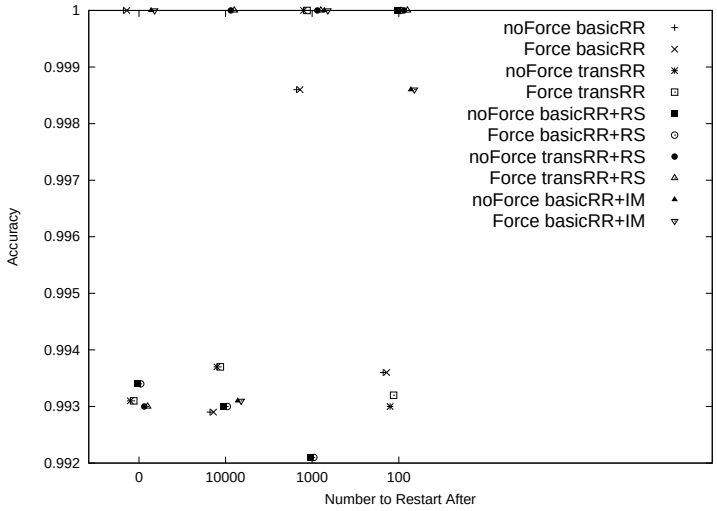



Figure B.379: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f25_400

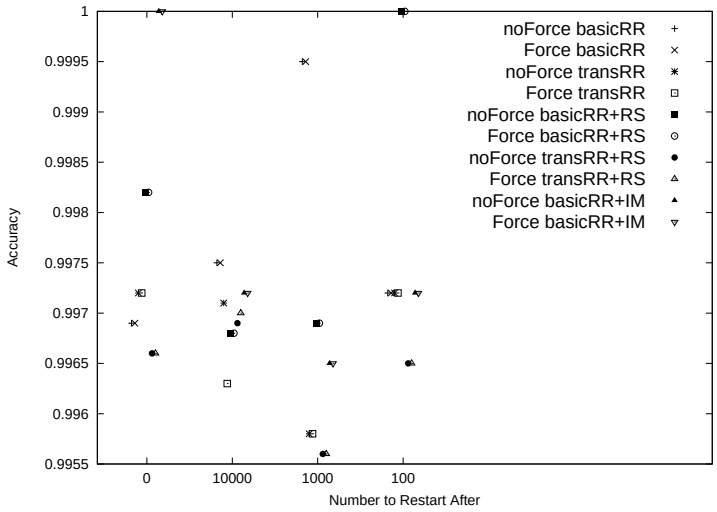



Figure B.380: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f25_500

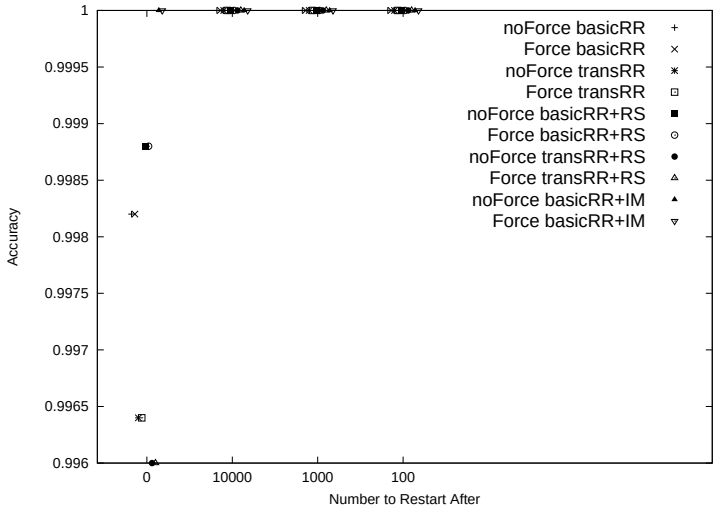



Figure B.381: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f50_315

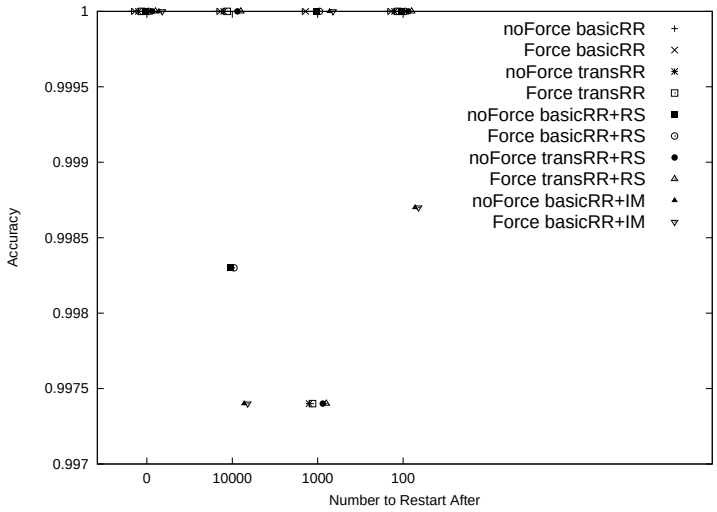



Figure B.382: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f50_412

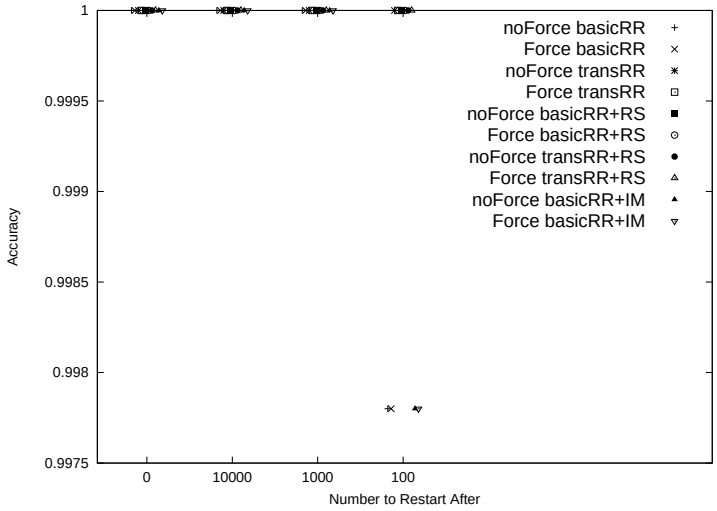



Figure B.383: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f50_498

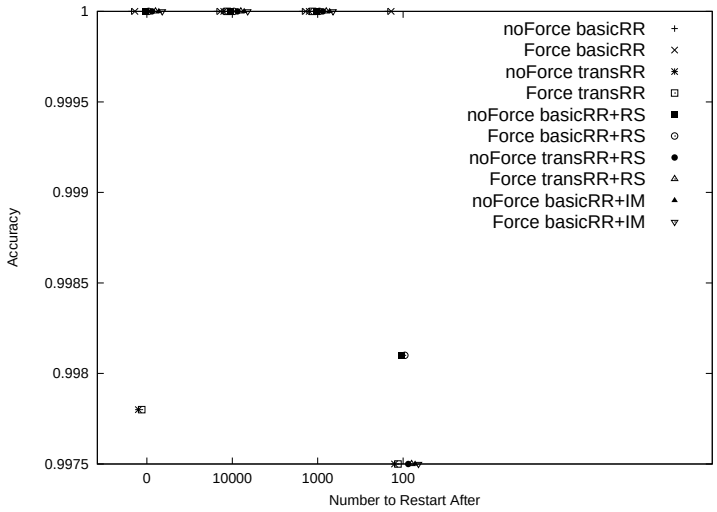



Figure B.384: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f100_307

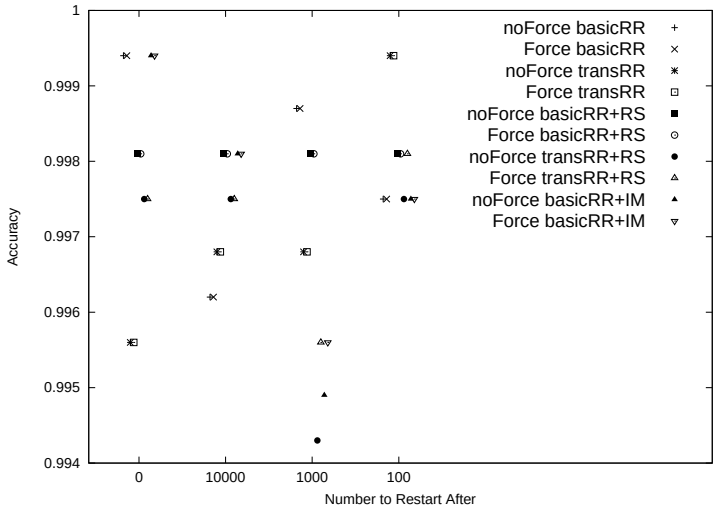



Figure B.385: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f100_415

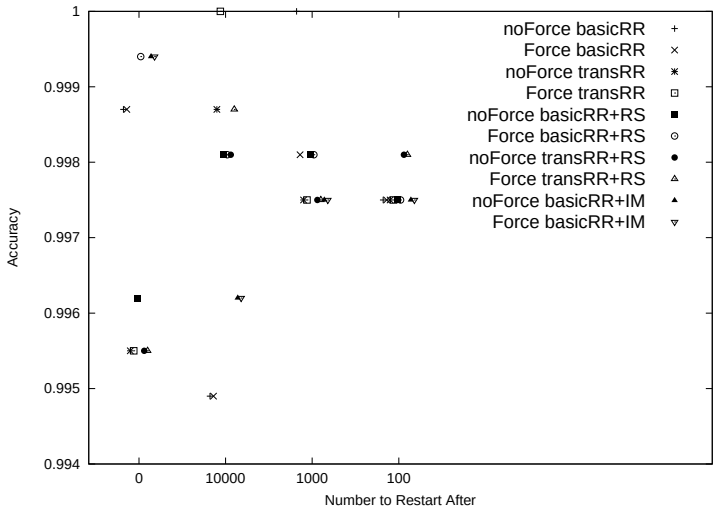



Figure B.386: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f100_512

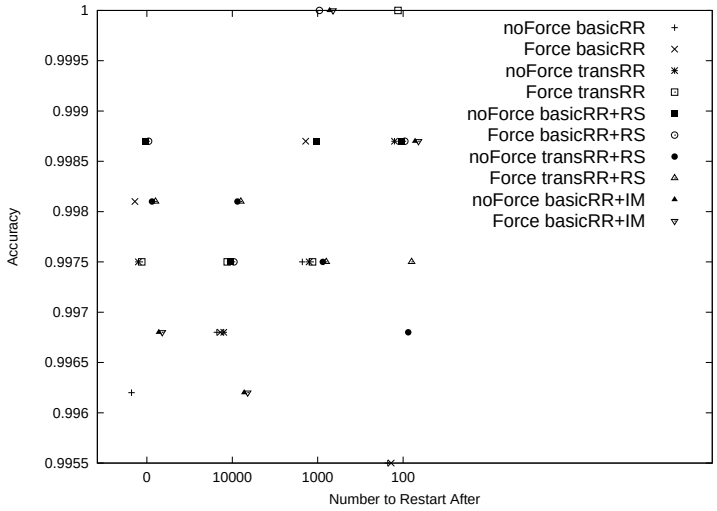



Figure B.387: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f508_354

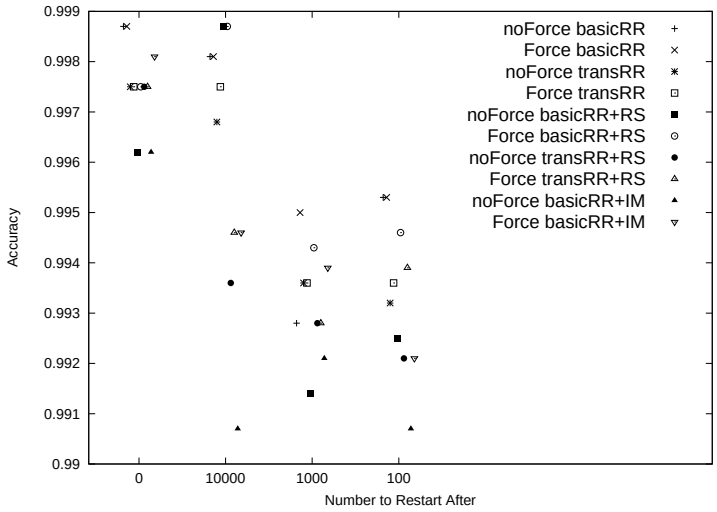



Figure B.388: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f635_350

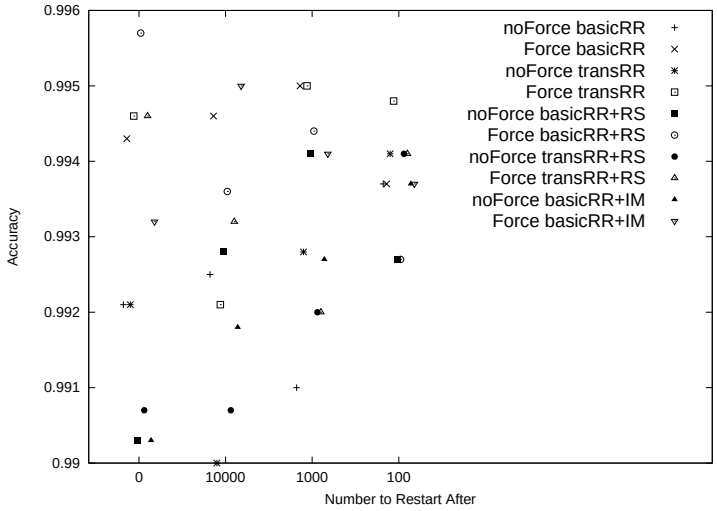



Figure B.389: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f737_355

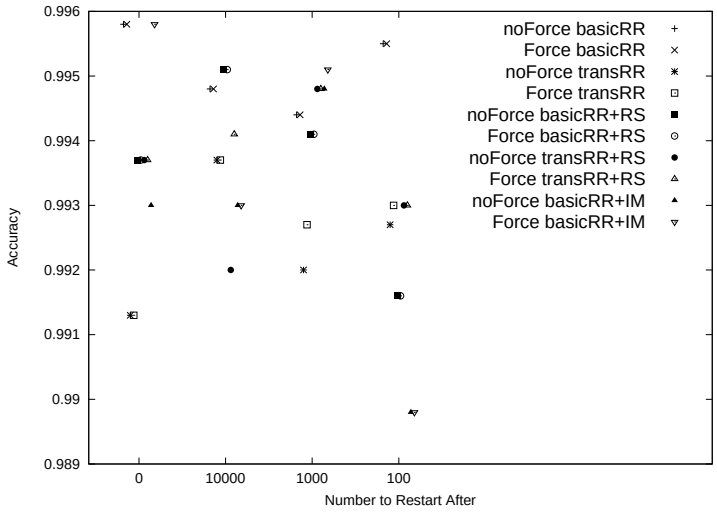



Figure B.390: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f1343_354

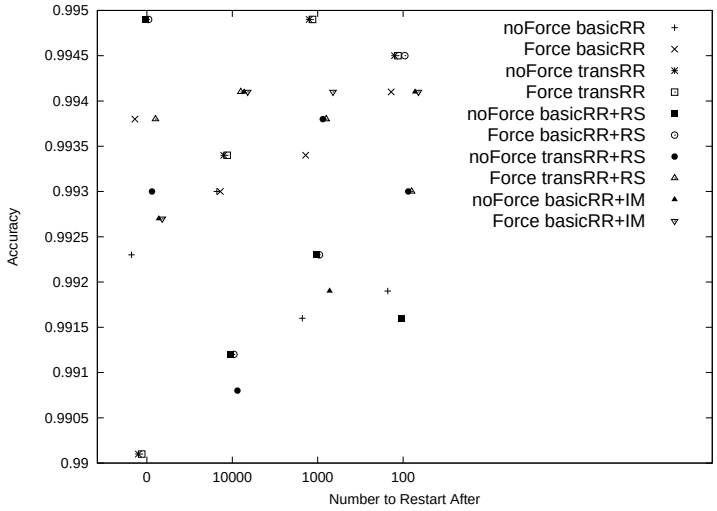



Figure B.391: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f1577_354

### B.5.3 Third Set of Results

**Results With No Post Optimization and No Forced Recentre**

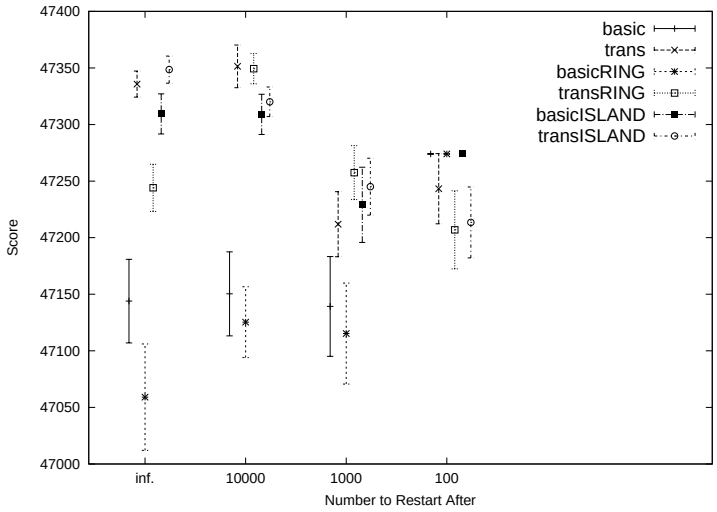



Figure B.392: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin1

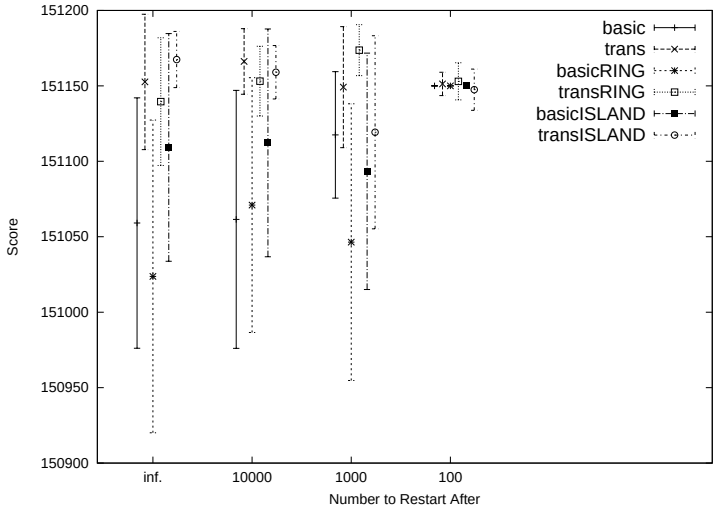



Figure B.393: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin2

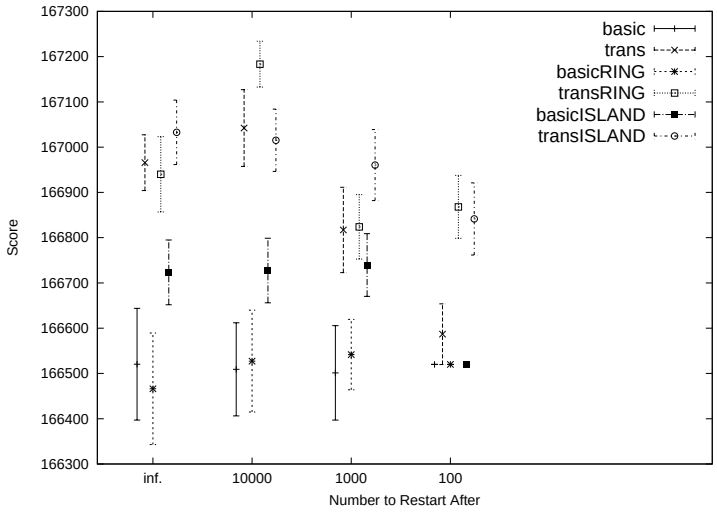



Figure B.394: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin3

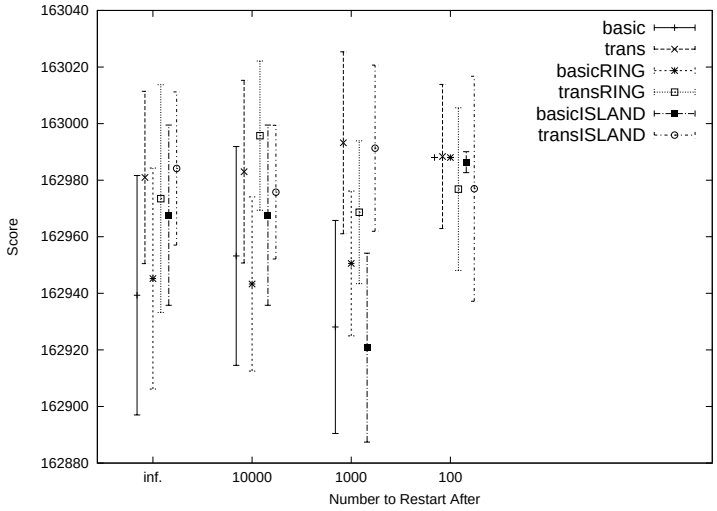



Figure B.395: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin5

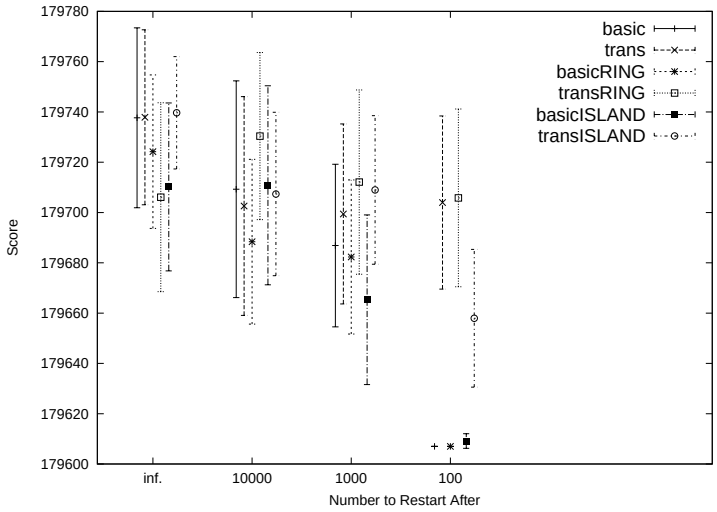



Figure B.396: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin7

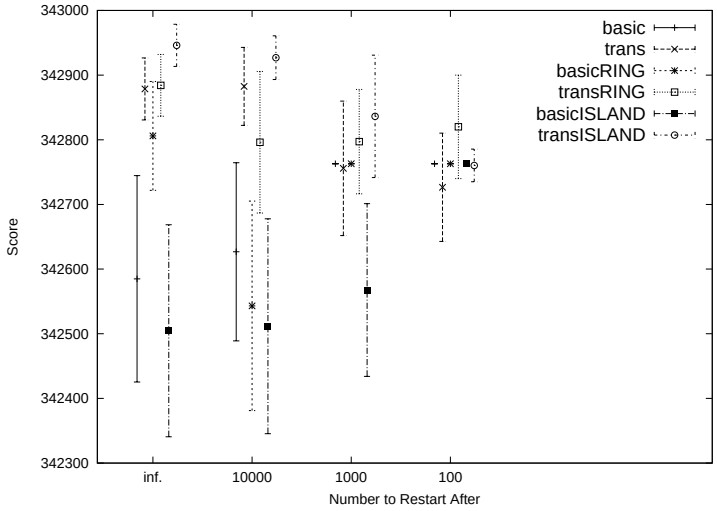



Figure B.397: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin9

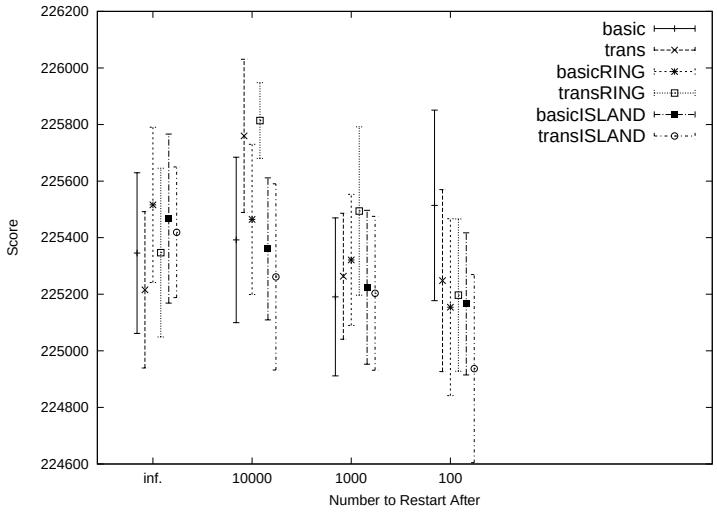



Figure B.398: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_4

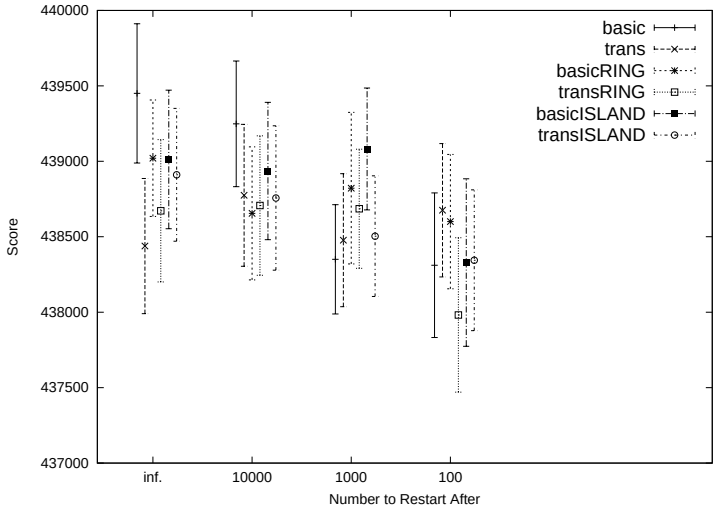



Figure B.399: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_7

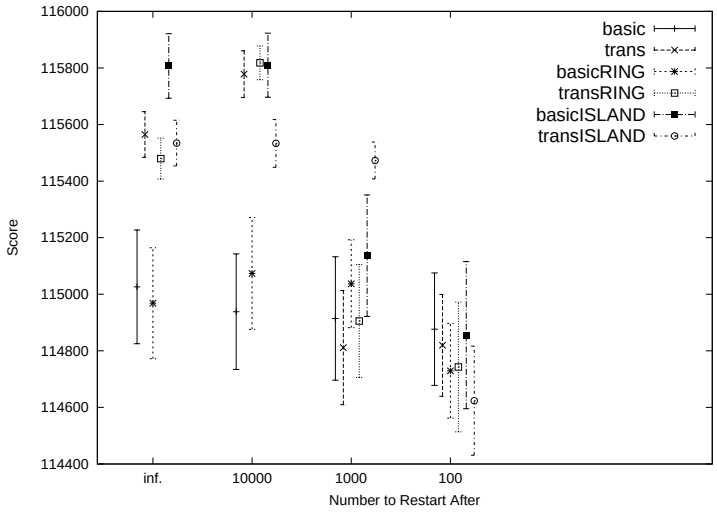



Figure B.400: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance j02459_7

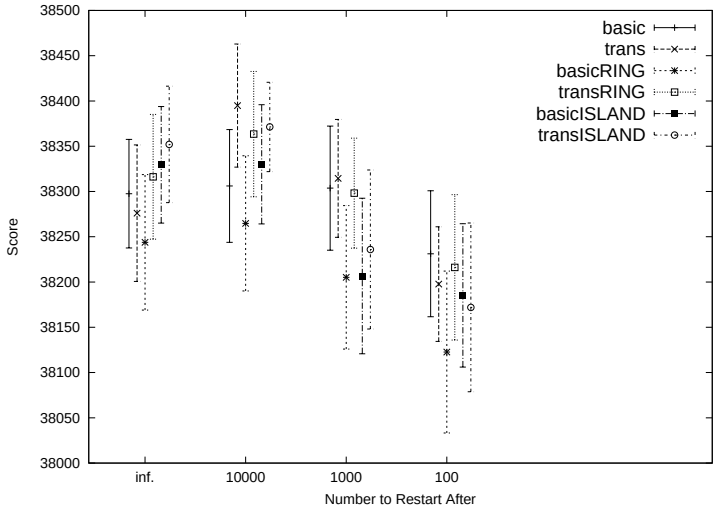



Figure B.401: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance m15421_5

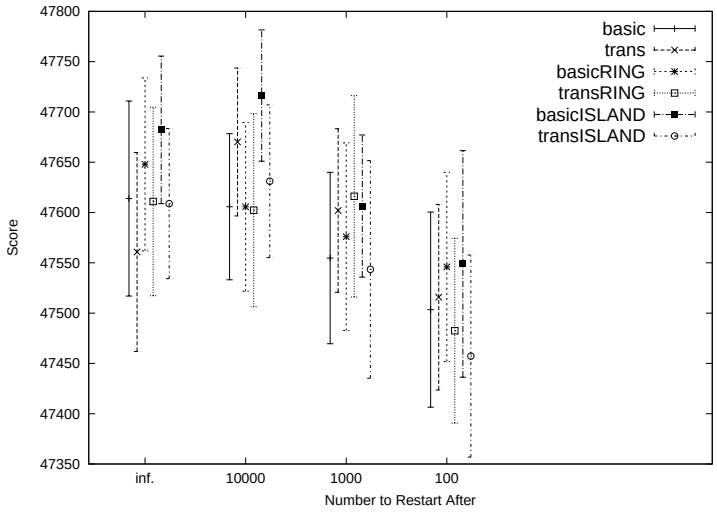



Figure B.402: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance m15421_6

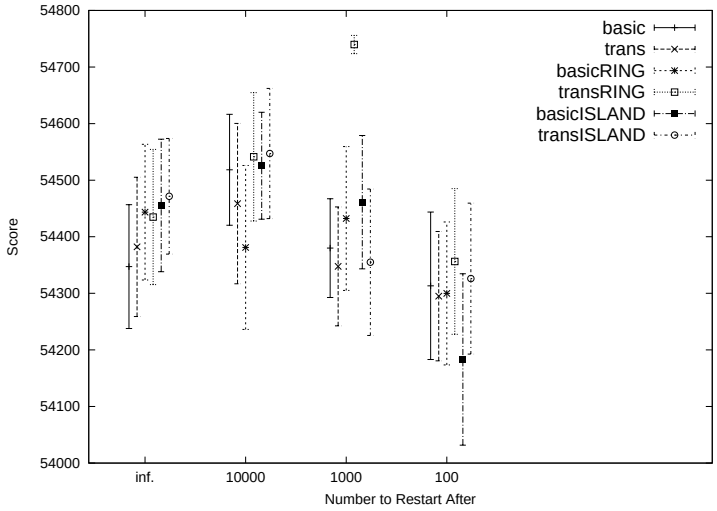



Figure B.403: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance m15421_7

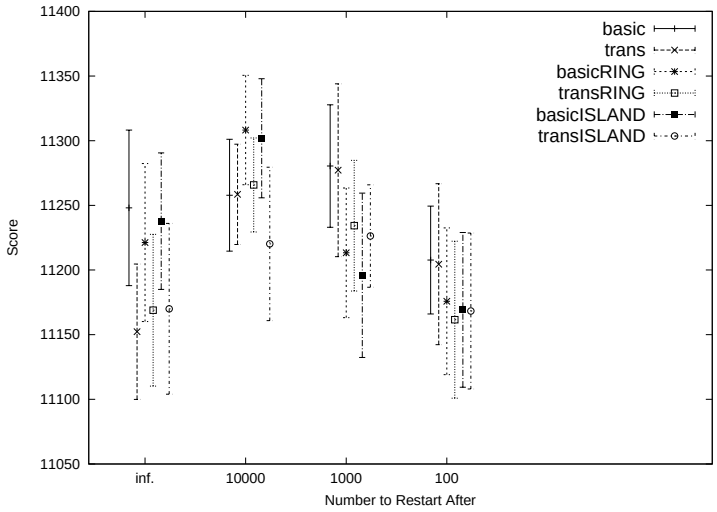



Figure B.404: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance x60189_4

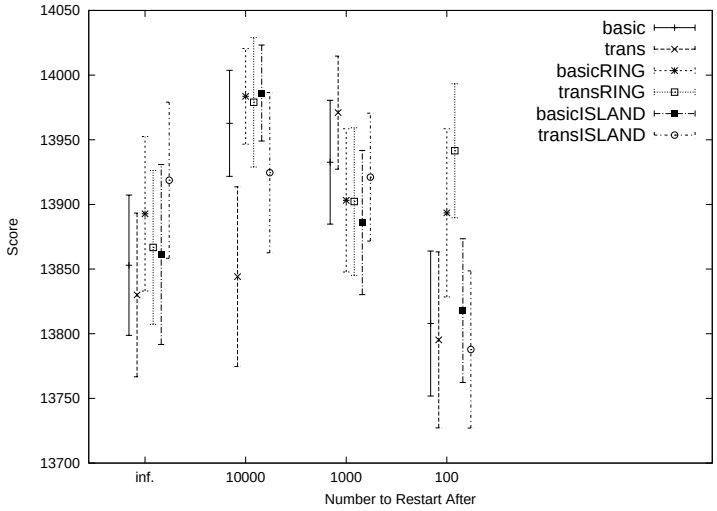



Figure B.405: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance x60189_5

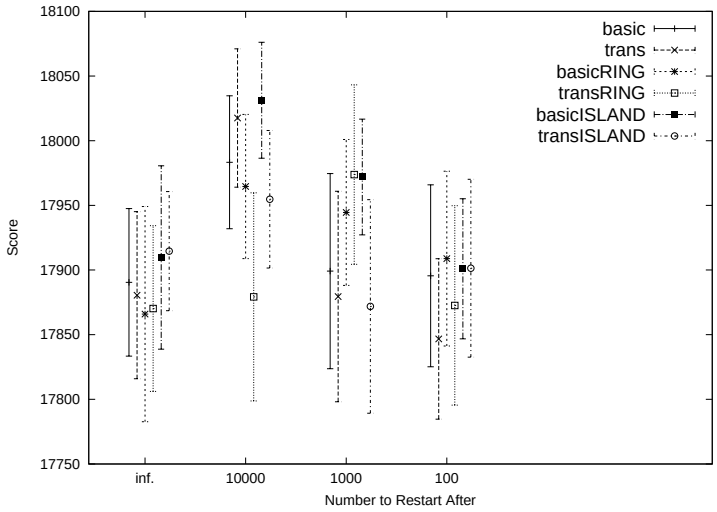



Figure B.406: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance x60189_6

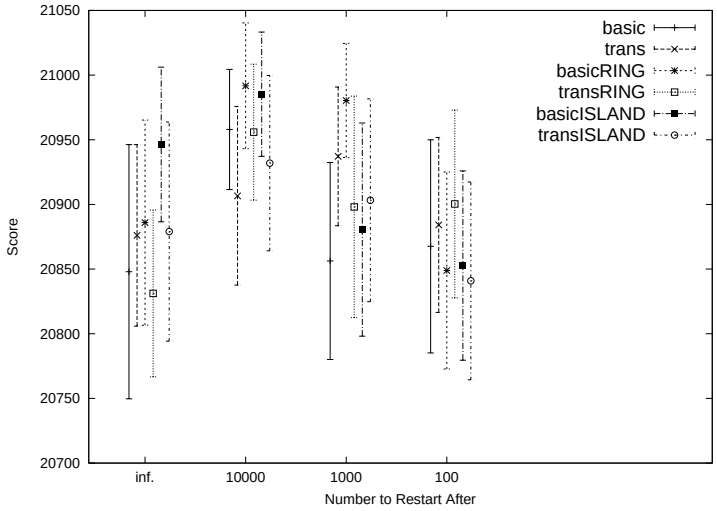



Figure B.407: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance x60189_7

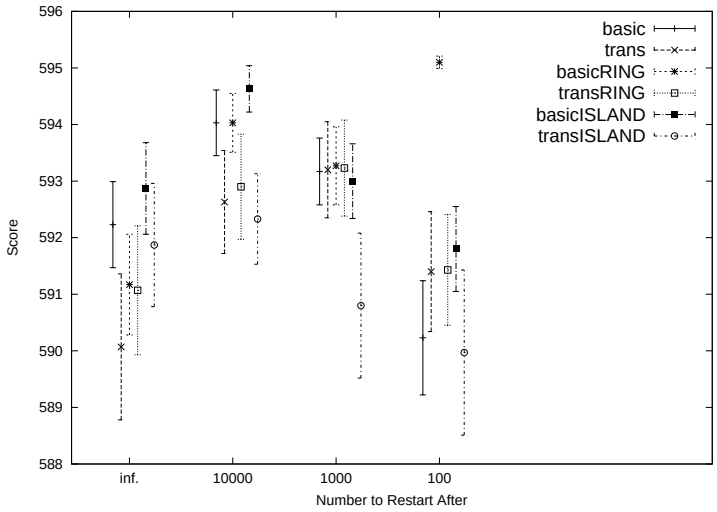



Figure B.408: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f25_305

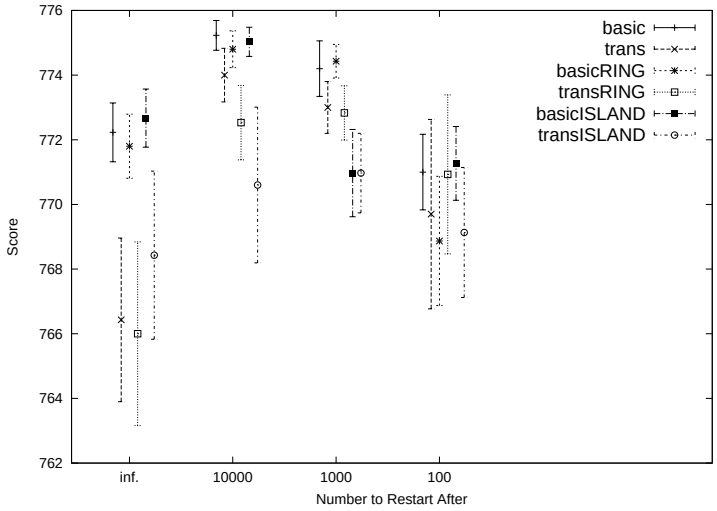



Figure B.409: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f25_400

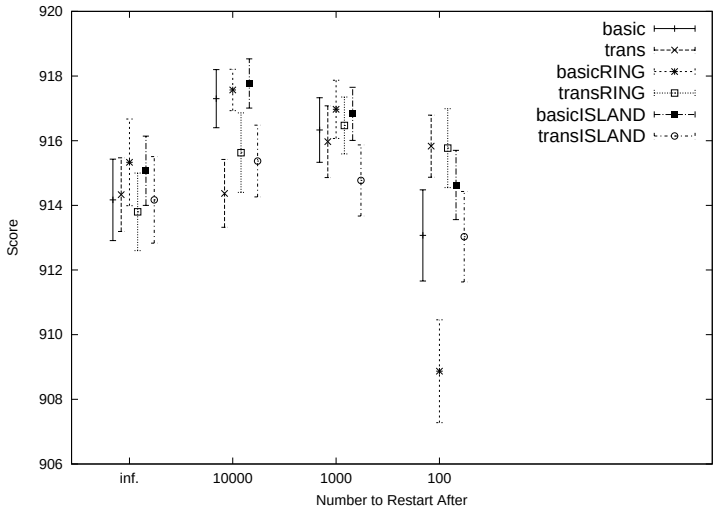



Figure B.410: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f25_500

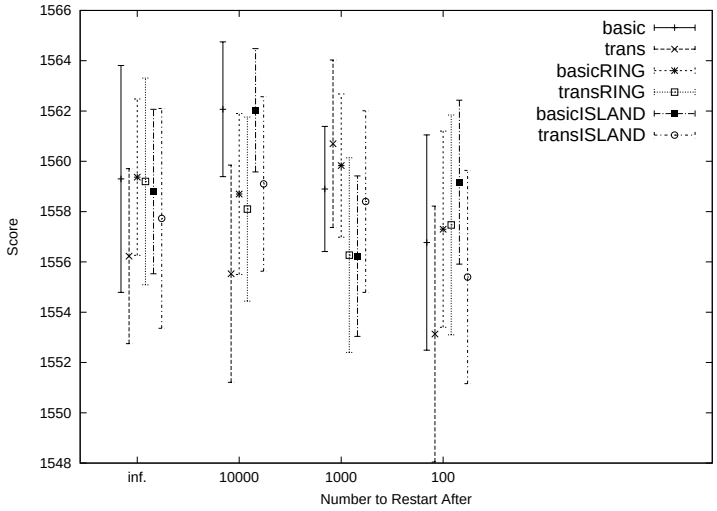



Figure B.411: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f50_315

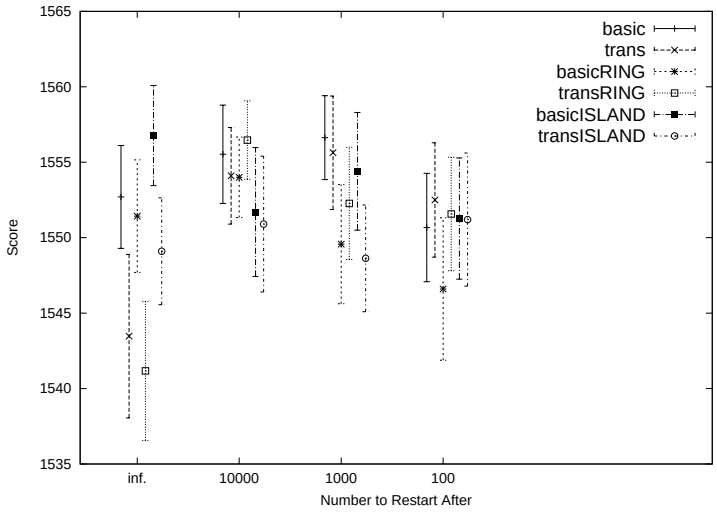



Figure B.412: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f50_412

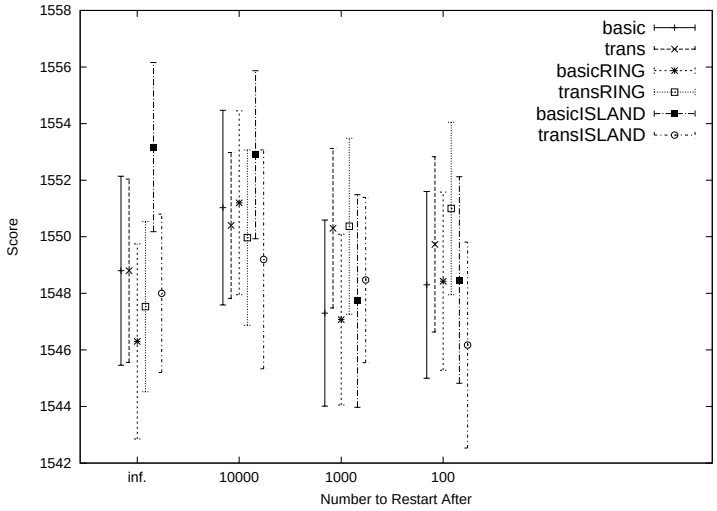



Figure B.413: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f50_498

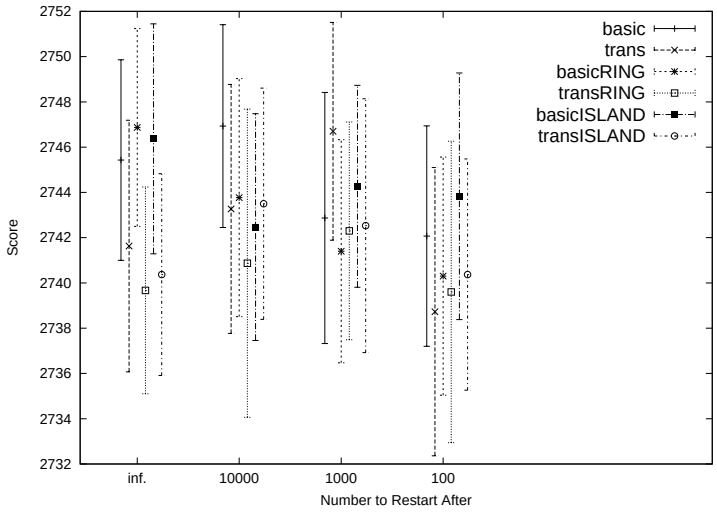



Figure B.414: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f100_307

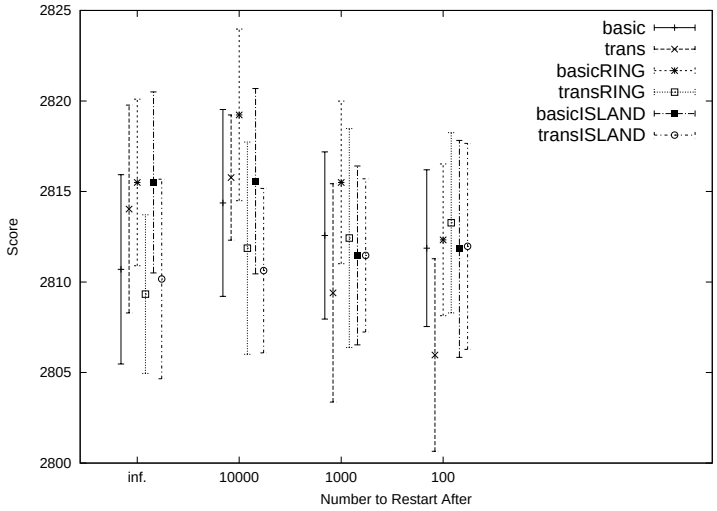



Figure B.415: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f100_415

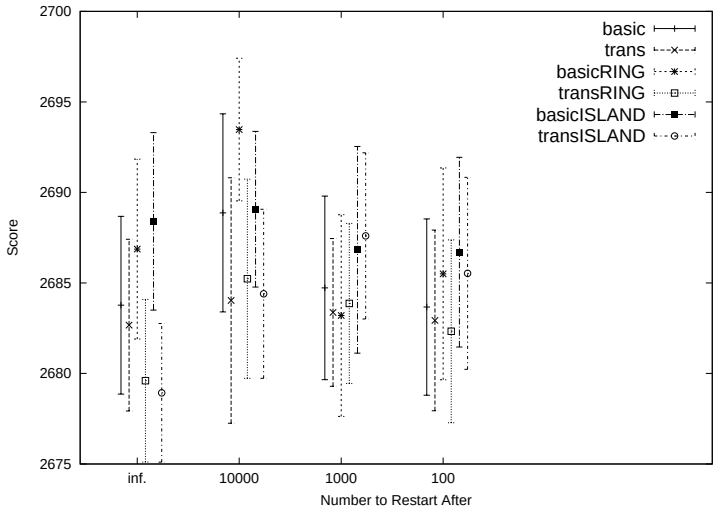



Figure B.416: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f100_512

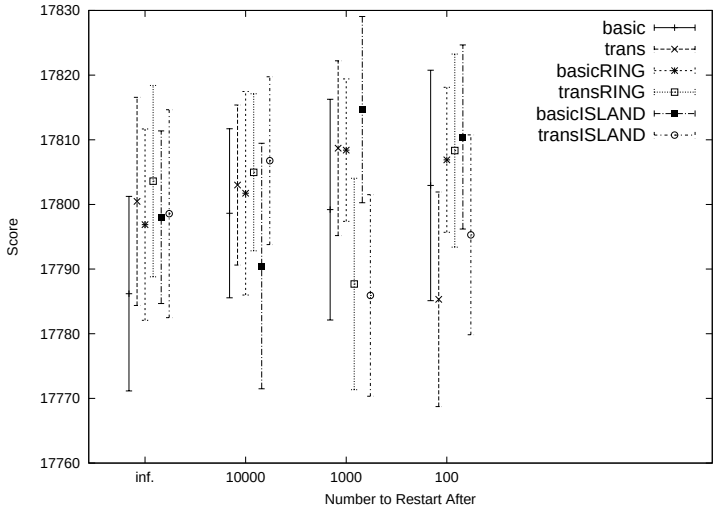



Figure B.417: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f508_354

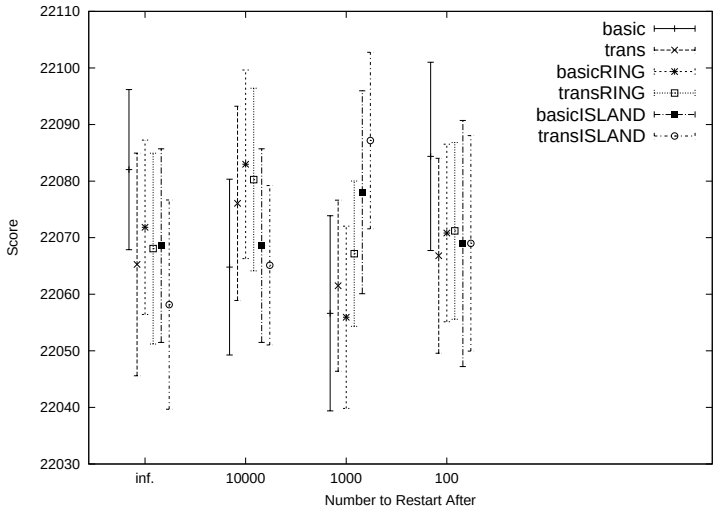



Figure B.418: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f635_350

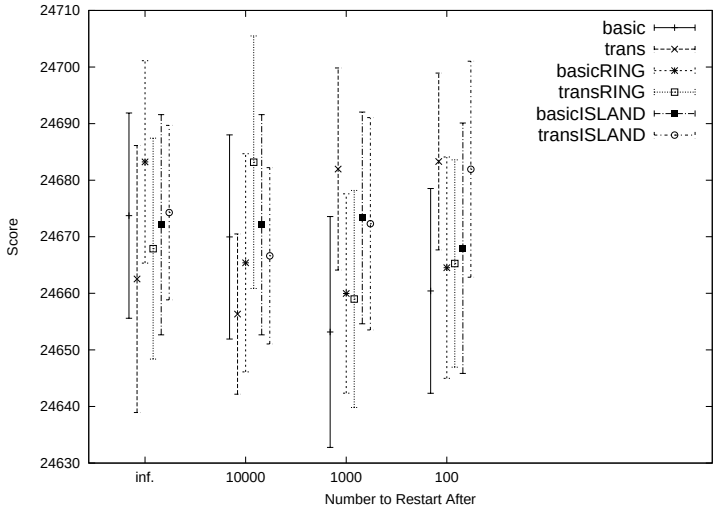



Figure B.419: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f737_355

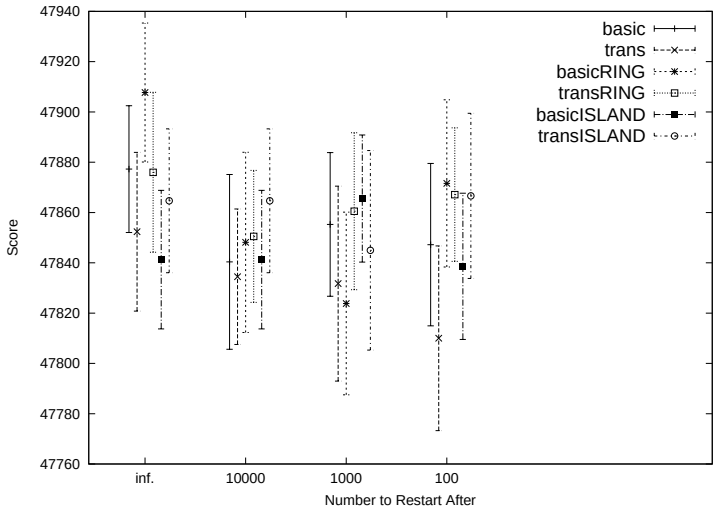



Figure B.420: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f1343_354

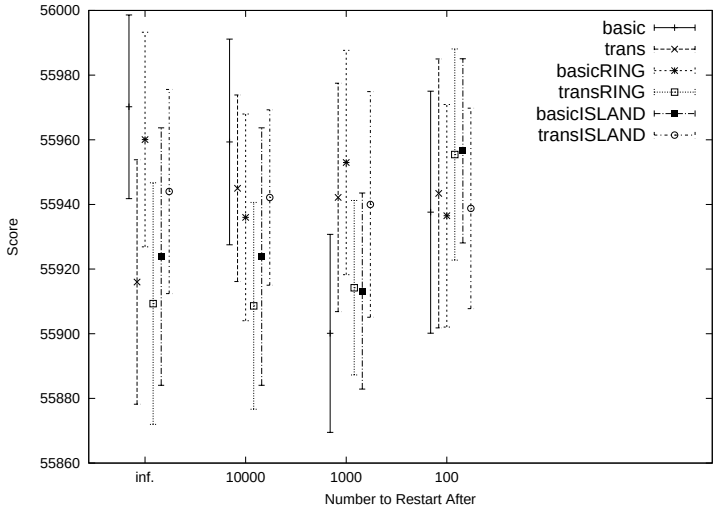



Figure B.421: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f1577_354

**Results With Post Optimization and No Forced Recentre**

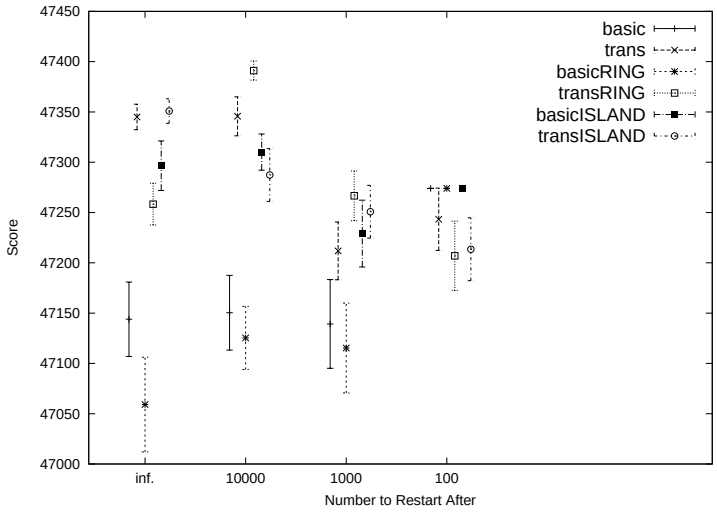



Figure B.422: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin1

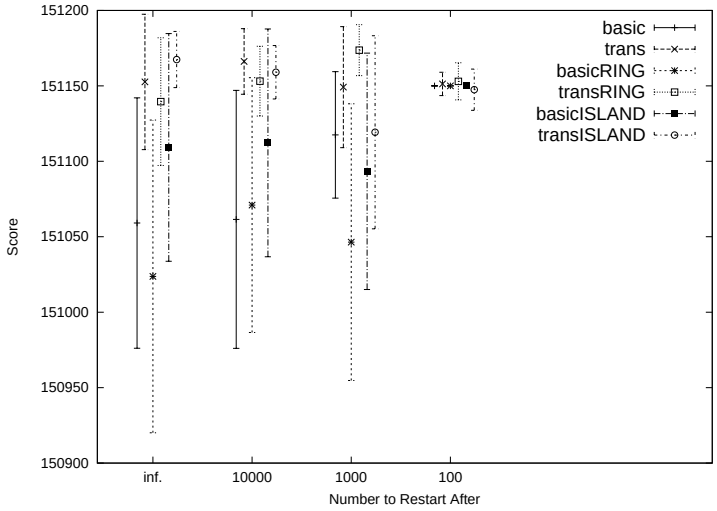



Figure B.423: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin2

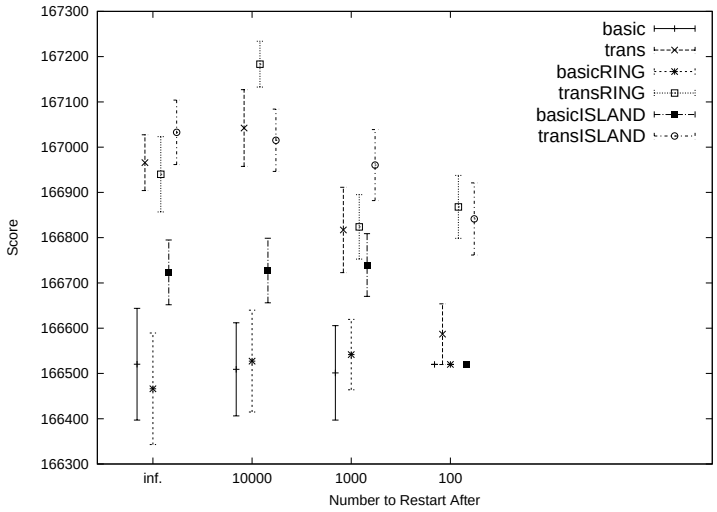



Figure B.424: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin3

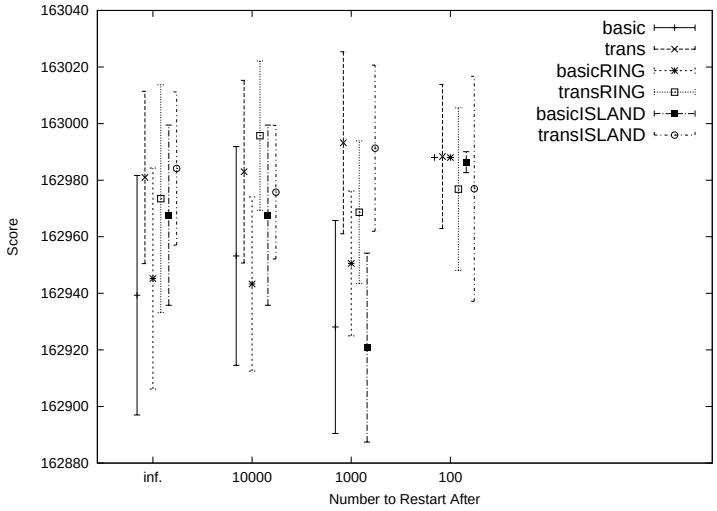



Figure B.425: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin5

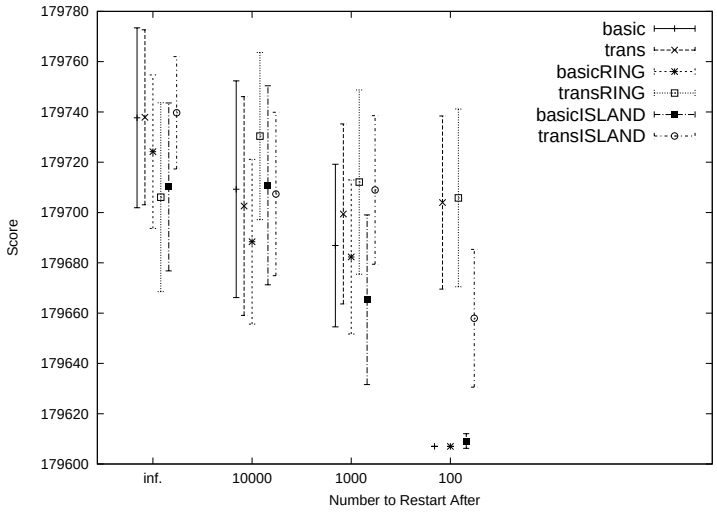



Figure B.426: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin7

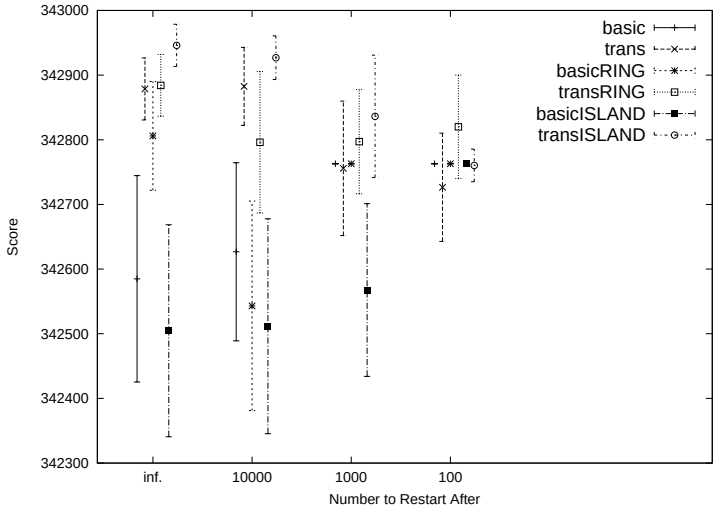



Figure B.427: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin9

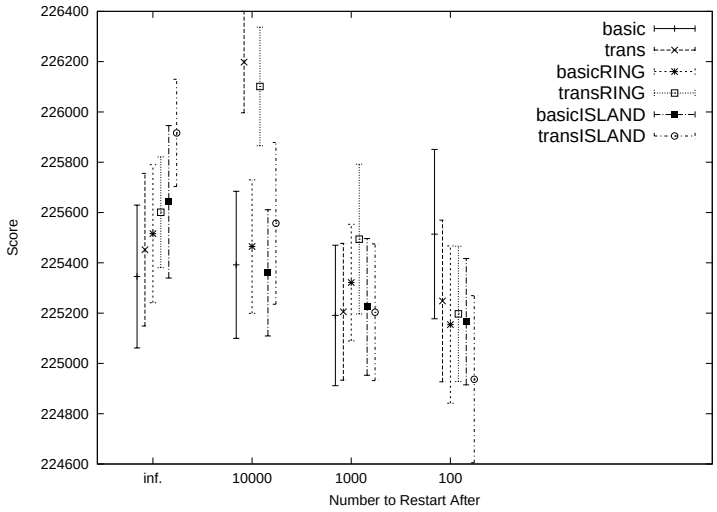



Figure B.428: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_4

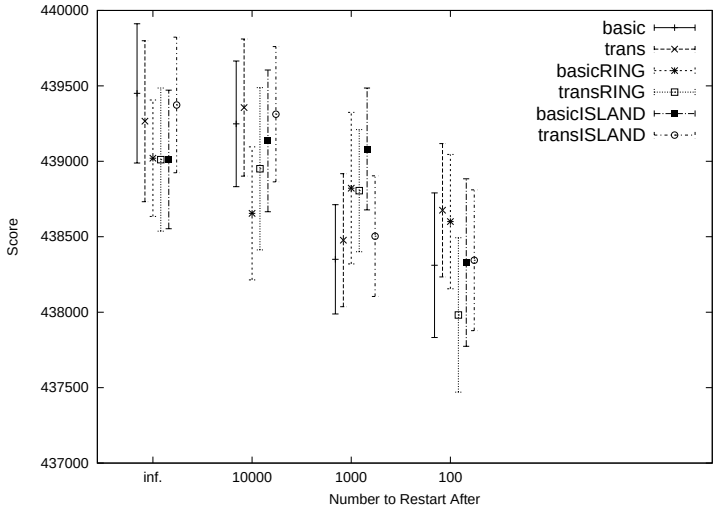



Figure B.429: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_7

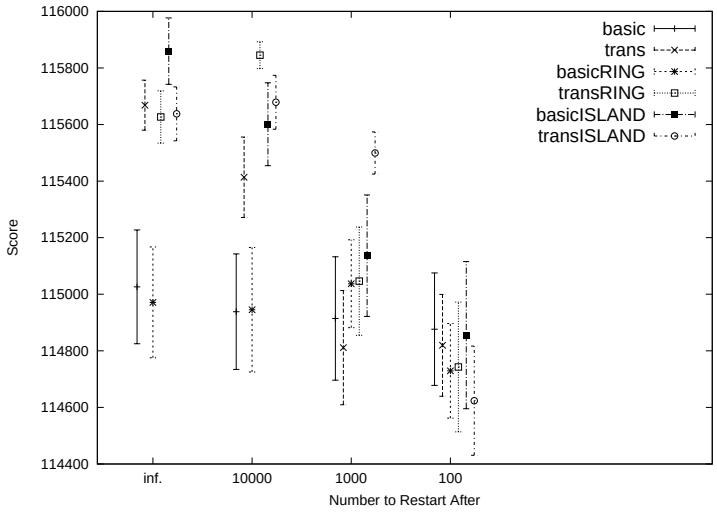



Figure B.430: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance j02459_7

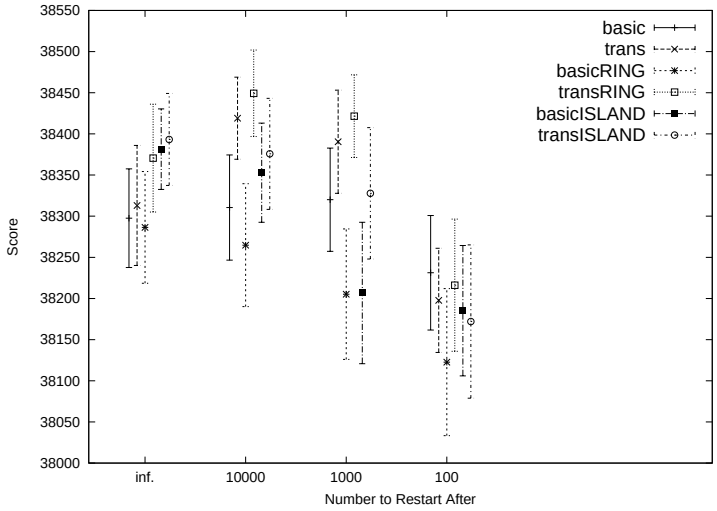



Figure B.431: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance m15421_5

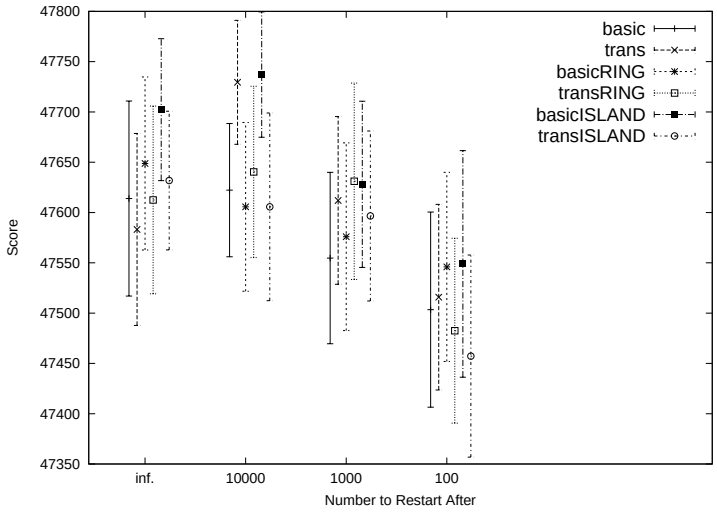



Figure B.432: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance m15421_6

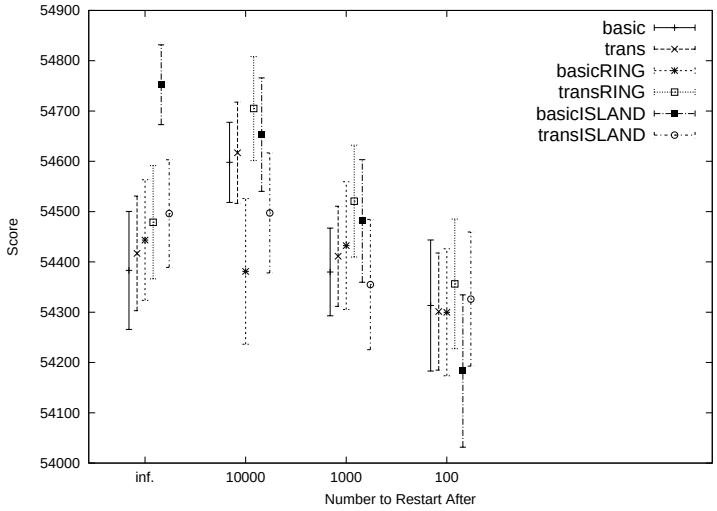



Figure B.433: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance m15421_7

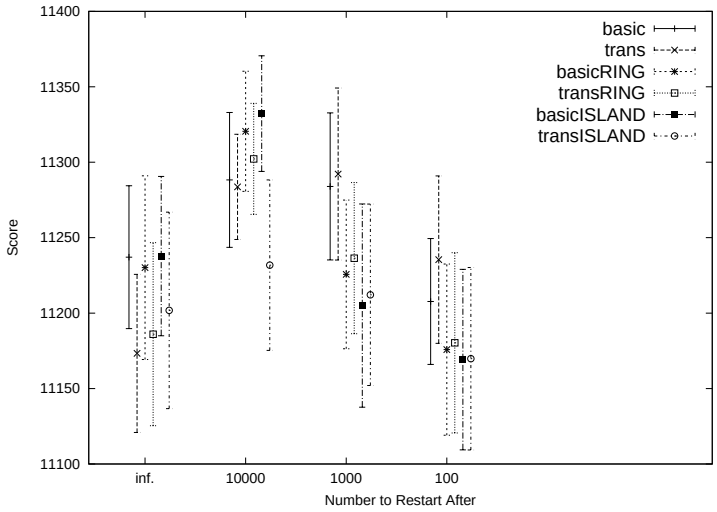



Figure B.434: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_4

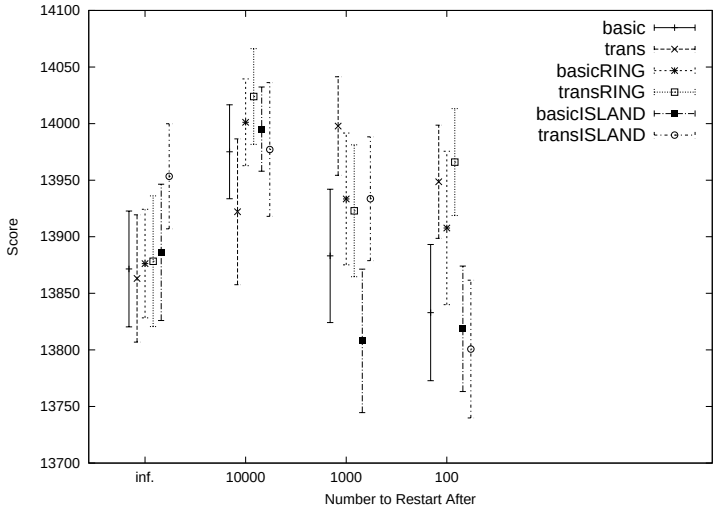



Figure B.435: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_5

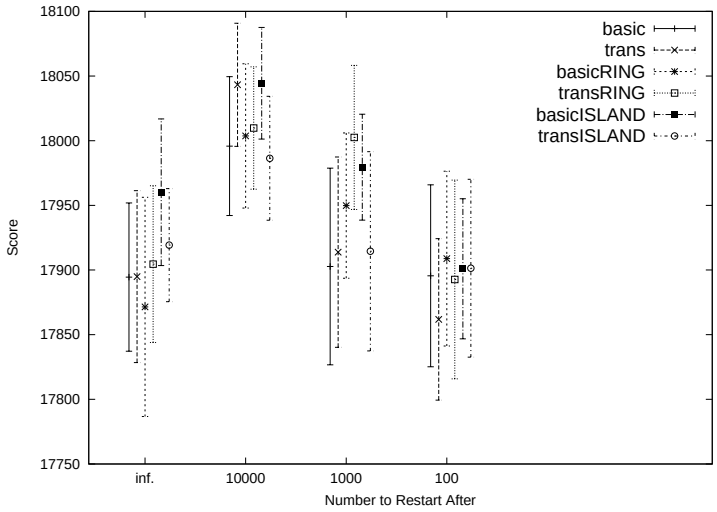



Figure B.436: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_6

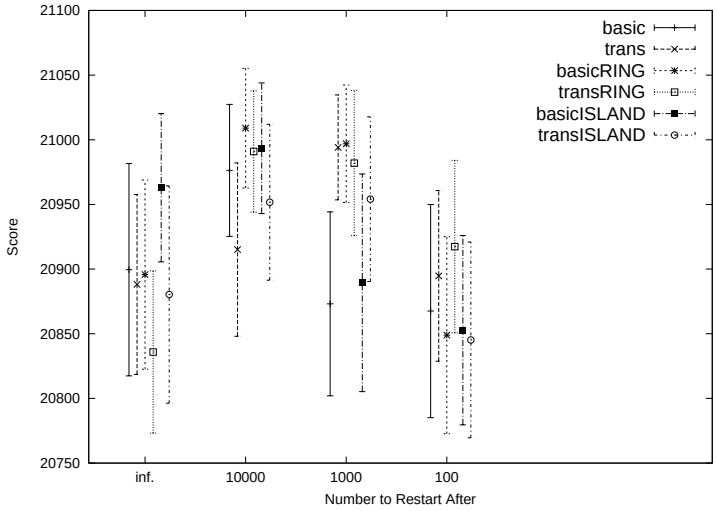



Figure B.437: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_7

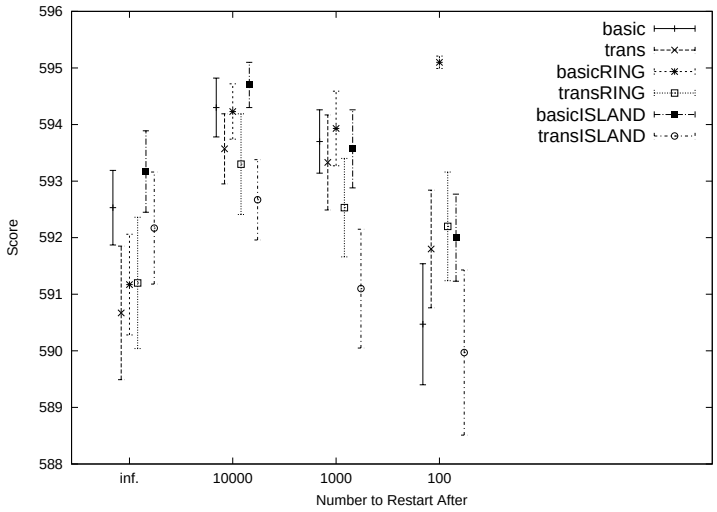



Figure B.438: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f25_305

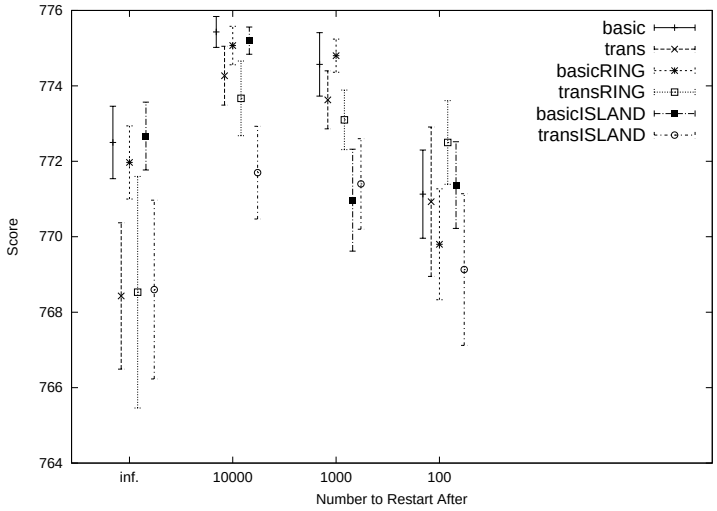



Figure B.439: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f25_400

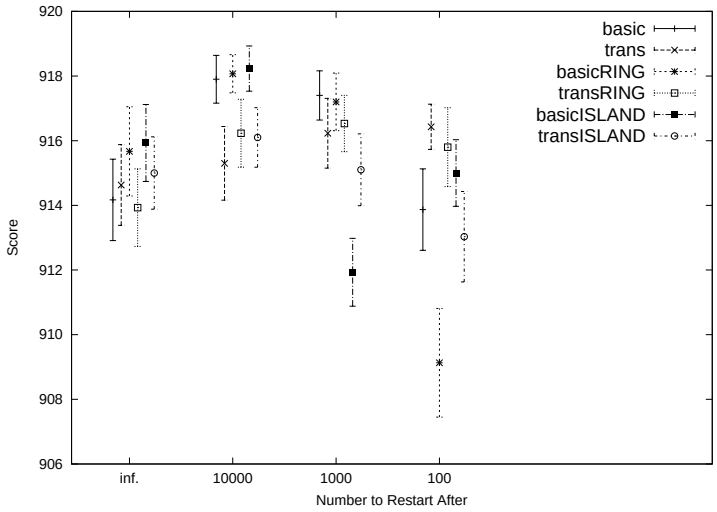



Figure B.440: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f25_500

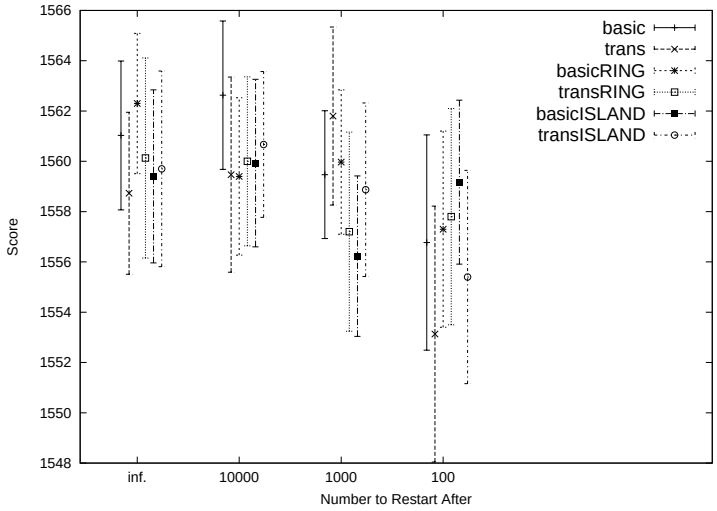



Figure B.441: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f50_315

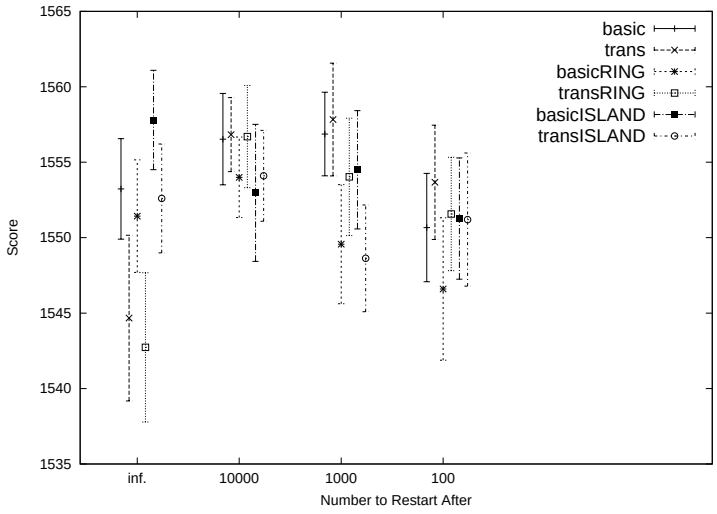



Figure B.442: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f50_412

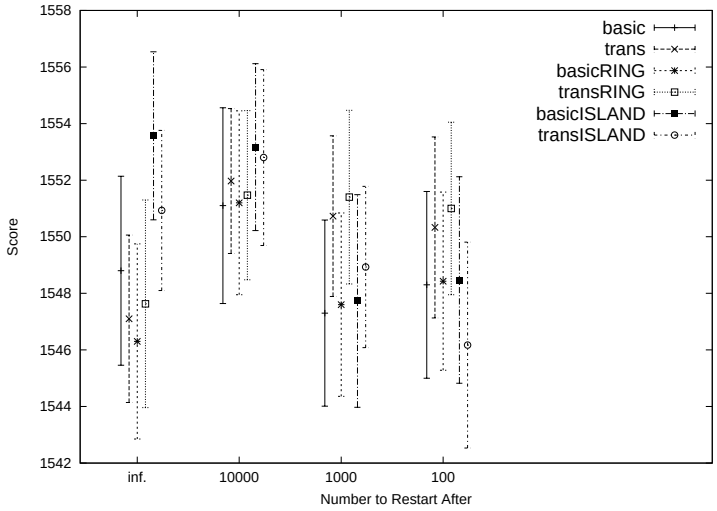



Figure B.443: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f50_498

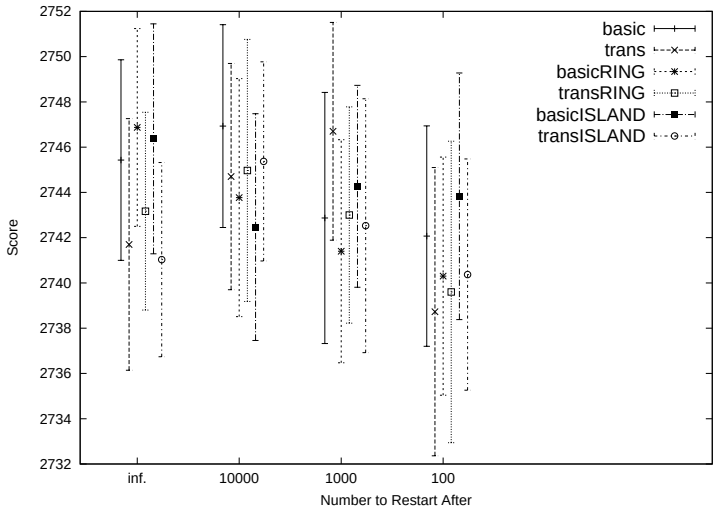



Figure B.444: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f100_307

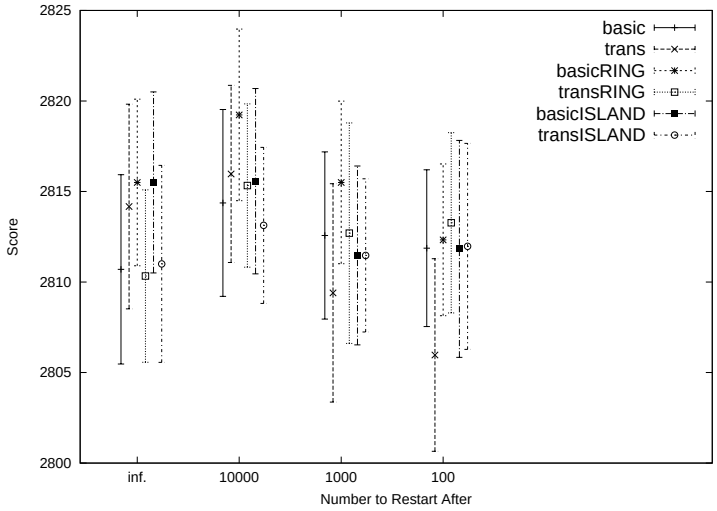



Figure B.445: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f100_415

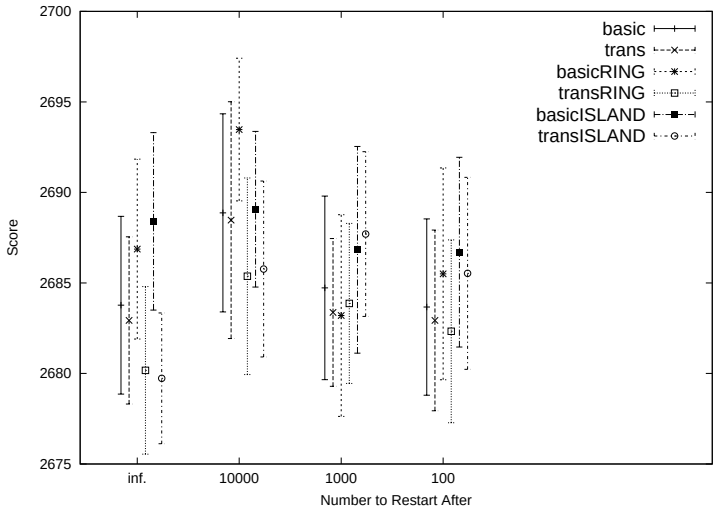



Figure B.446: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f100_512

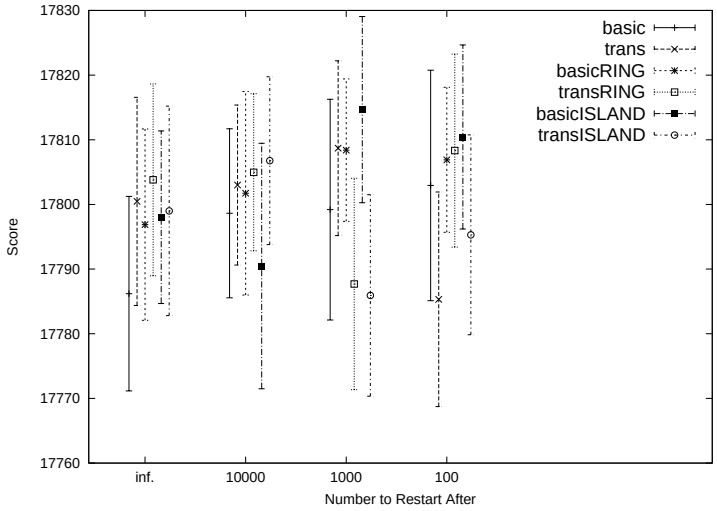



Figure B.447: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f508_354

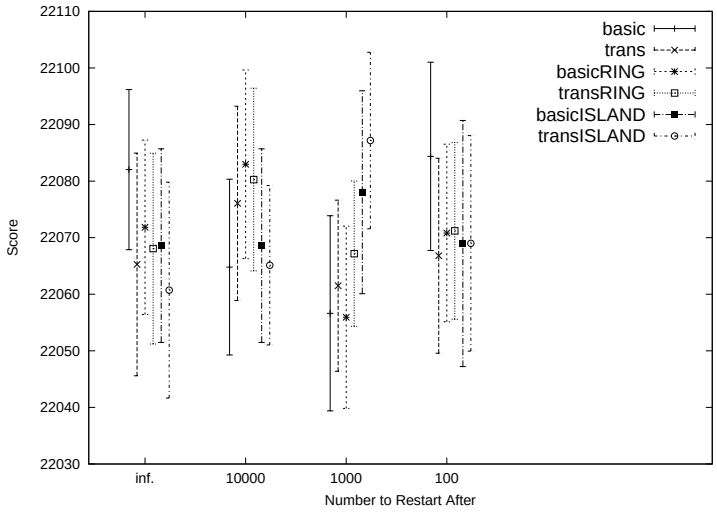



Figure B.448: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f635_350

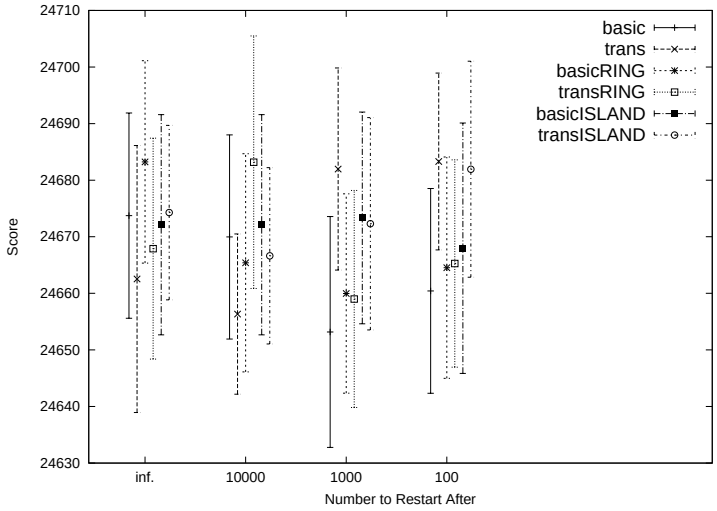



Figure B.449: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f737_355

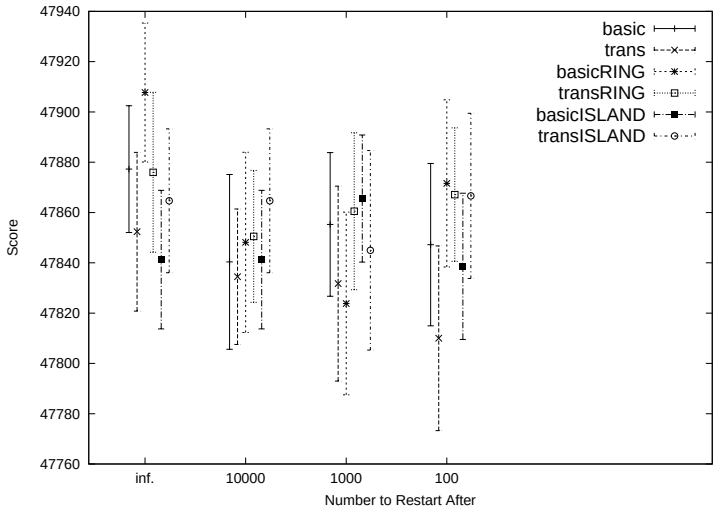



Figure B.450: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f1343_354

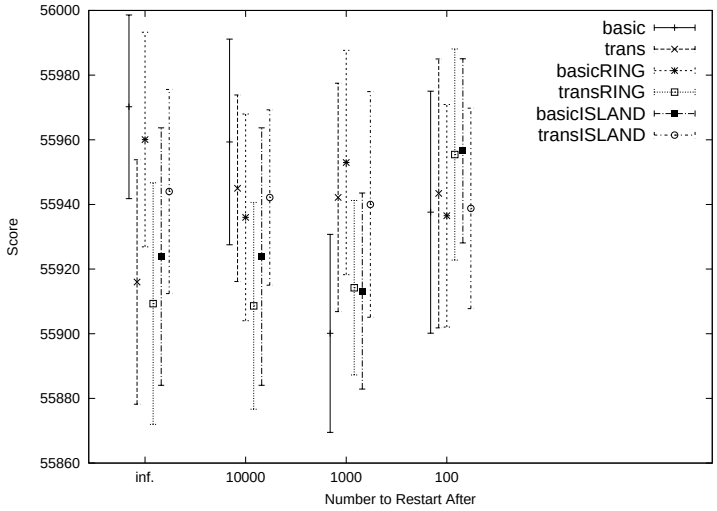



Figure B.451: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f1577_354

**Results With No Post Optimization and Forced Recentre**

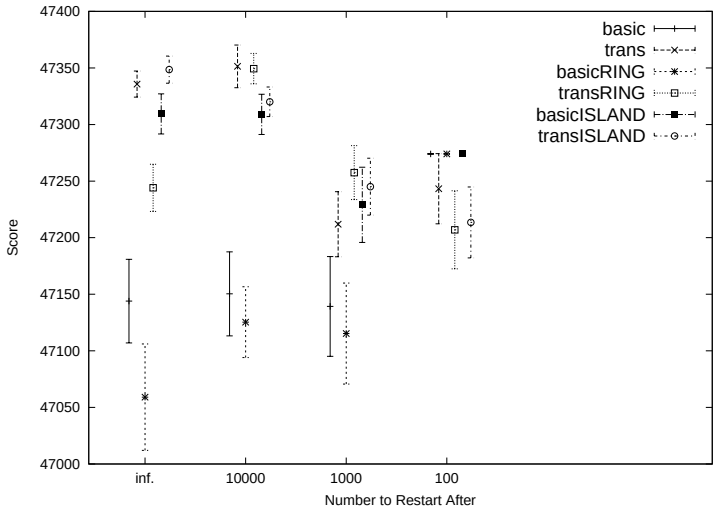



Figure B.452: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin1

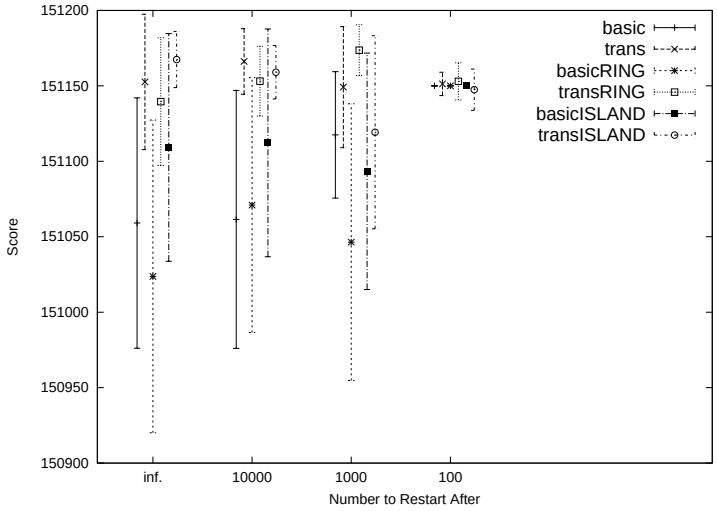



Figure B.453: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin2

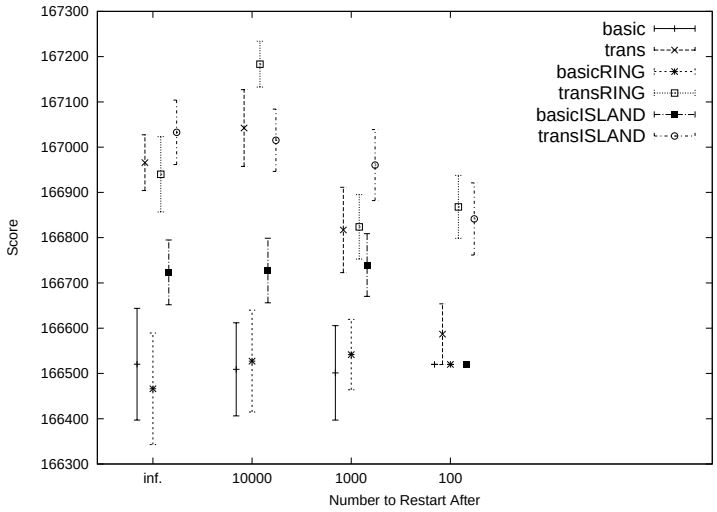



Figure B.454: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin3

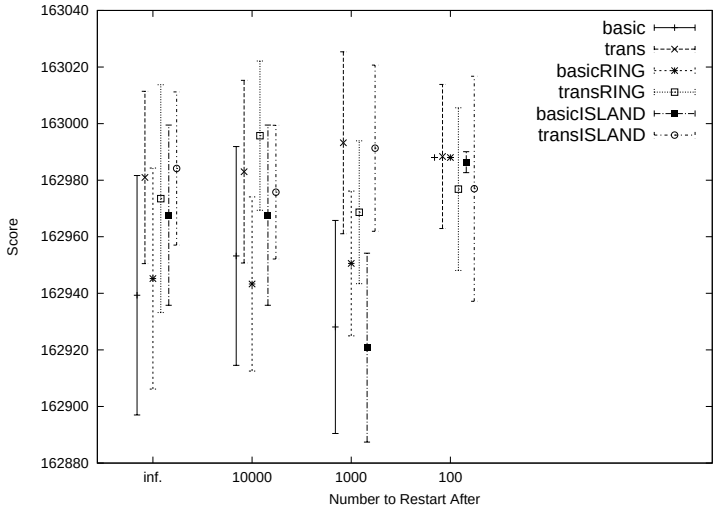



Figure B.455: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin5

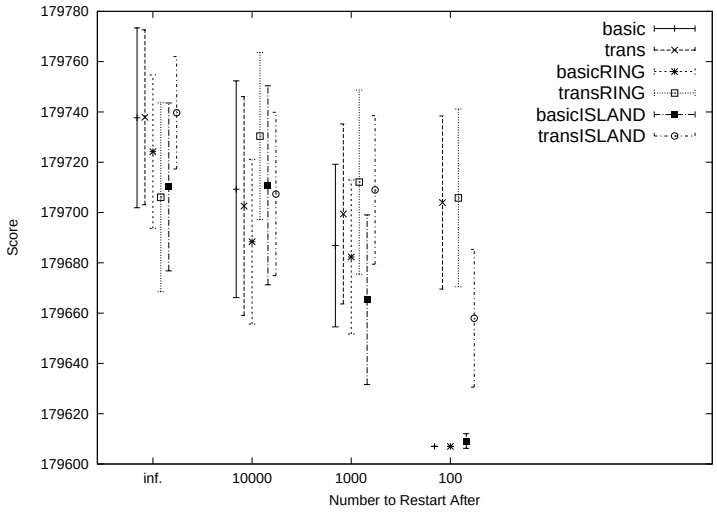



Figure B.456: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin7

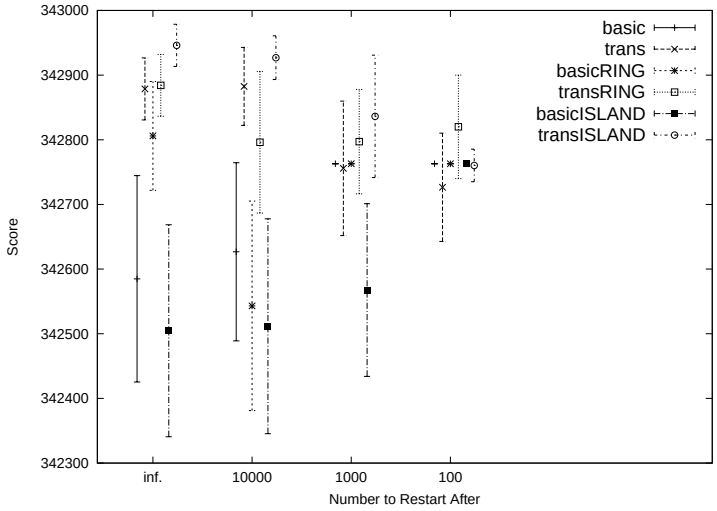



Figure B.457: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin9

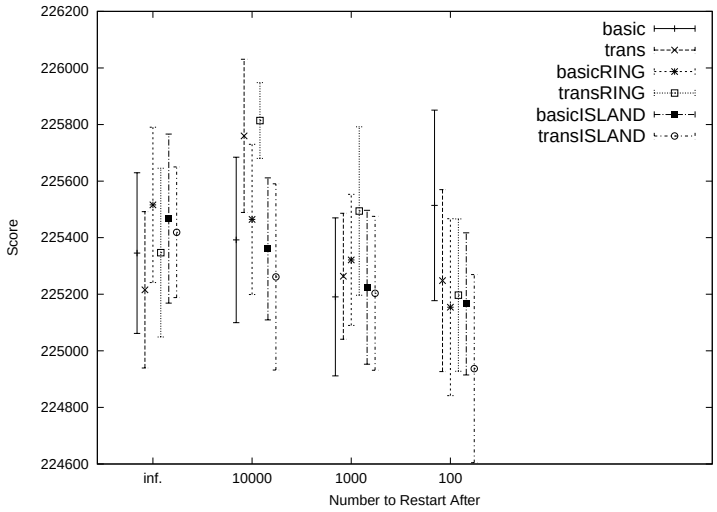



Figure B.458: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_4

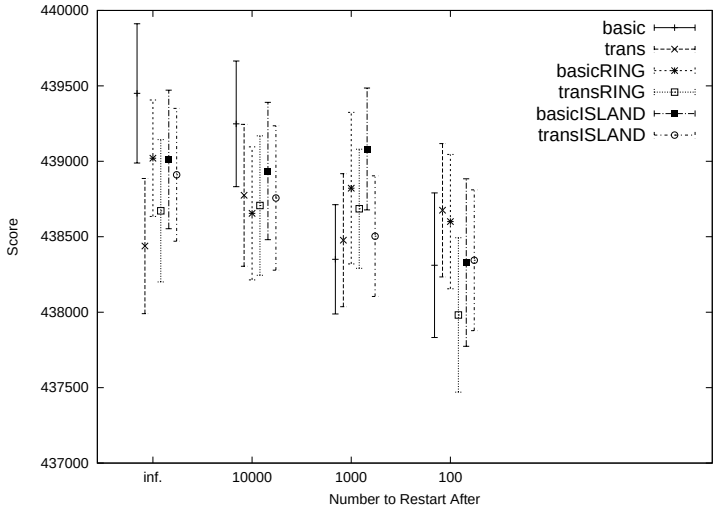



Figure B.459: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_7

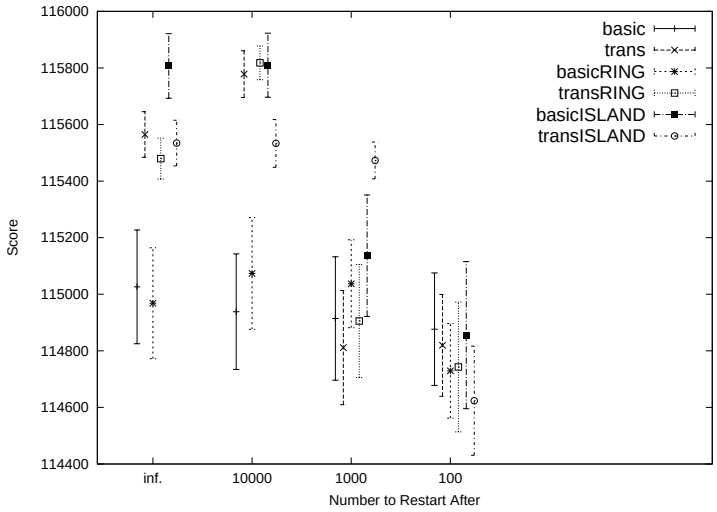



Figure B.460: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance j02459_7

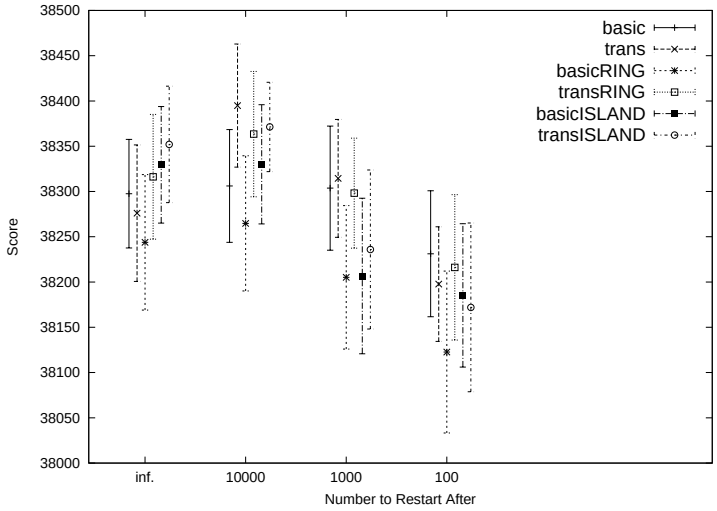



Figure B.461: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance m15421_5

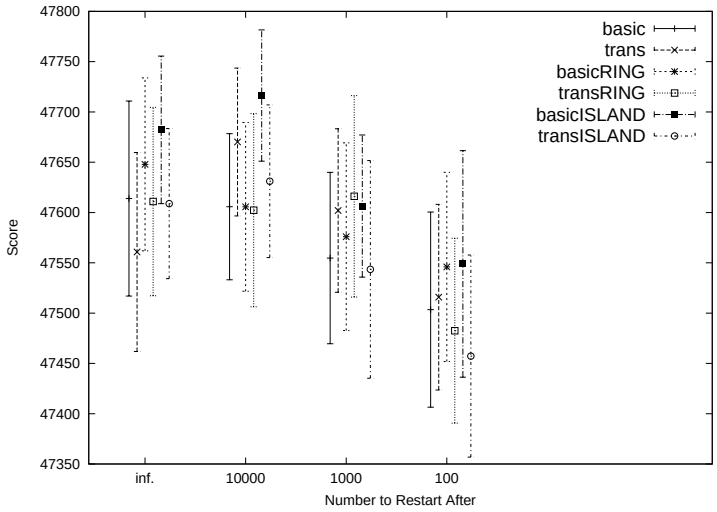



Figure B.462: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance m15421_6

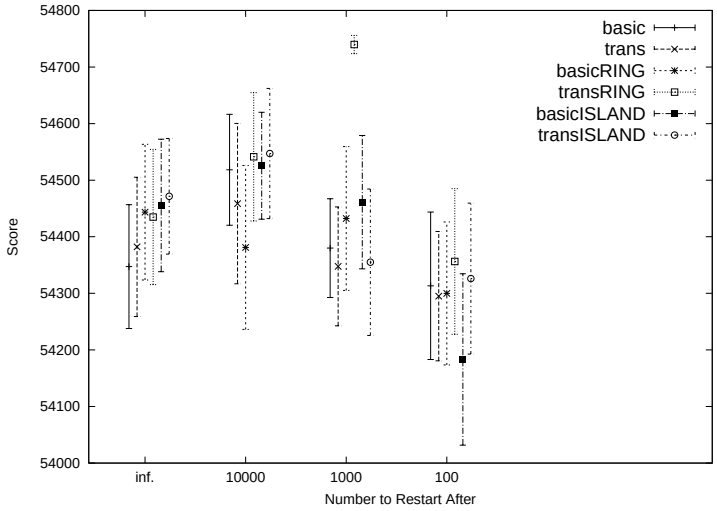



Figure B.463: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance m15421_7

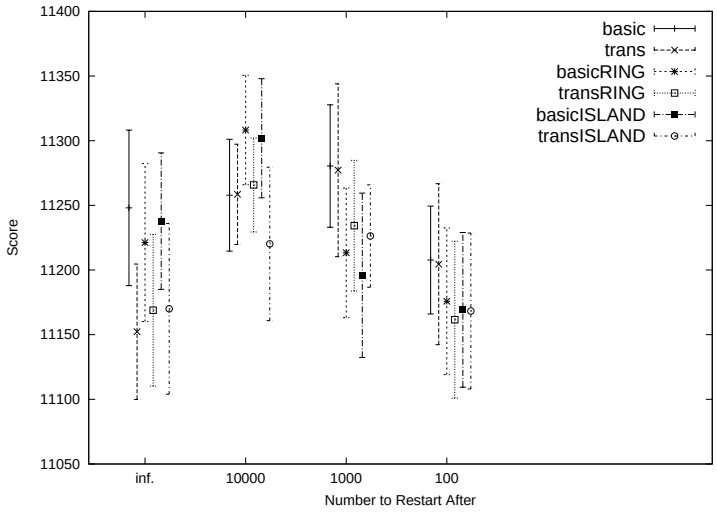



Figure B.464: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_4

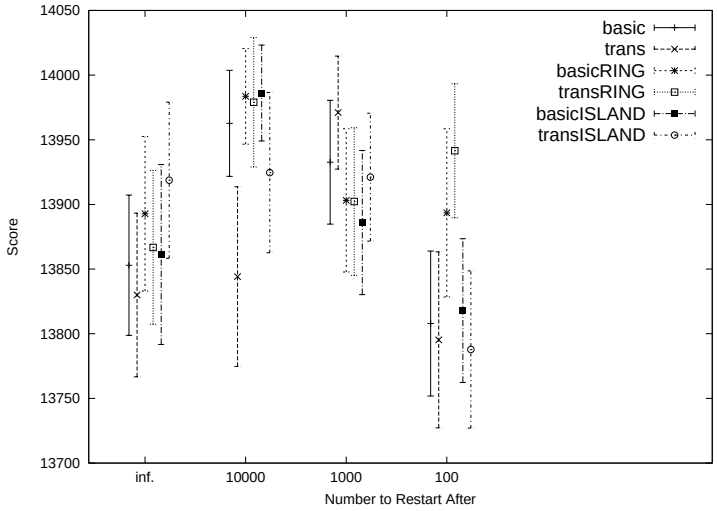



Figure B.465: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_5

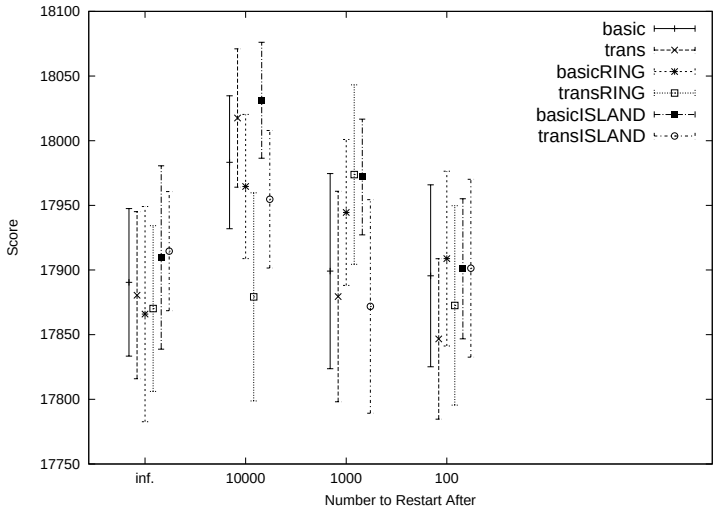



Figure B.466: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_6

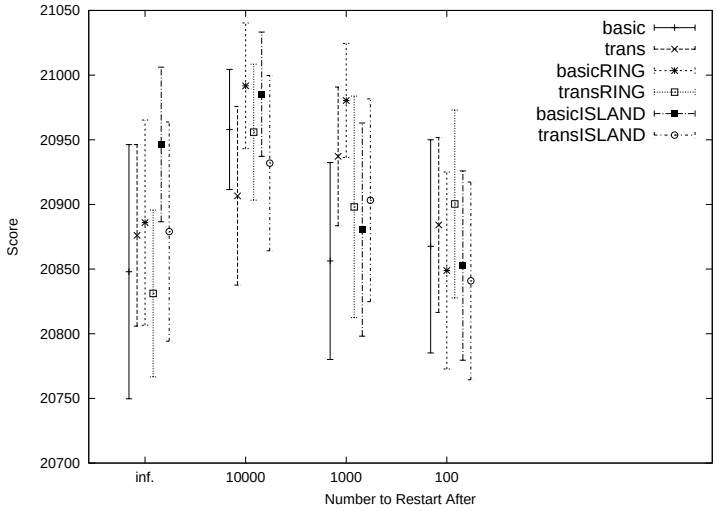



Figure B.467: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_7

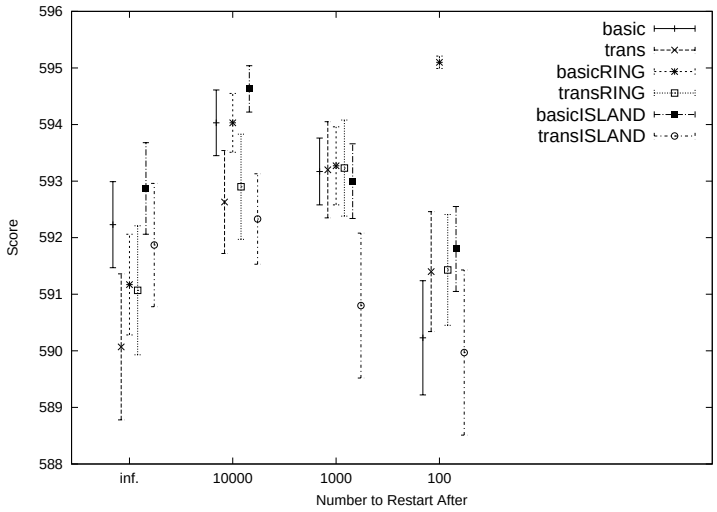



Figure B.468: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f25_305

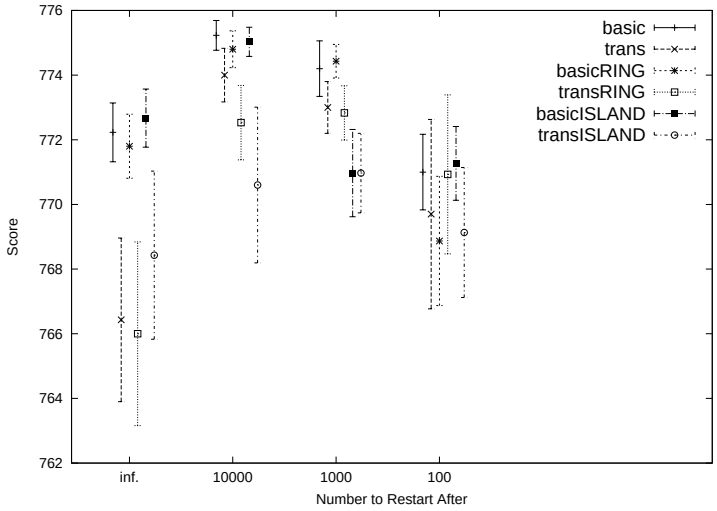



Figure B.469: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f25_400

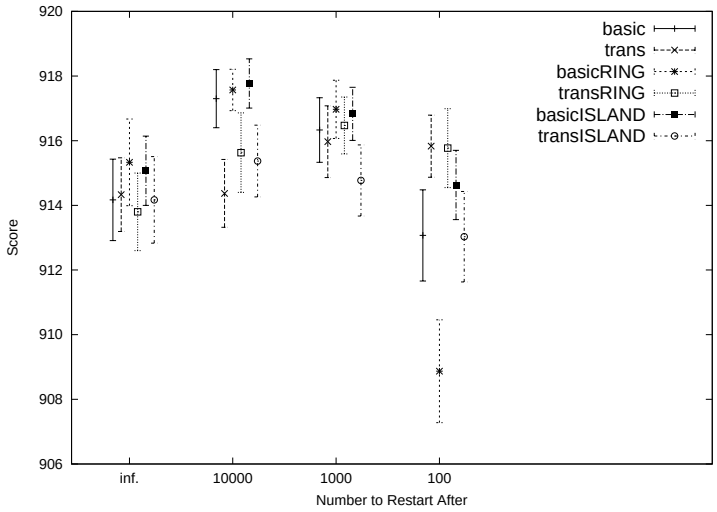



Figure B.470: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f25_500

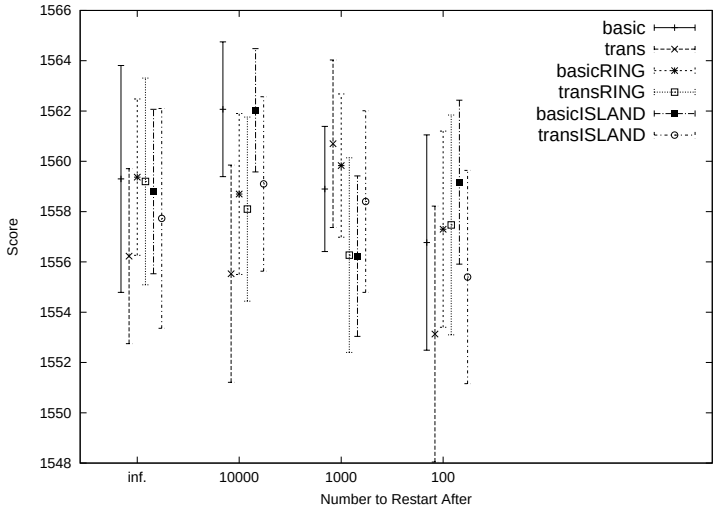



Figure B.471: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f50_315

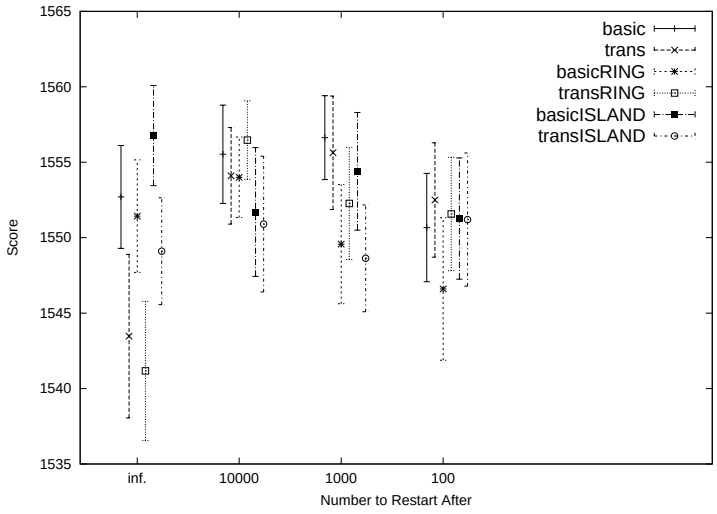



Figure B.472: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f50_412

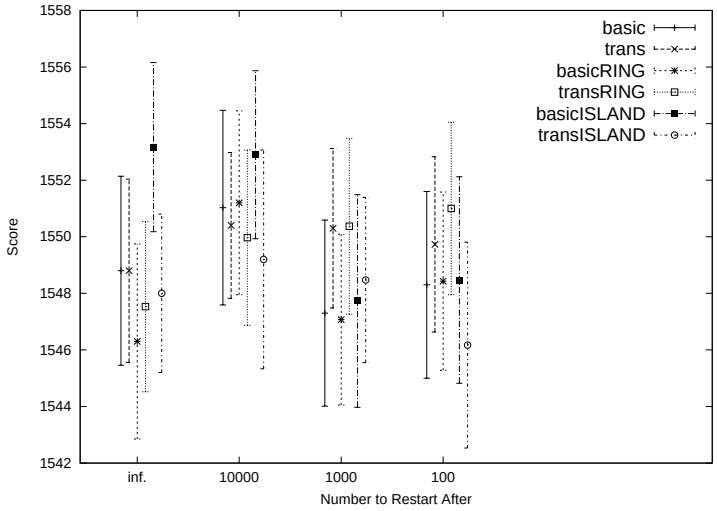



Figure B.473: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f50_498

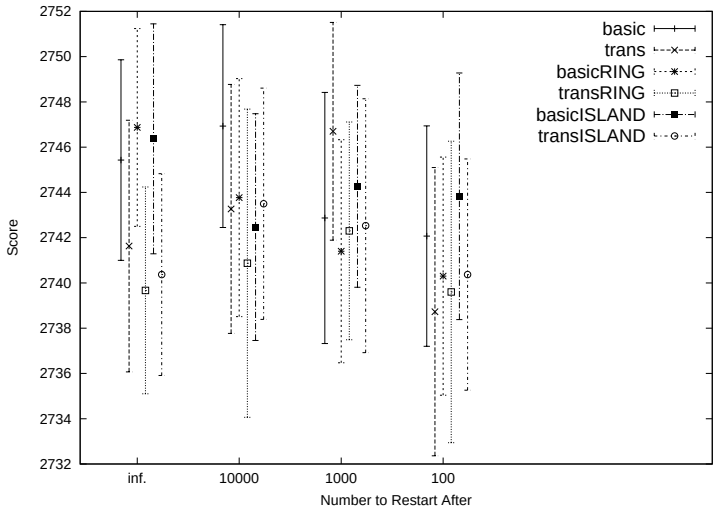



Figure B.474: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f100_307

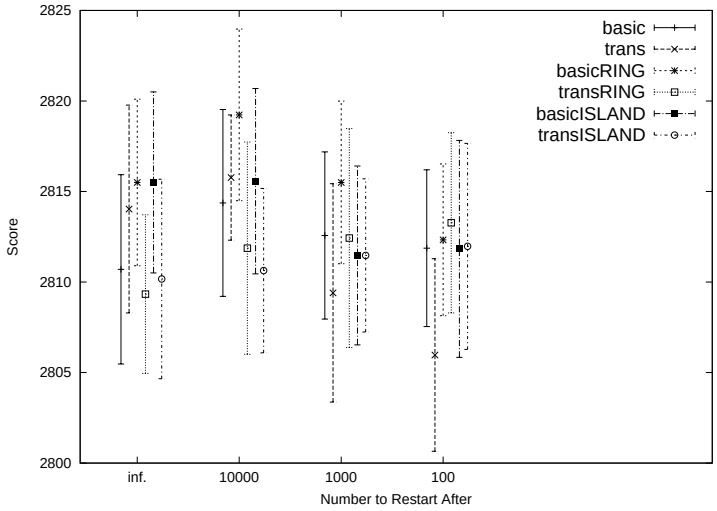



Figure B.475: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f100_415

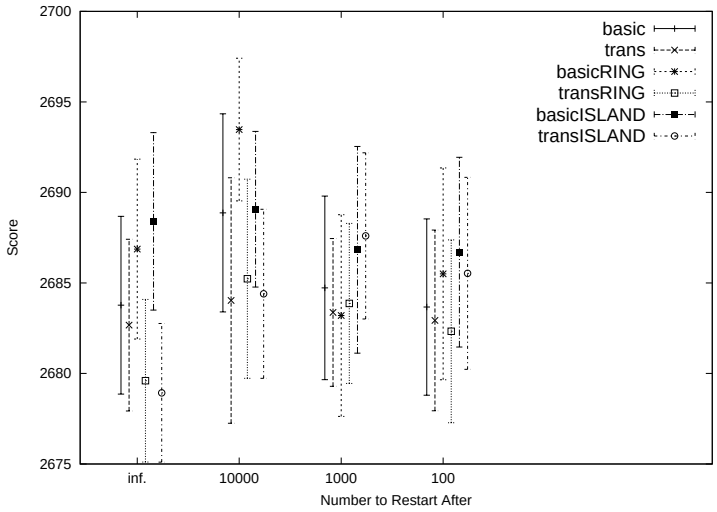



Figure B.476: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f100_512

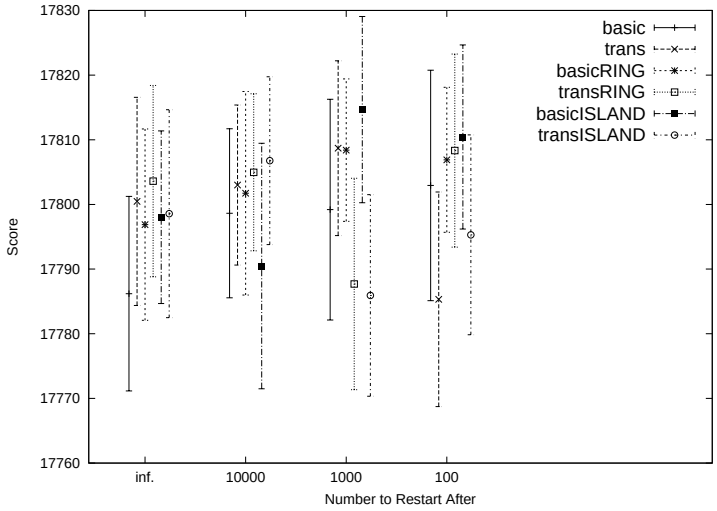



Figure B.477: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f508_354

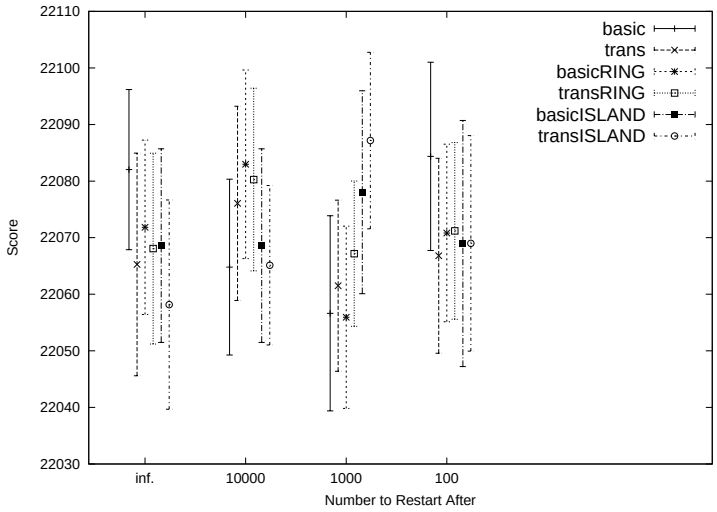



Figure B.478: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f635_350

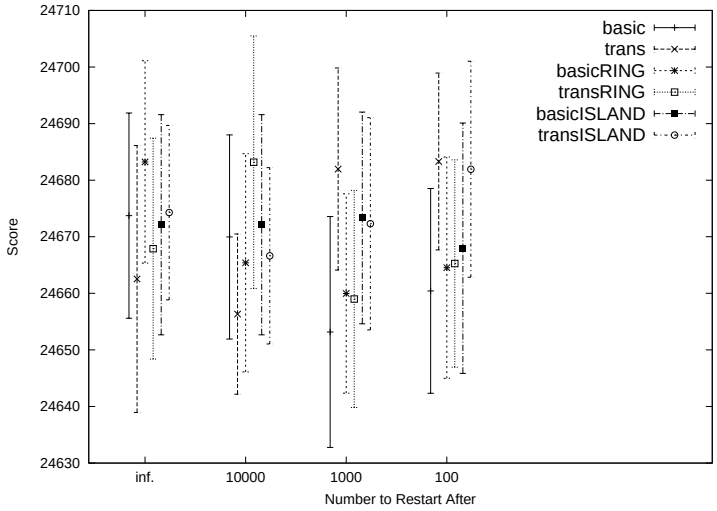



Figure B.479: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f737_355

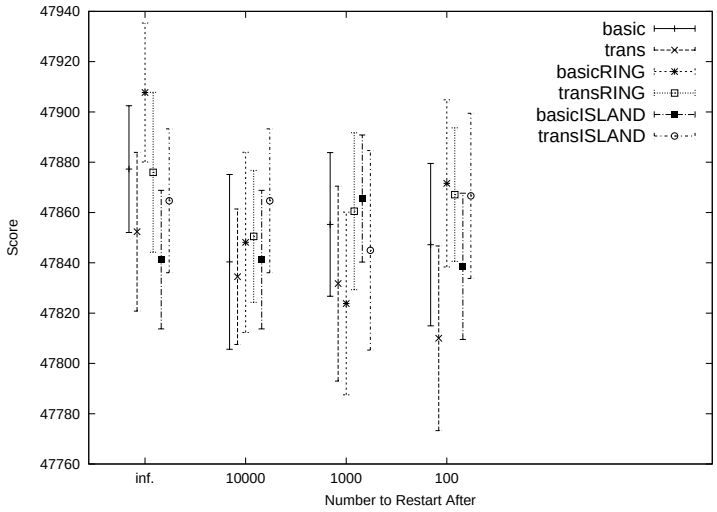



Figure B.480: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f1343_354

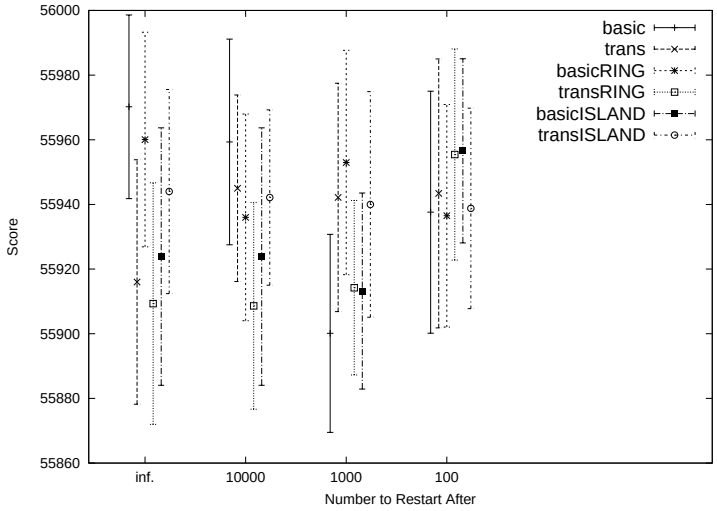



Figure B.481: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f1577_354

**Results With Post Optimization and Forced Recentre**

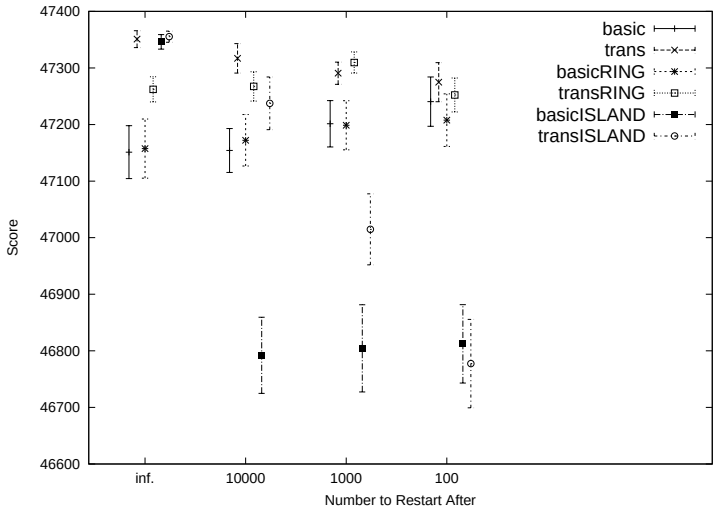



Figure B.482: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance acin1

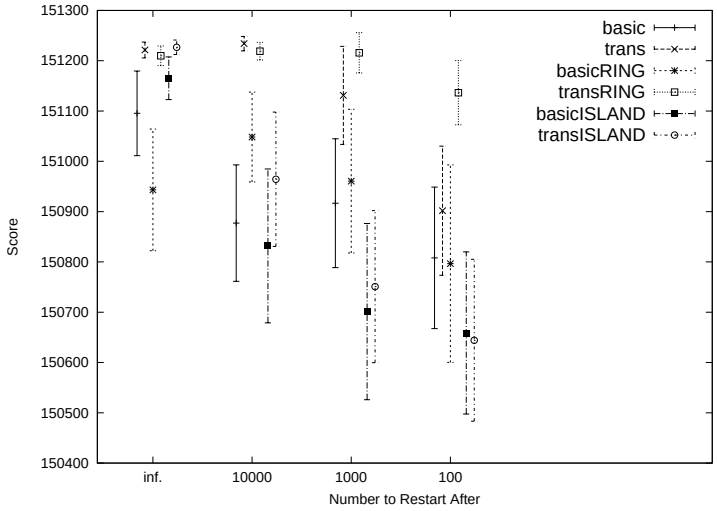



Figure B.483: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance acin2

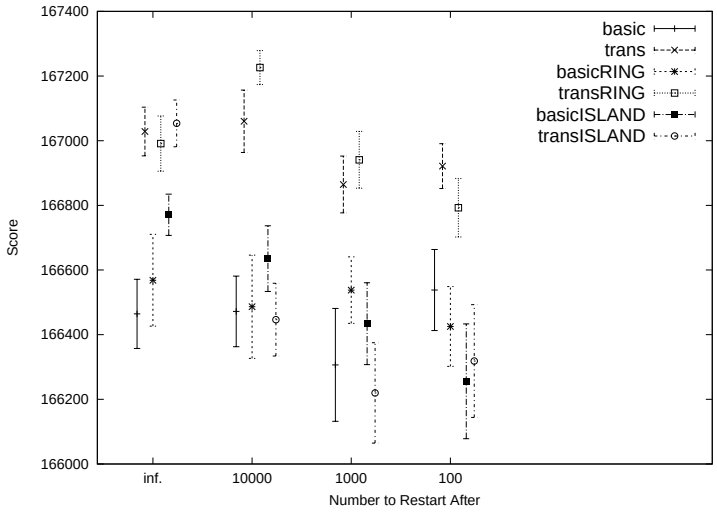



Figure B.484: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance acin3

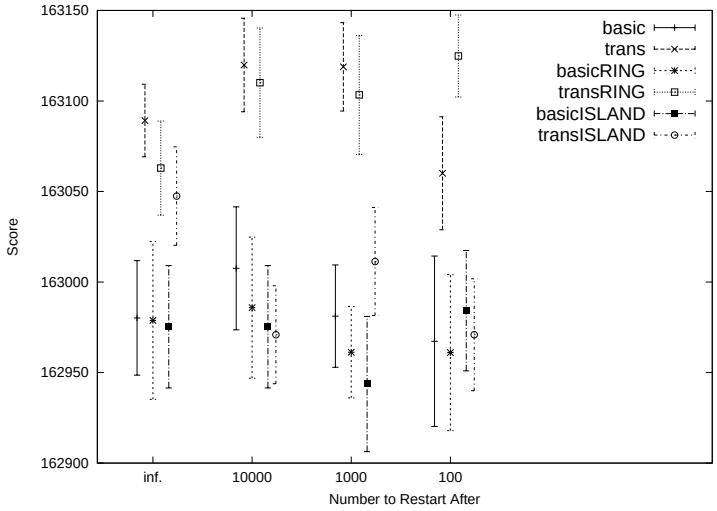



Figure B.485: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance acin5

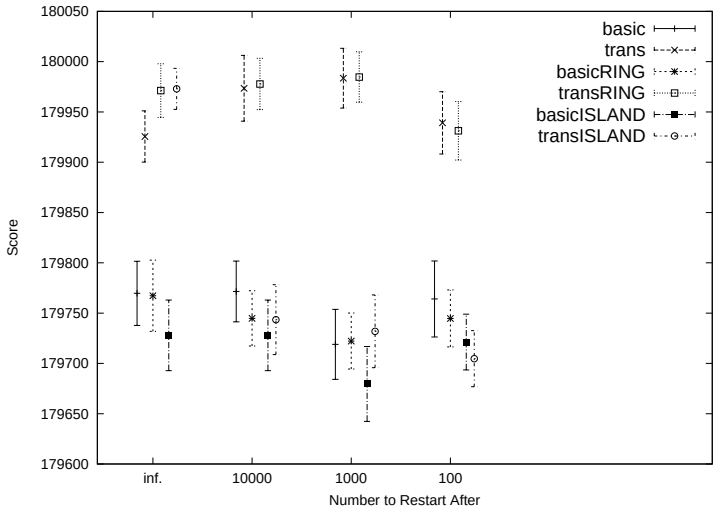



Figure B.486: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance acin7

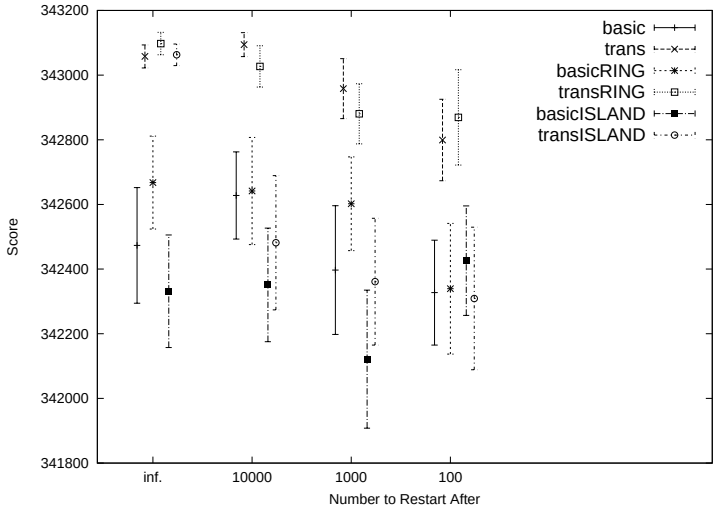



Figure B.487: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance acin9

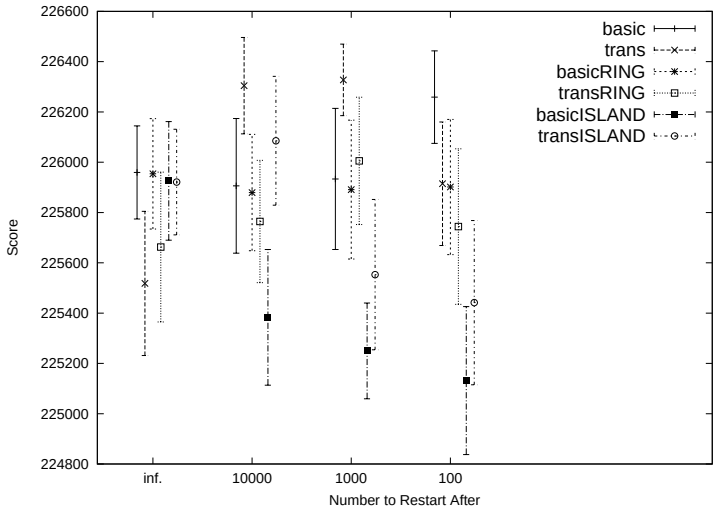



Figure B.488: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance bx842596_4

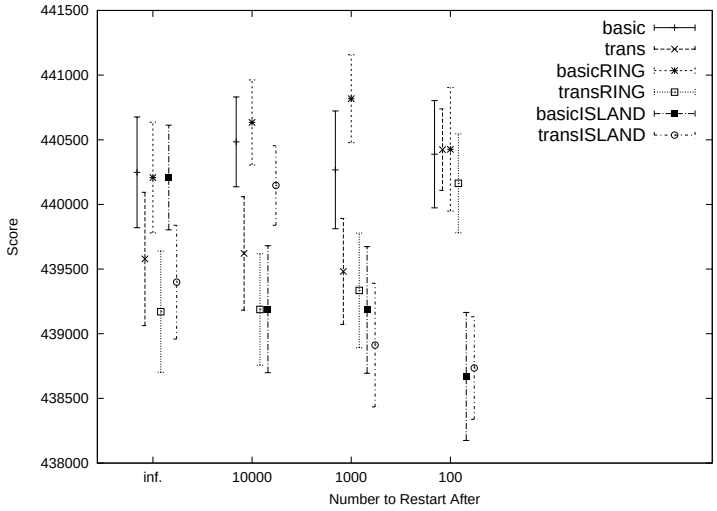



Figure B.489: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance bx842596_7

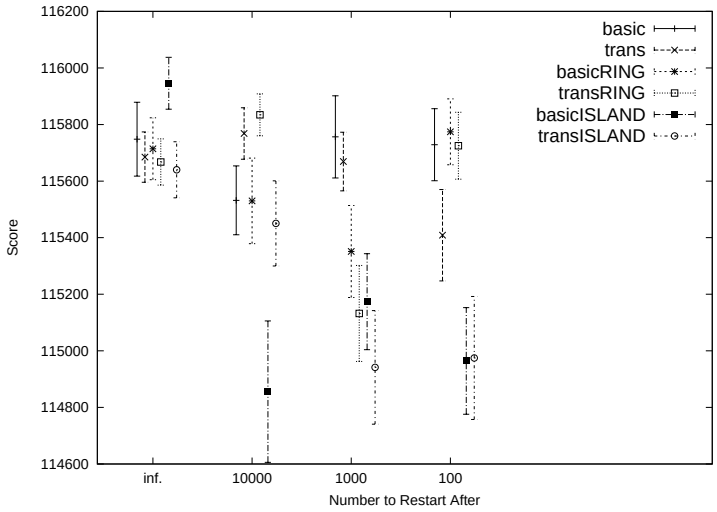



Figure B.490: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance j02459_7

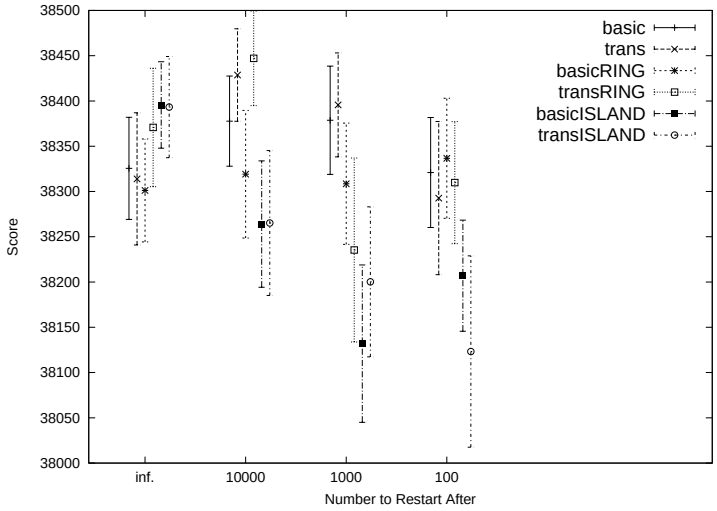



Figure B.491: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance m15421_5

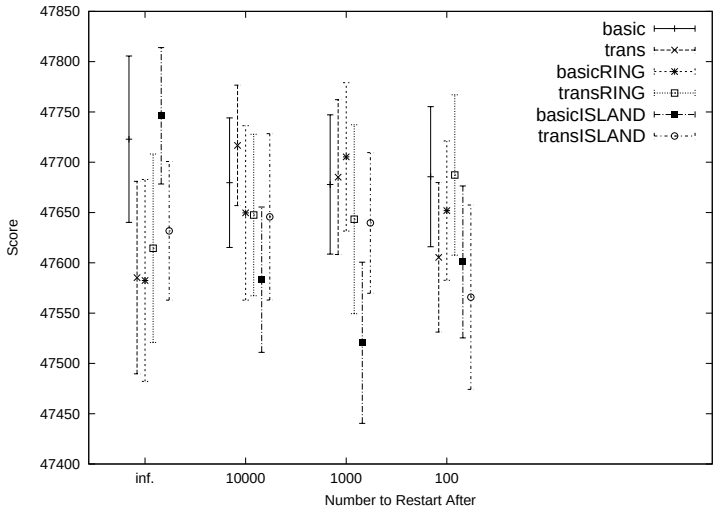



Figure B.492: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance m15421_6

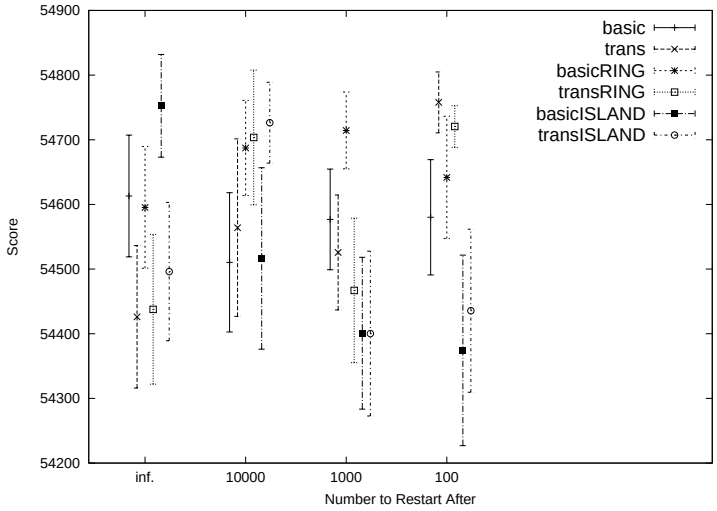



Figure B.493: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance m15421_7

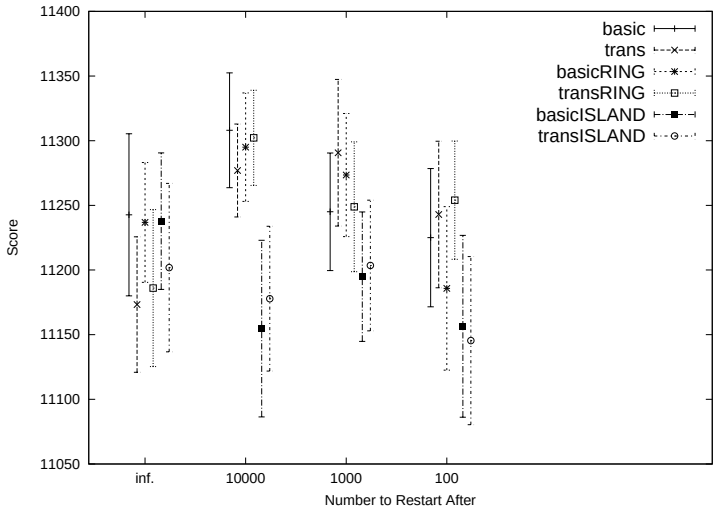



Figure B.494: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance x60189_4

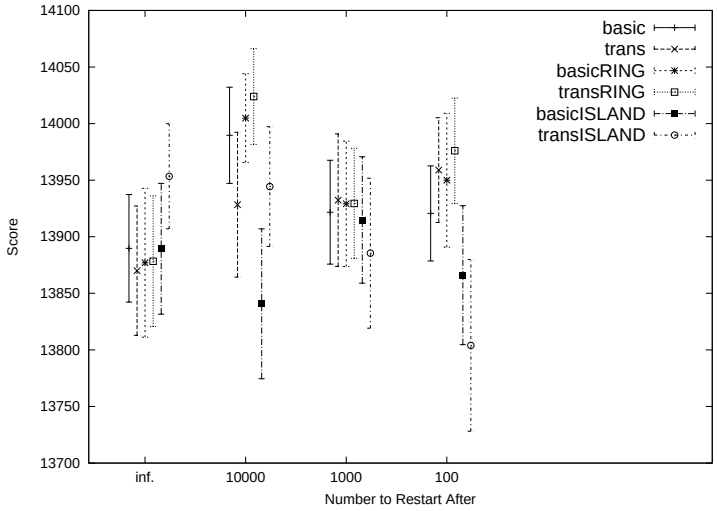



Figure B.495: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance x60189_5

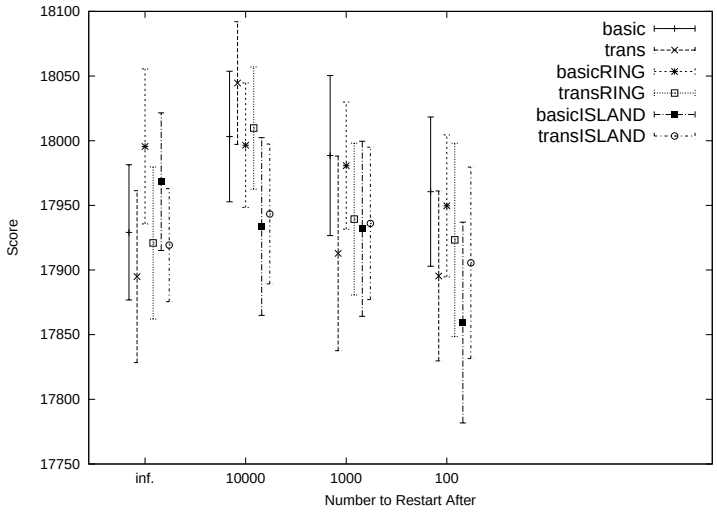



Figure B.496: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance x60189_6

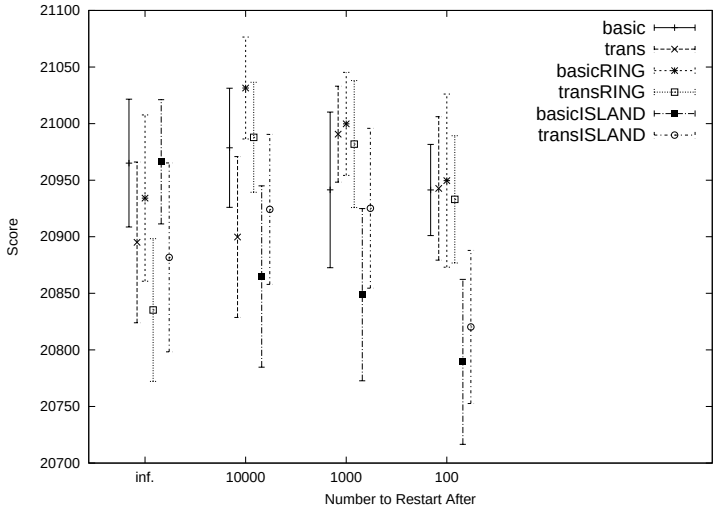



Figure B.497: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance x60189_7

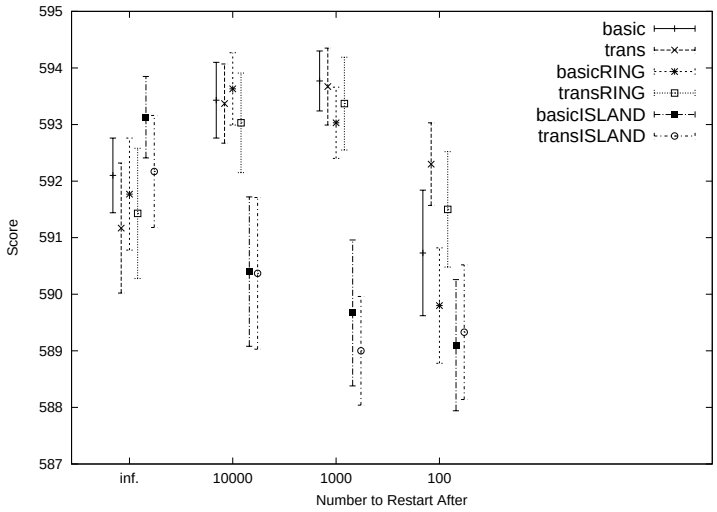



Figure B.498: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f25_305

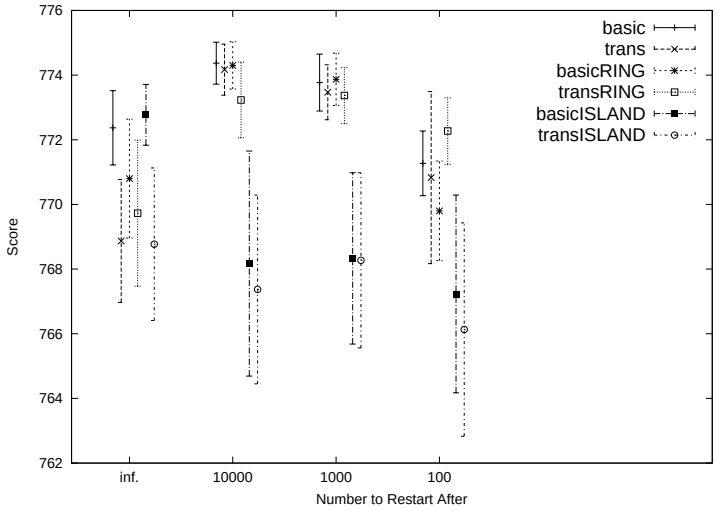



Figure B.499: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f25_400

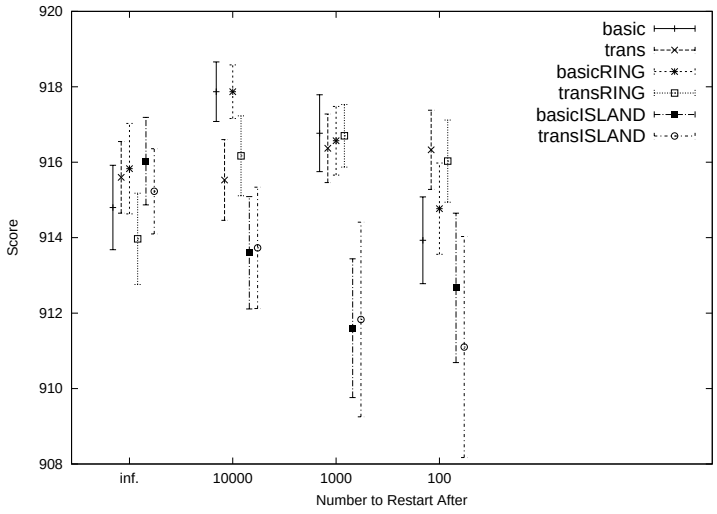



Figure B.500: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f25_500

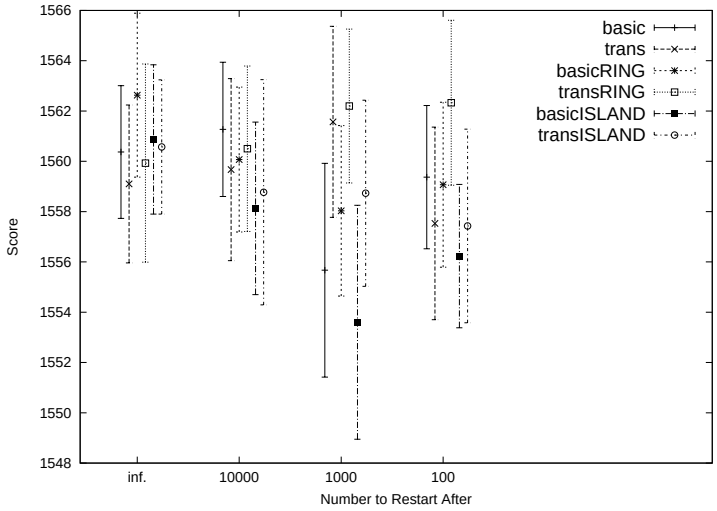



Figure B.501: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f50_315

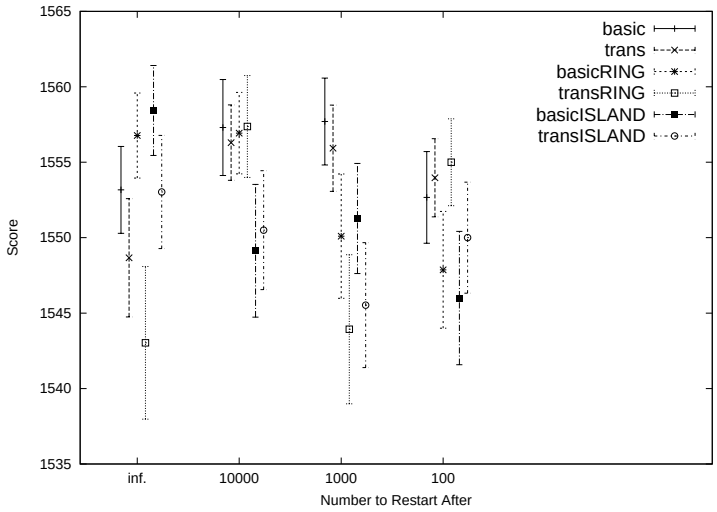



Figure B.502: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f50_412

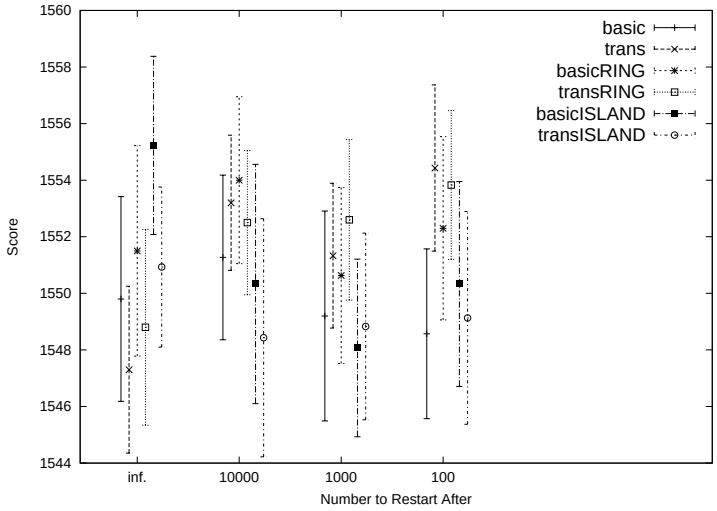



Figure B.503: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f50_498

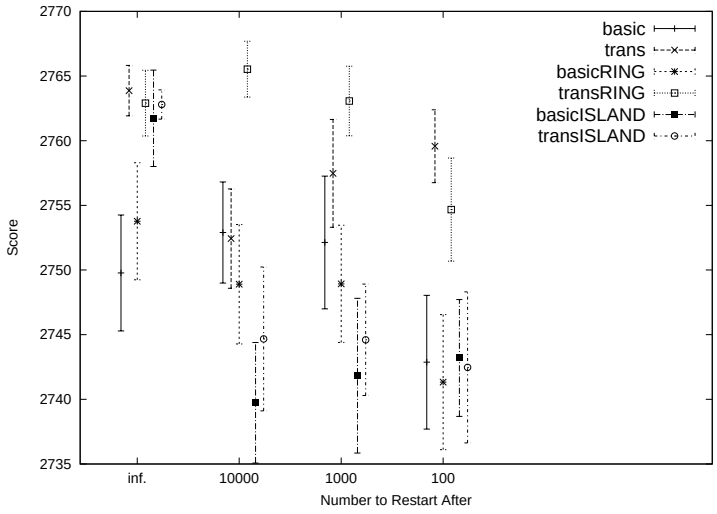



Figure B.504: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f100_307

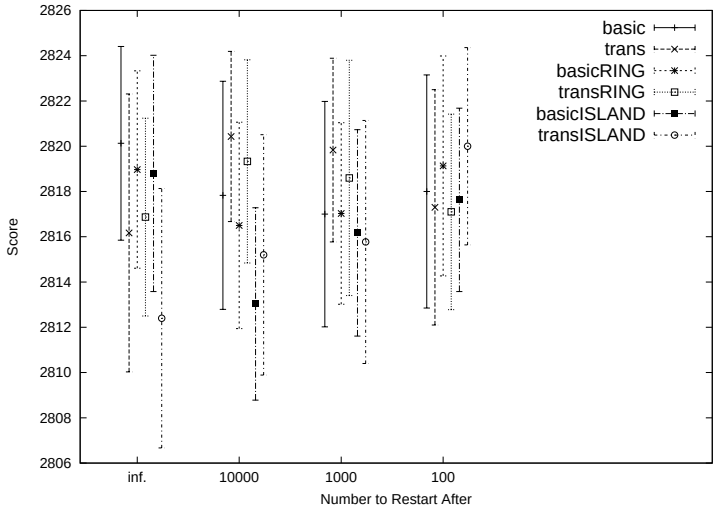



Figure B.505: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f100_415

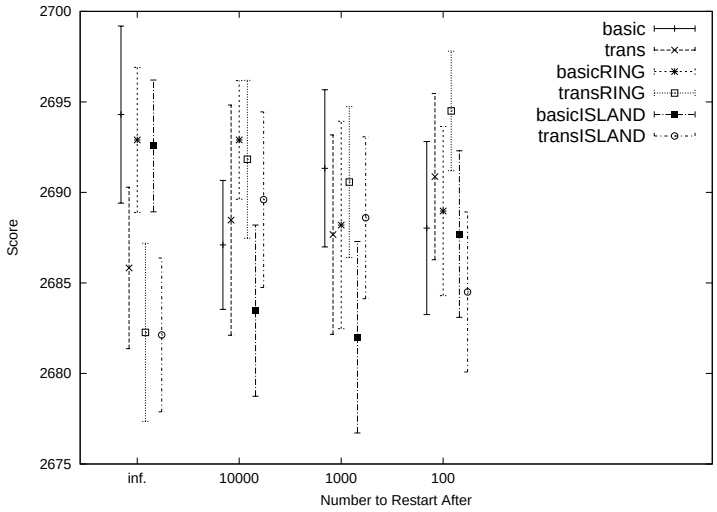



Figure B.506: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f100_512

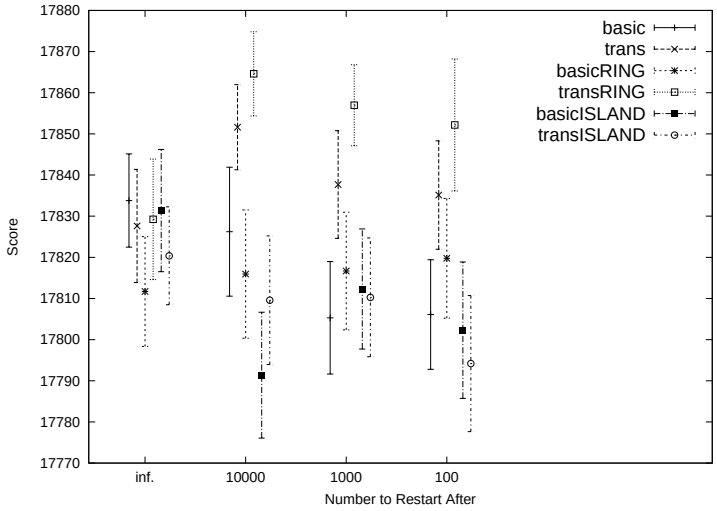



Figure B.507: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f508_354

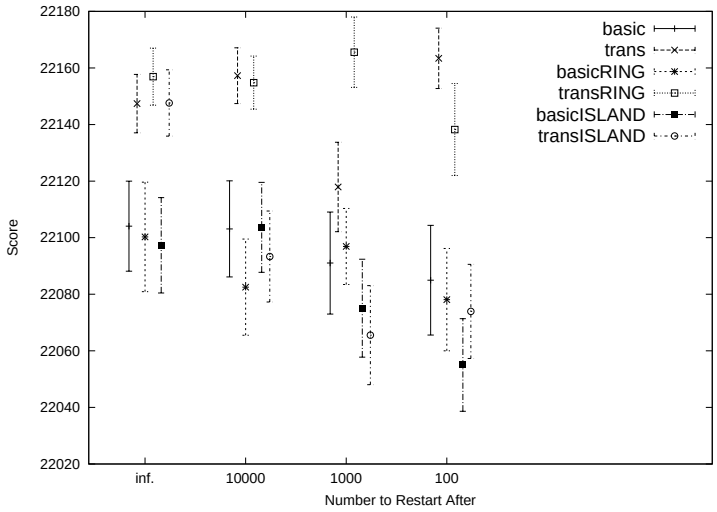



Figure B.508: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f635_350

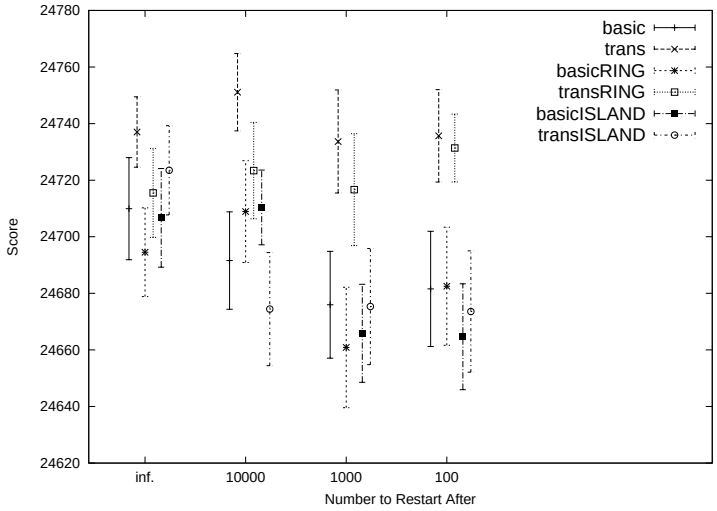



Figure B.509: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f737_355

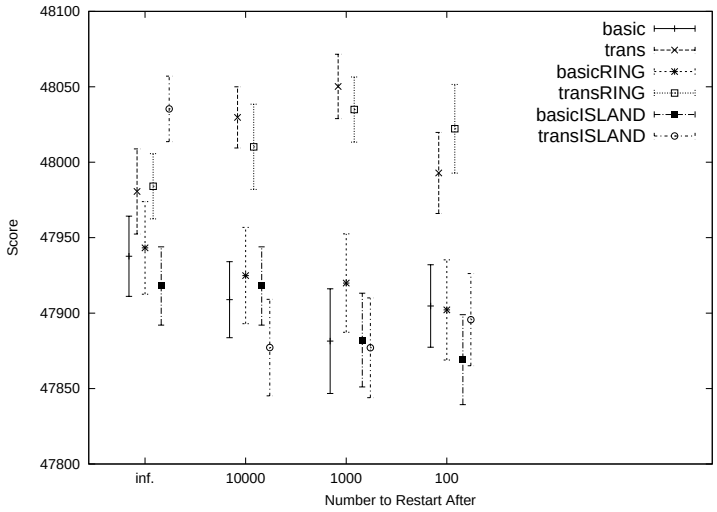



Figure B.510: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f1343_354

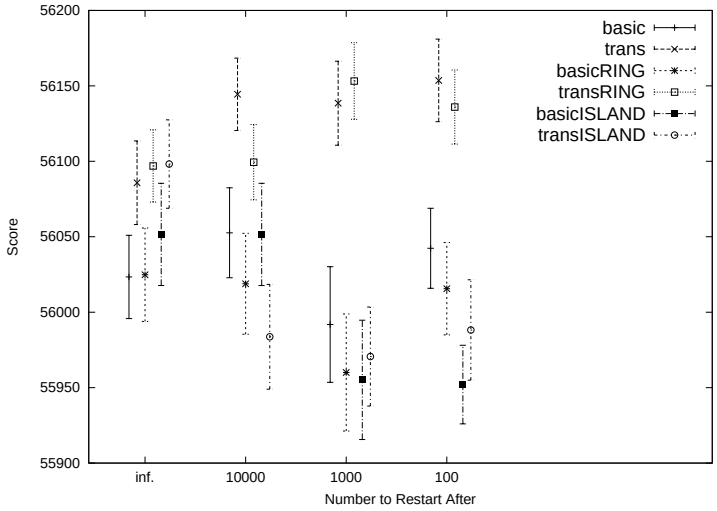



Figure B.511: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Restart on Problem Instance f1577_354

**Comparison of No Forced and Forced Recentre Experimental Results**

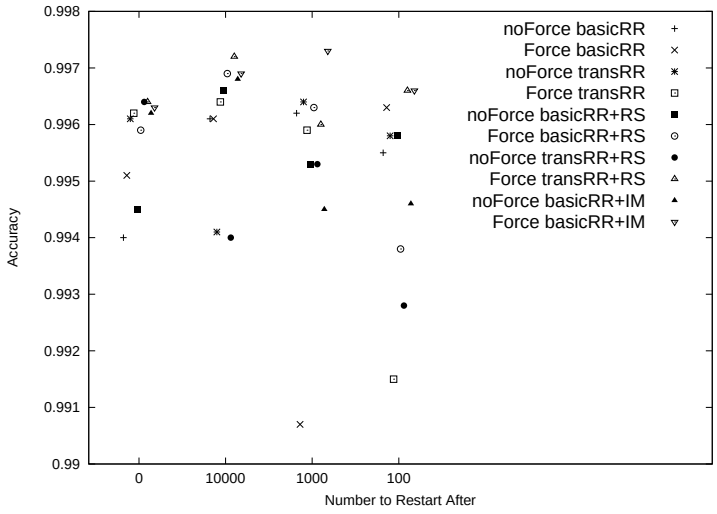



Figure B.512: Comparison of Second and Third Experimental Results on Problem Instance acin1

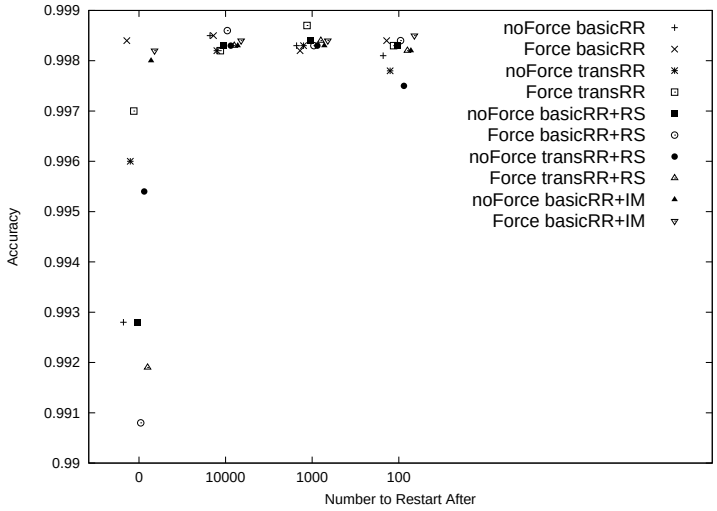



Figure B.513: Comparison of Second and Third Experimental Results on Problem Instance acin2

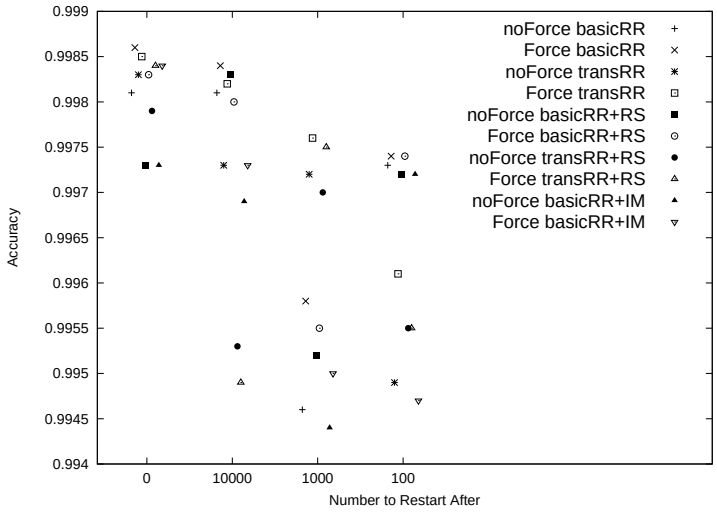



Figure B.514: Comparison of Second and Third Experimental Results on Problem Instance acin3

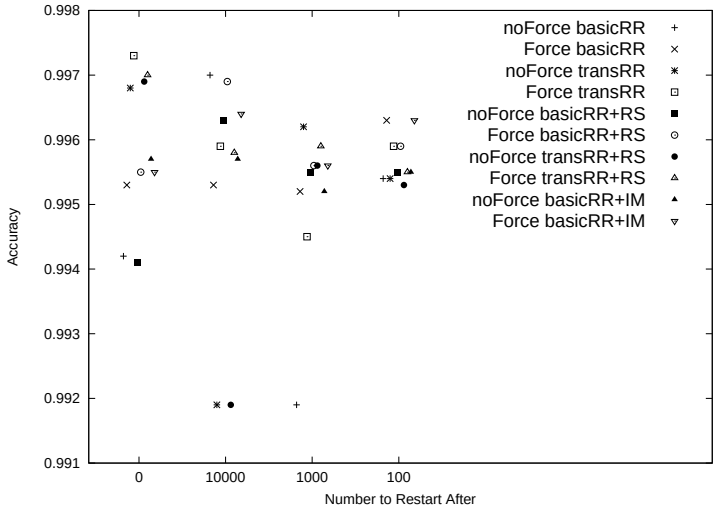



Figure B.515: Comparison of Second and Third Experimental Results on Problem Instance acin5

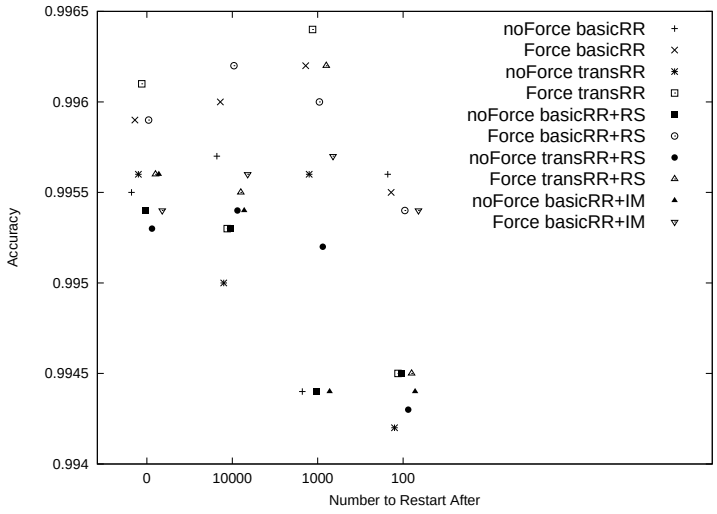



Figure B.516: Comparison of Second and Third Experimental Results on Problem Instance acin7

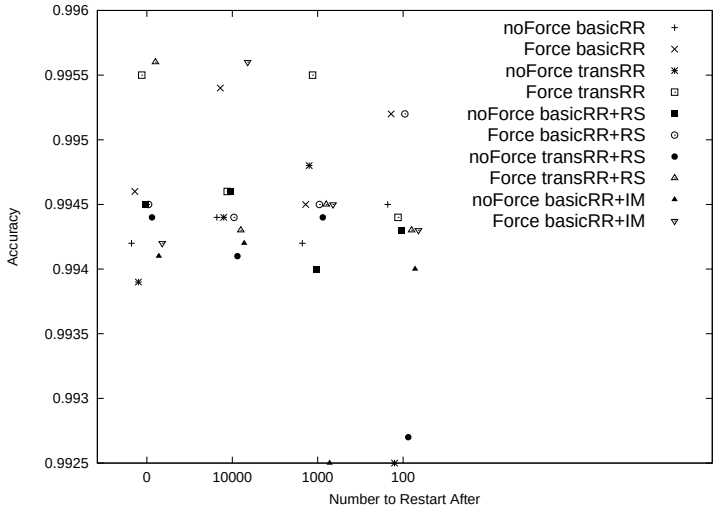



Figure B.517: Comparison of Second and Third Experimental Results on Problem Instance acin9

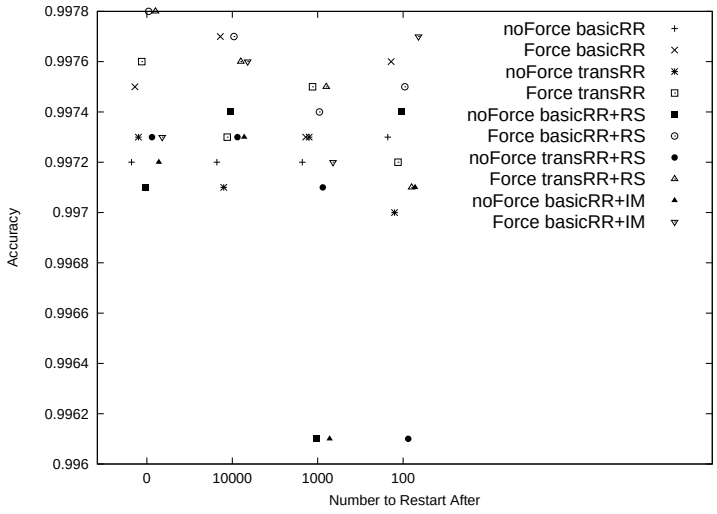



Figure B.518: Comparison of Second and Third Experimental Results on Problem Instance bx842596_4

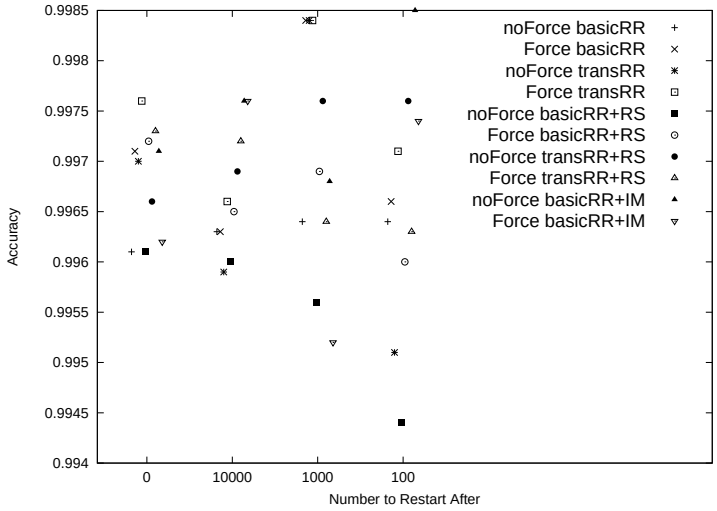



Figure B.519: Comparison of Second and Third Experimental Results on Problem Instance bx842596_7

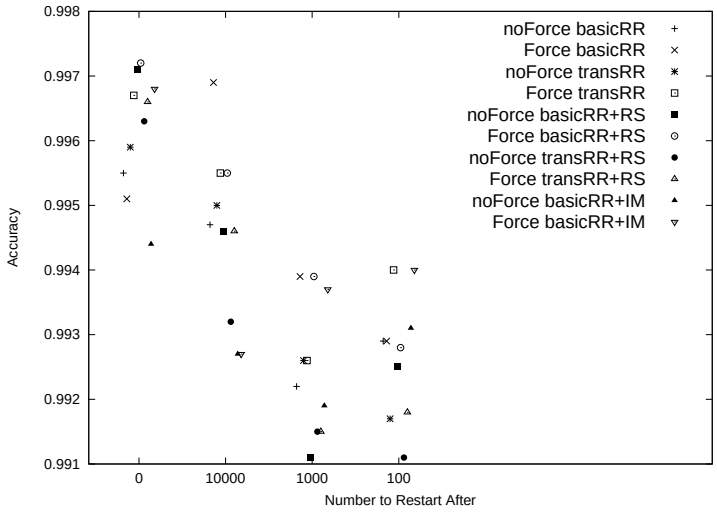



Figure B.520: Comparison of Second and Third Experimental Results on Problem Instance j02459_7

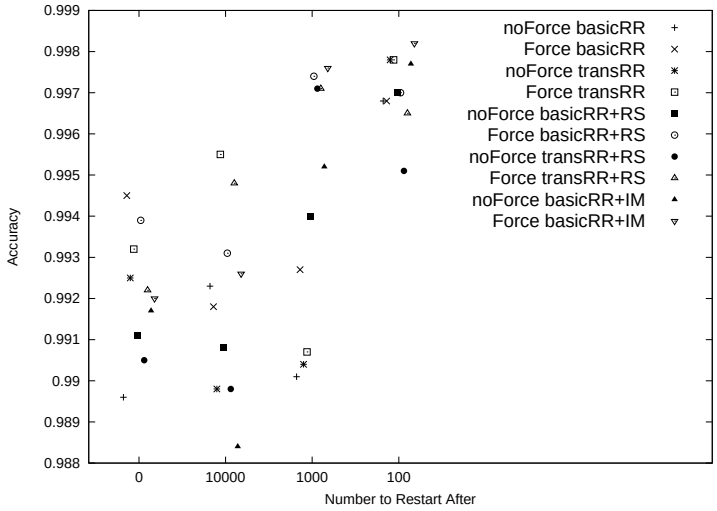



Figure B.521: Comparison of Second and Third Experimental Results on Problem Instance m15421_5

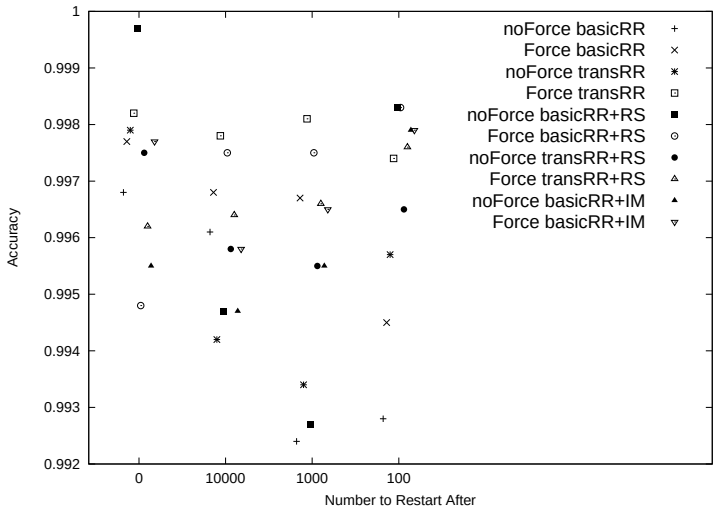



Figure B.522: Comparison of Second and Third Experimental Results on Problem Instance m15421_6

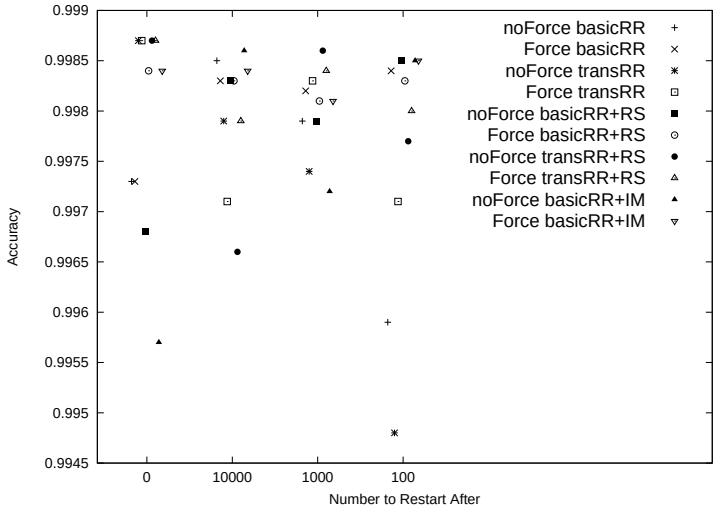



Figure B.523: Comparison of Second and Third Experimental Results on Problem Instance m15421_7

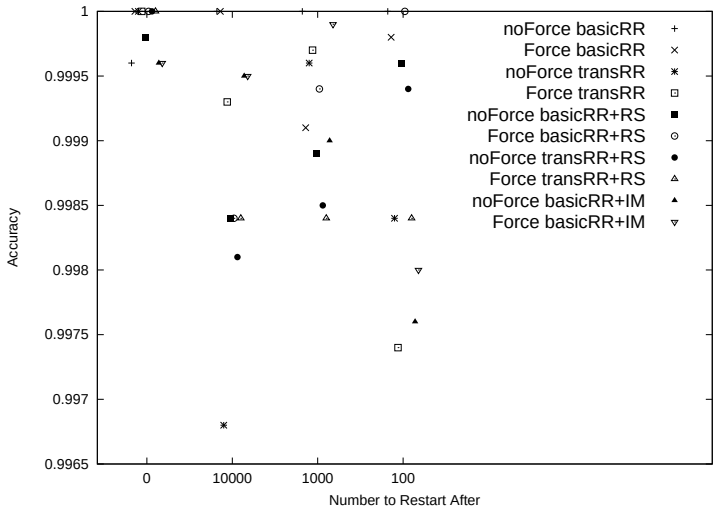



Figure B.524: Comparison of Second and Third Experimental Results on Problem Instance x60189_4

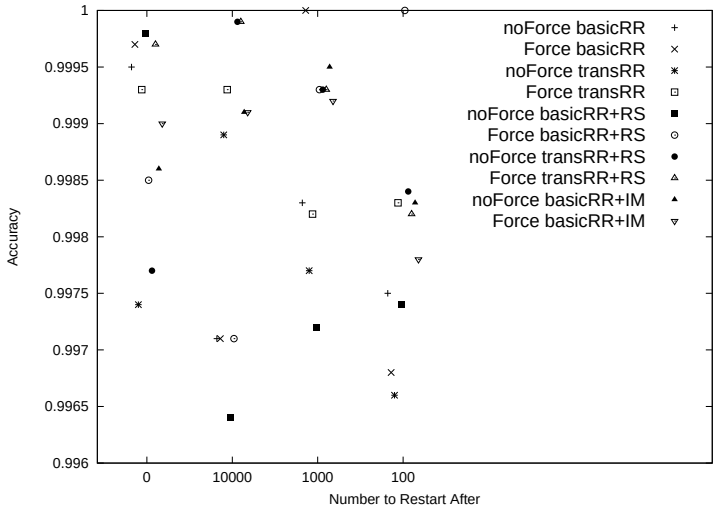



Figure B.525: Comparison of Second and Third Experimental Results on Problem Instance x60189_5

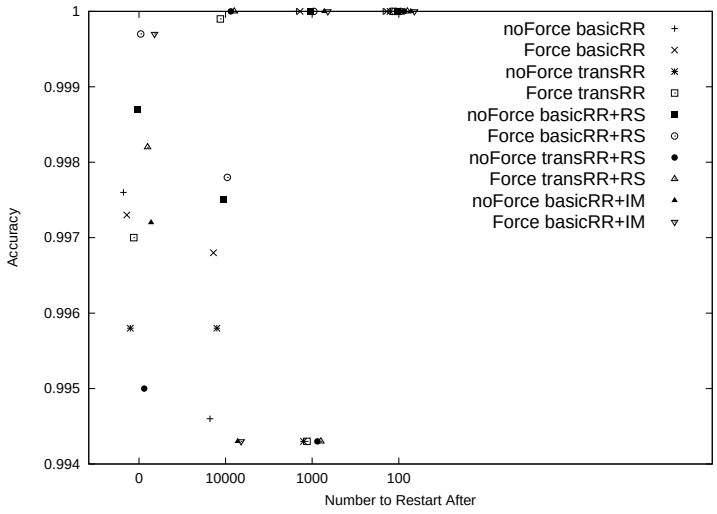



Figure B.526: Comparison of Second and Third Experimental Results on Problem Instance x60189_6

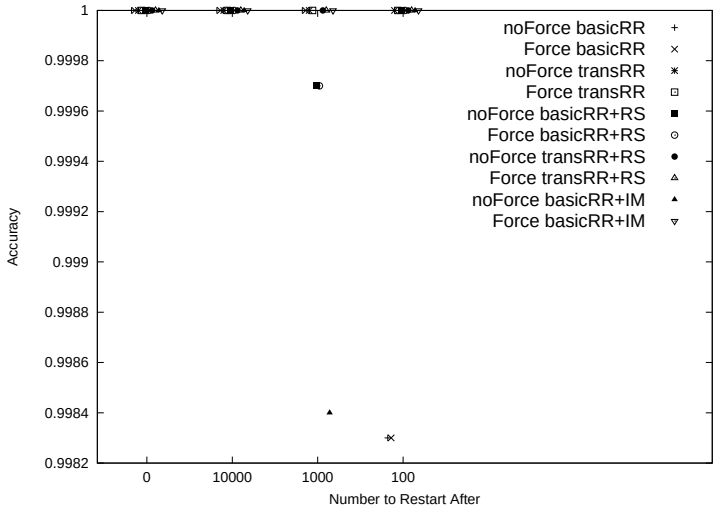



Figure B.527: Comparison of Second and Third Experimental Results on Problem Instance x60189_7

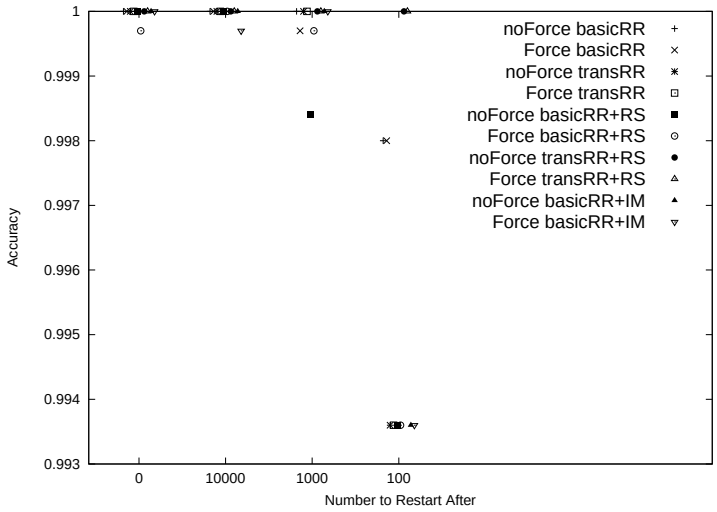



Figure B.528: Comparison of Second and Third Experimental Results on Problem Instance f25_305

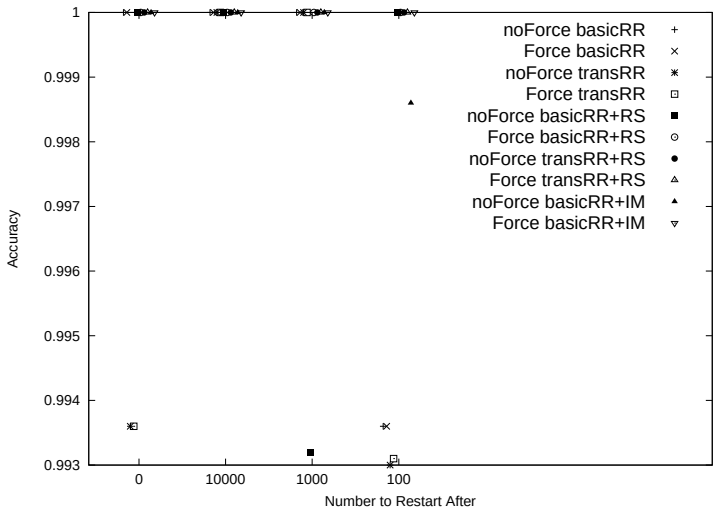



Figure B.529: Comparison of Second and Third Experimental Results on Problem Instance f25_400

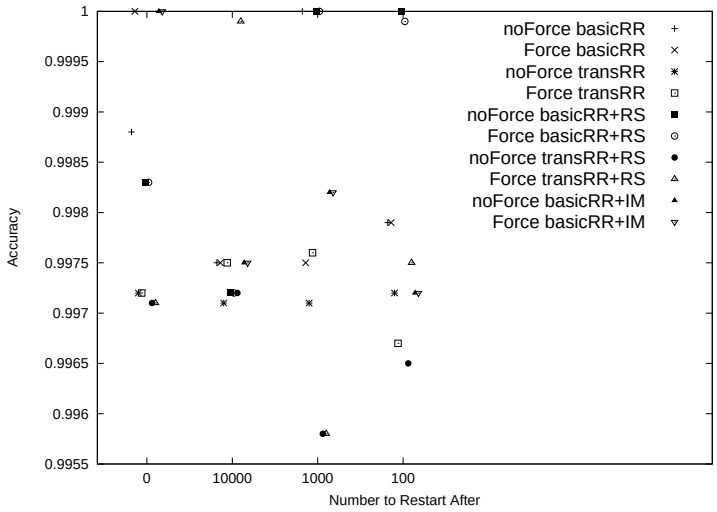



Figure B.530: Comparison of Second and Third Experimental Results on Problem Instance f25_500

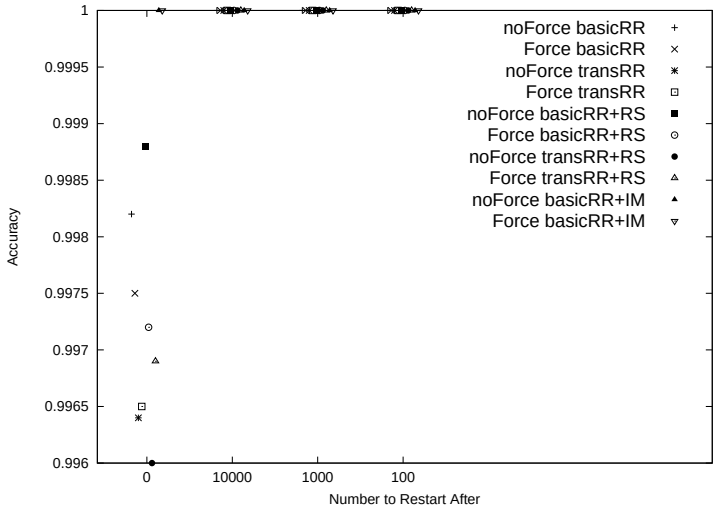



Figure B.531: Comparison of Second and Third Experimental Results on Problem Instance f50_315

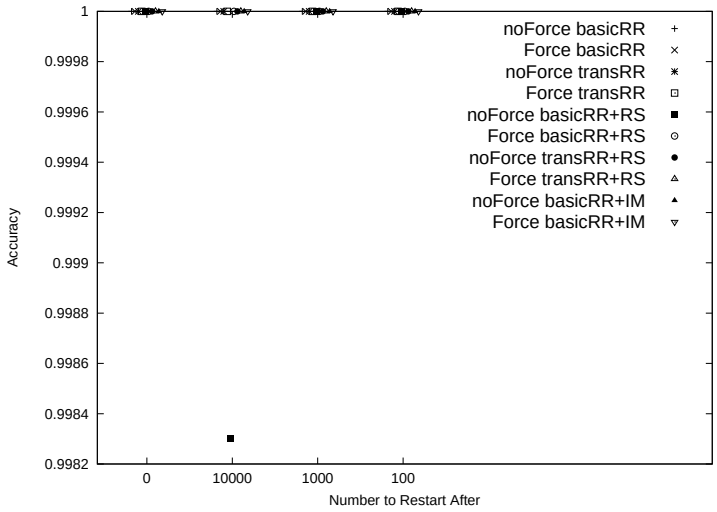



Figure B.532: Comparison of Second and Third Experimental Results on Problem Instance f50_412

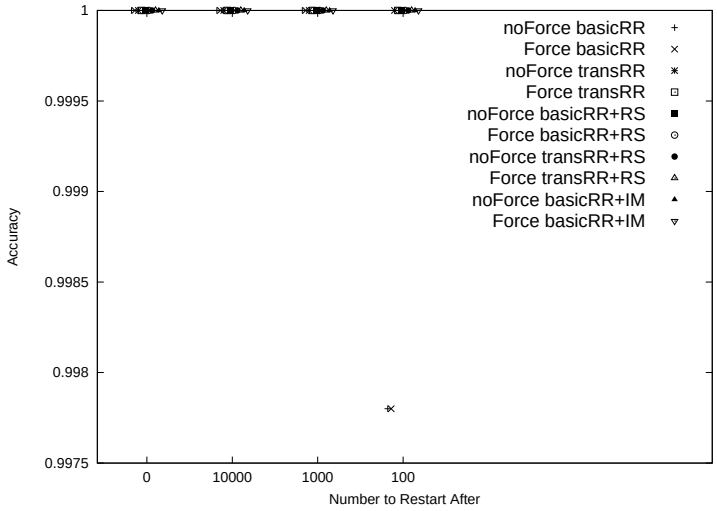



Figure B.533: Comparison of Second and Third Experimental Results on Problem Instance f50_498

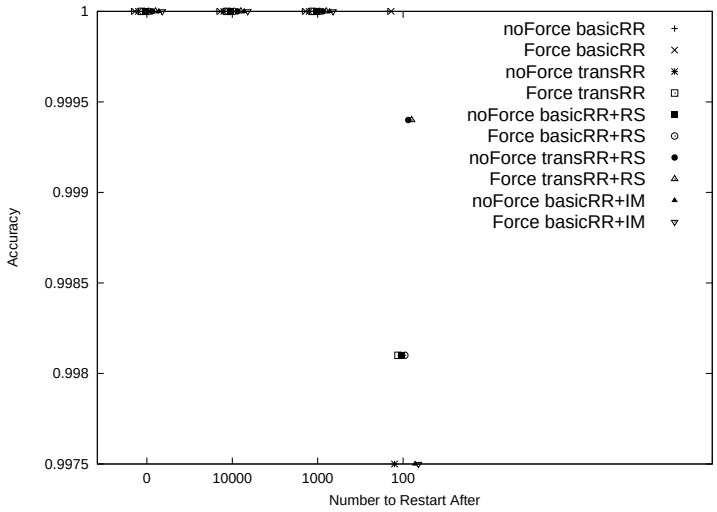



Figure B.534: Comparison of Second and Third Experimental Results on Problem Instance f100_307

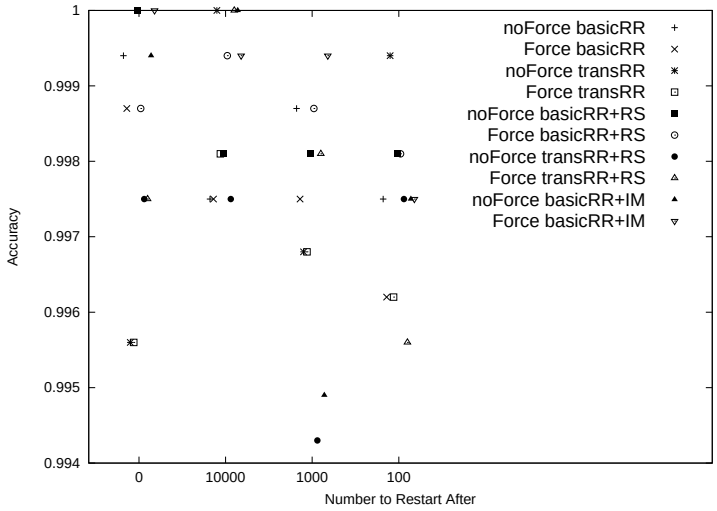



Figure B.535: Comparison of Second and Third Experimental Results on Problem Instance f100_415

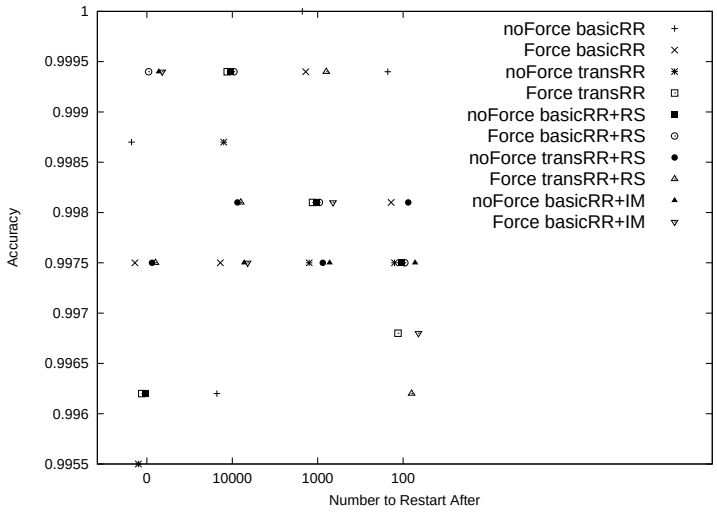



Figure B.536: Comparison of Second and Third Experimental Results on Problem Instance f100_512

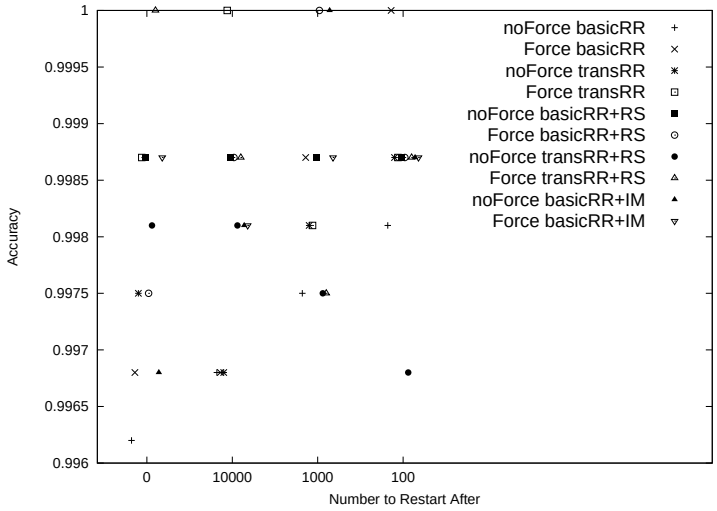



Figure B.537: Comparison of Second and Third Experimental Results on Problem Instance f508_354

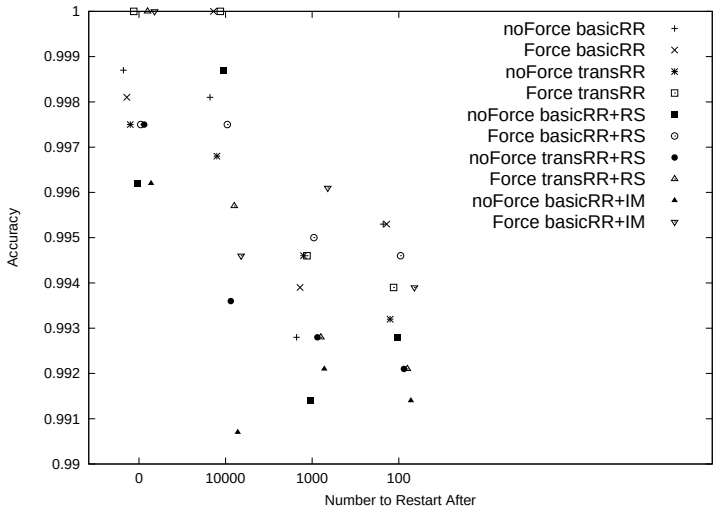



Figure B.538: Comparison of Second and Third Experimental Results on Problem Instance f635_350

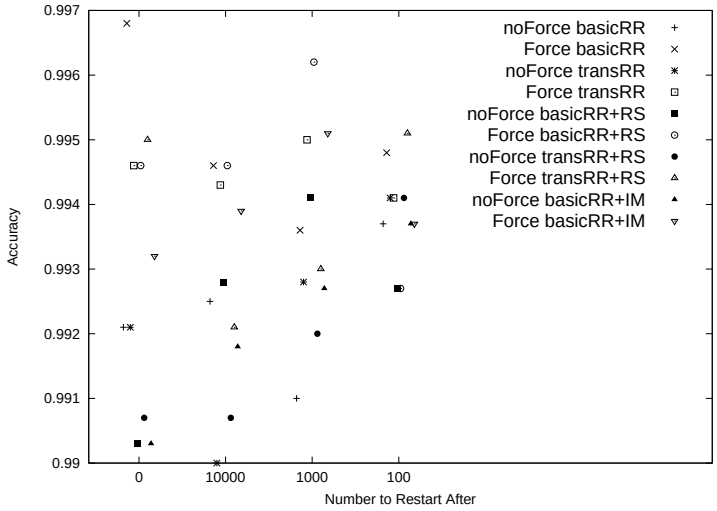



Figure B.539: Comparison of Second and Third Experimental Results on Problem Instance f737_355

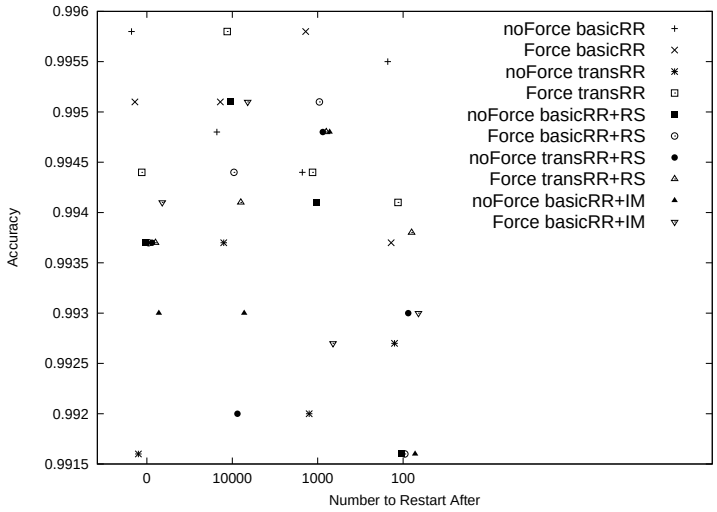



Figure B.540: Comparison of Second and Third Experimental Results on Problem Instance f1343_354

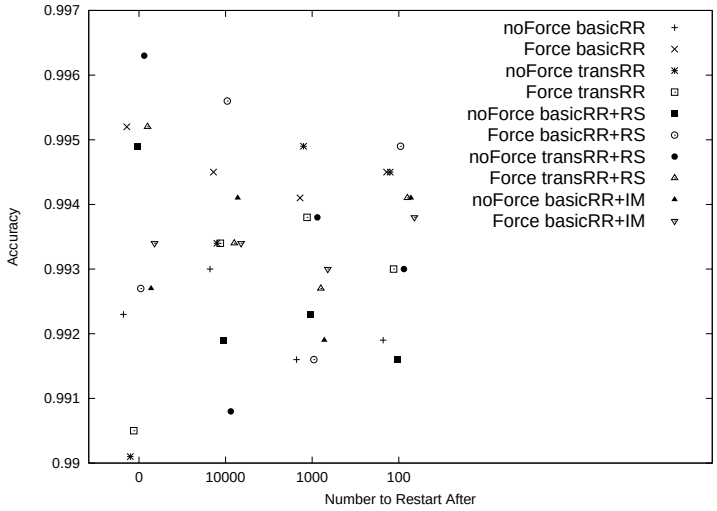



Figure B.541: Comparison of Second and Third Experimental Results on Problem Instance f1577_354

**Comparison of Second and Third Set of Experimental Results With Forced Restarts**

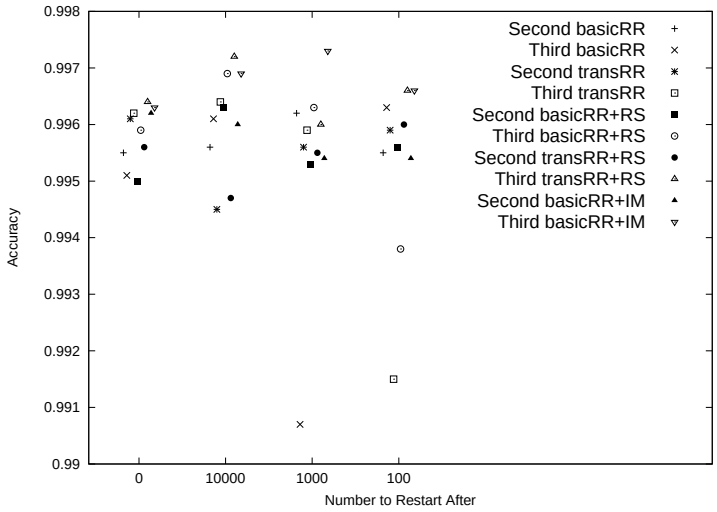



Figure B.542: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin1

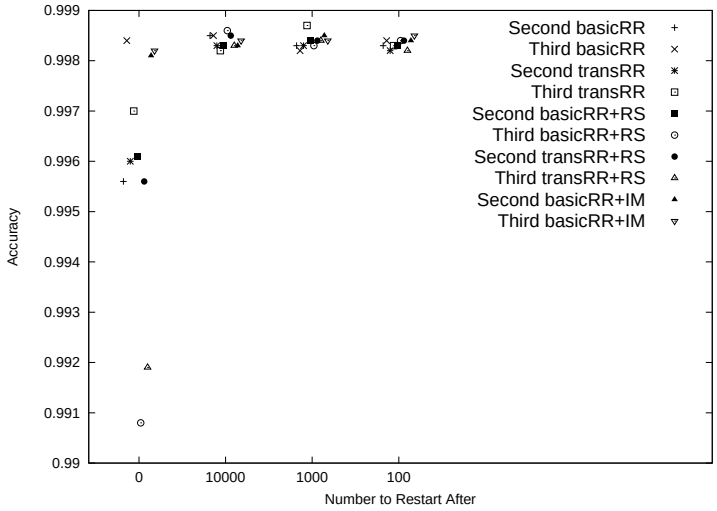



Figure B.543: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin2

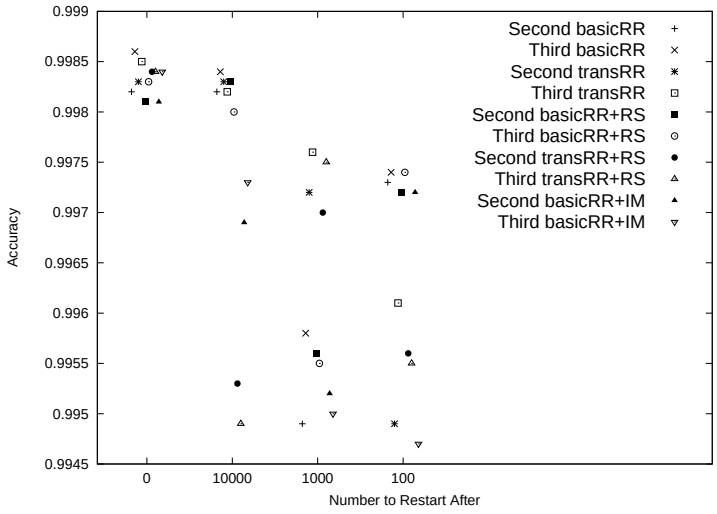



Figure B.544: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin3

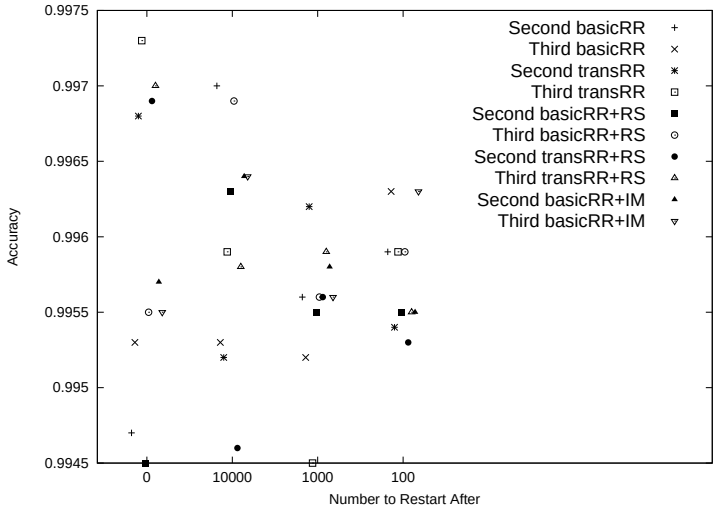



Figure B.545: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin5

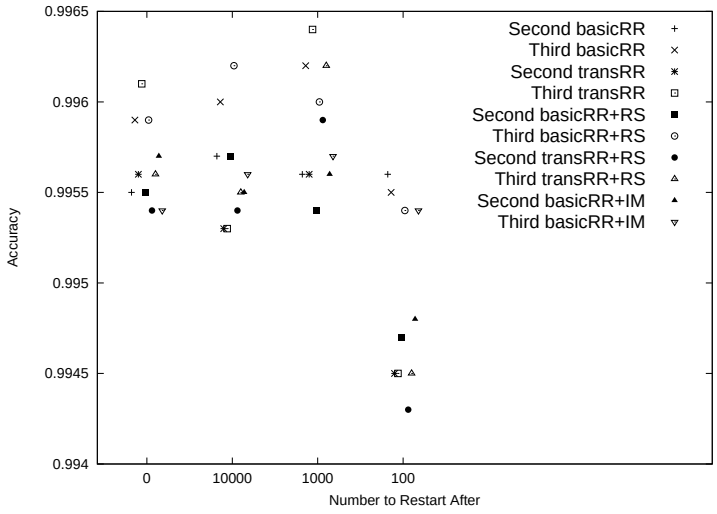



Figure B.546: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin7

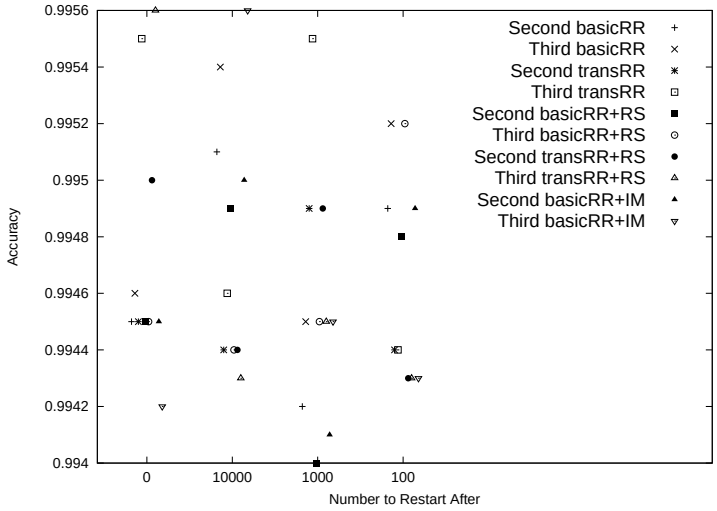



Figure B.547: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin9

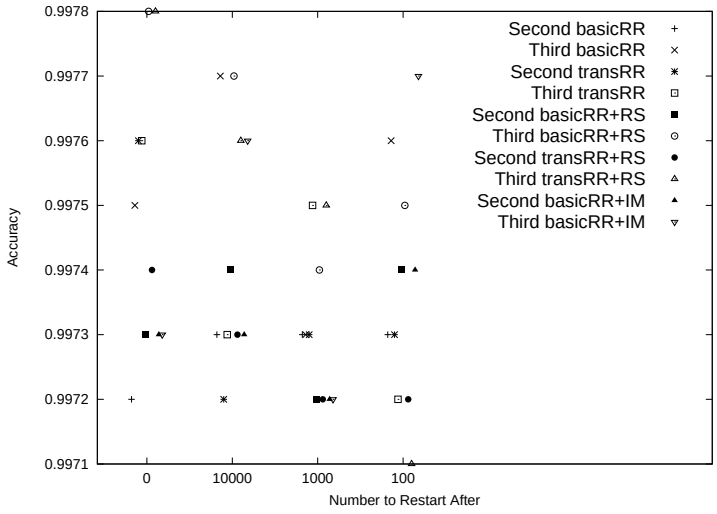



Figure B.548: Comparison of No Forced Recentre and Forced Recentre on Problem Instance bx842596_4

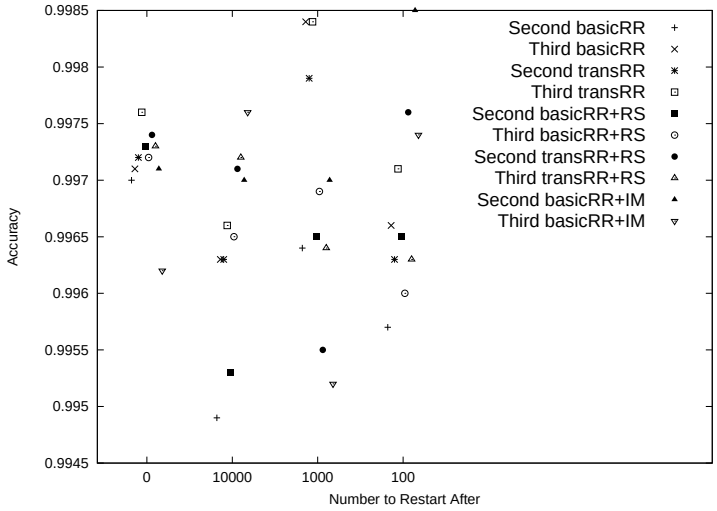



Figure B.549: Comparison of No Forced Recentre and Forced Recentre on Problem Instance bx842596_7

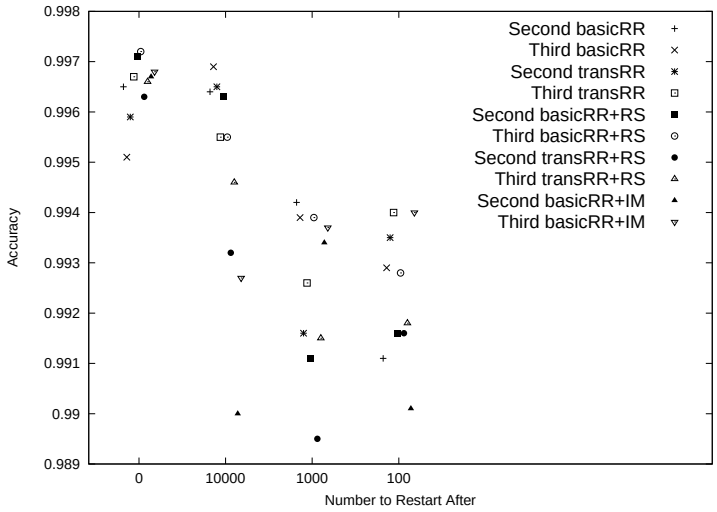



Figure B.550: Comparison of No Forced Recentre and Forced Recentre on Problem Instance j02459_7

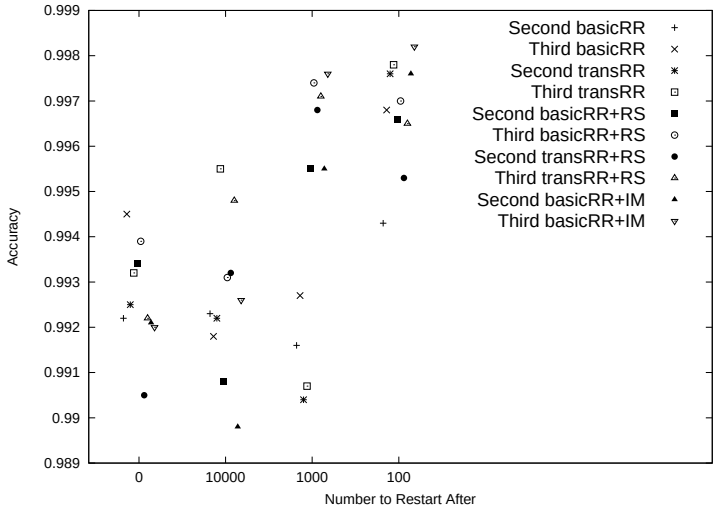



Figure B.551: Comparison of No Forced Recentre and Forced Recentre on Problem Instance m15421_5

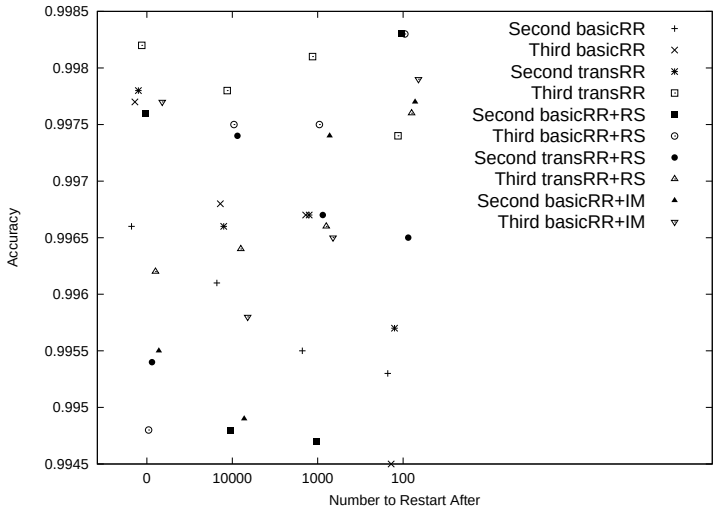



Figure B.552: Comparison of No Forced Recentre and Forced Recentre on Problem Instance m15421_6

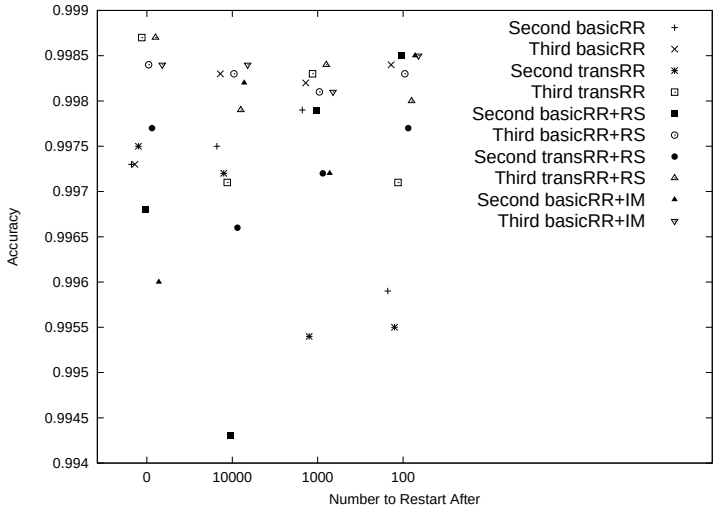



Figure B.553: Comparison of No Forced Recentre and Forced Recentre on Problem Instance m15421_7

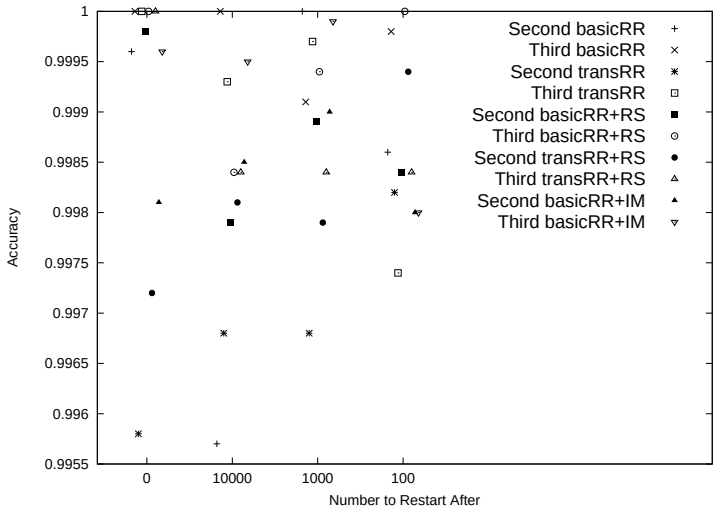



Figure B.554: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_4

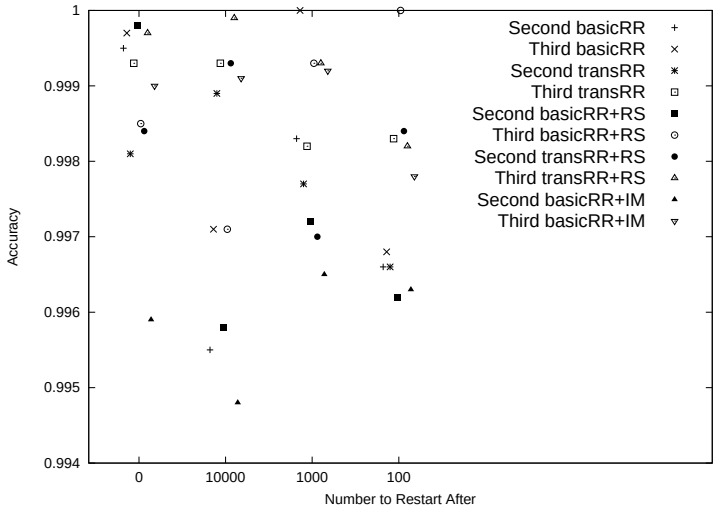



Figure B.555: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_5

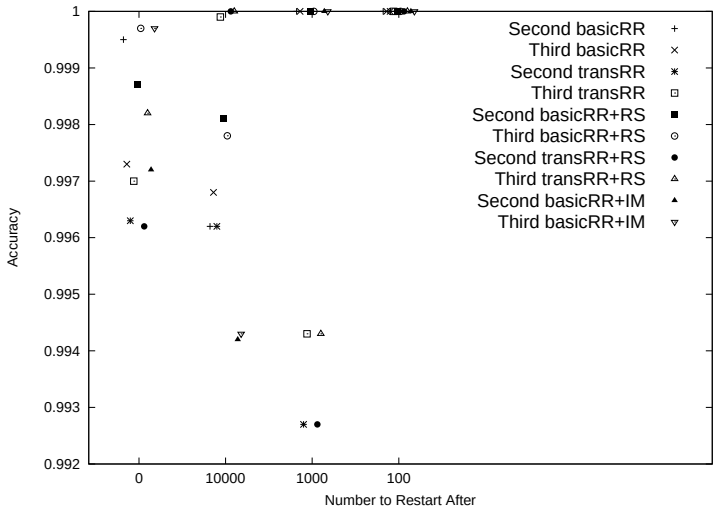



Figure B.556: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_6

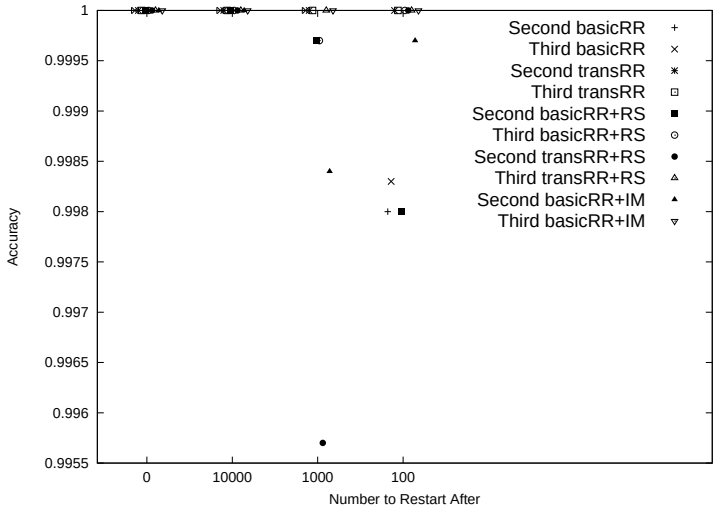



Figure B.557: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_7

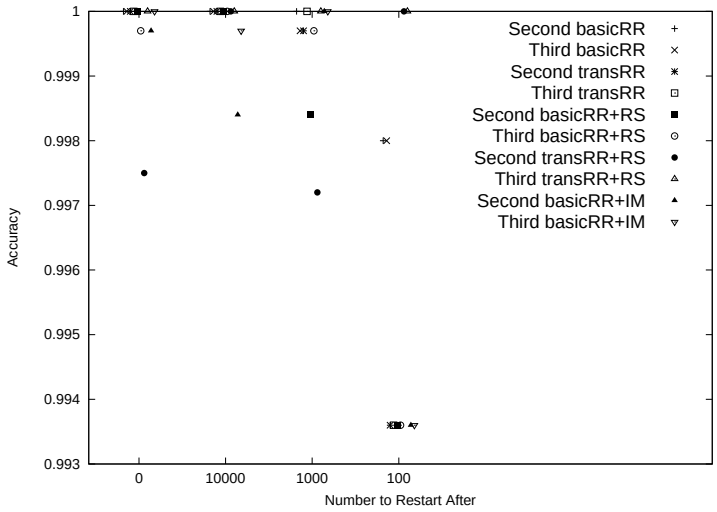



Figure B.558: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f25_305

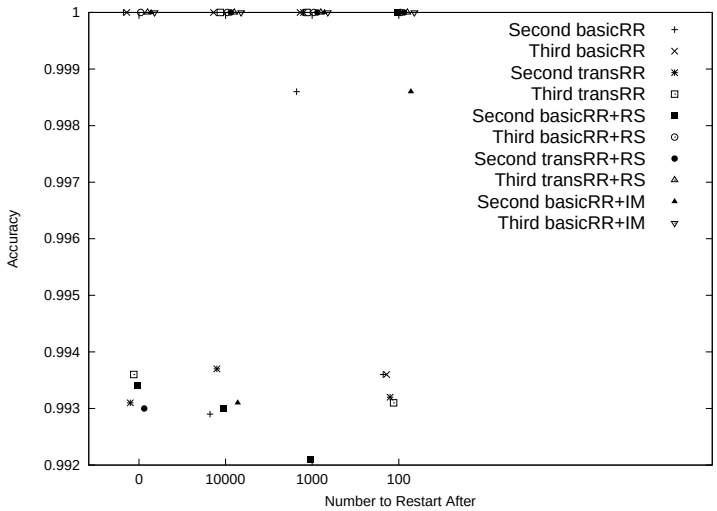



Figure B.559: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f25_400

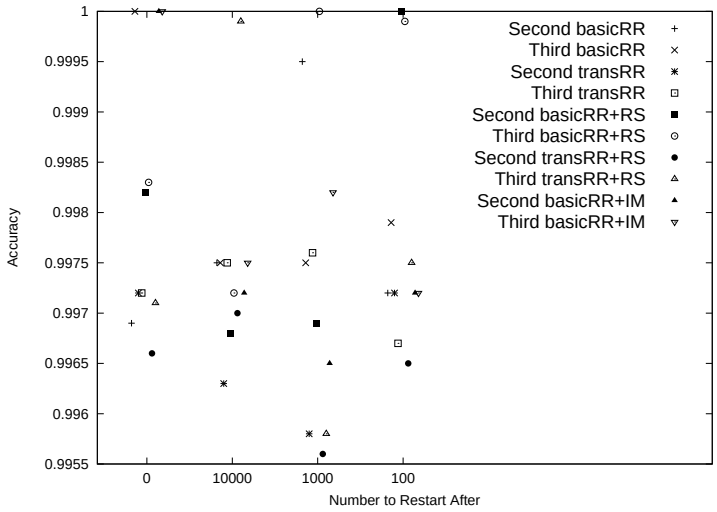



Figure B.560: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f25_500

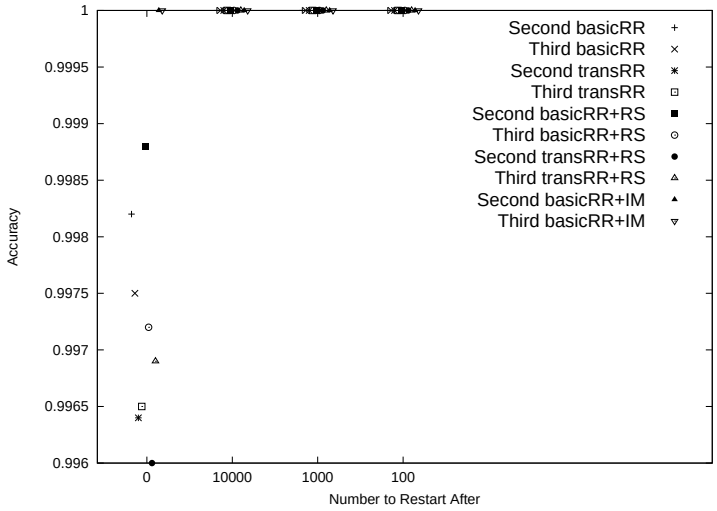



Figure B.561: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f50_315

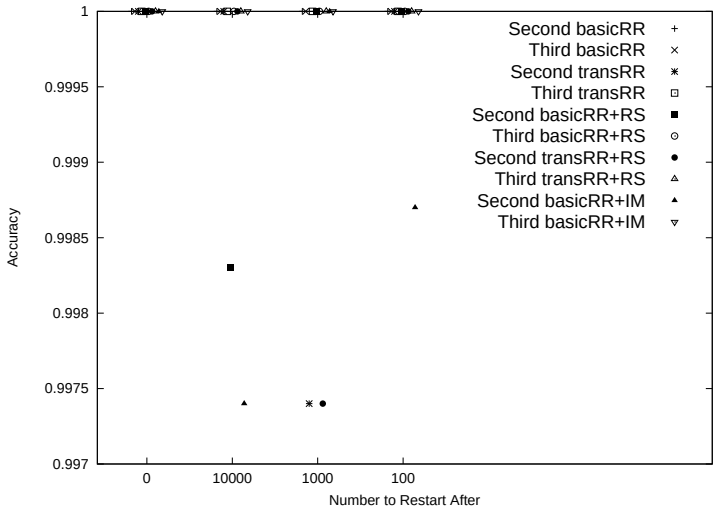



Figure B.562: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f50_412

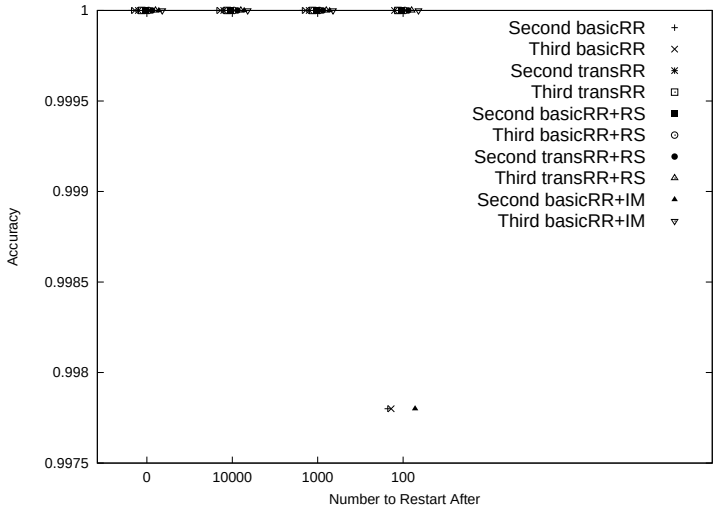



Figure B.563: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f50_498

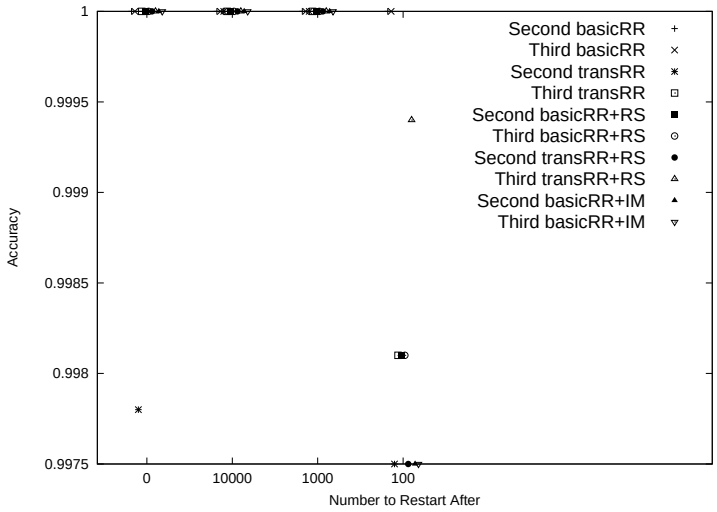



Figure B.564: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f100_307

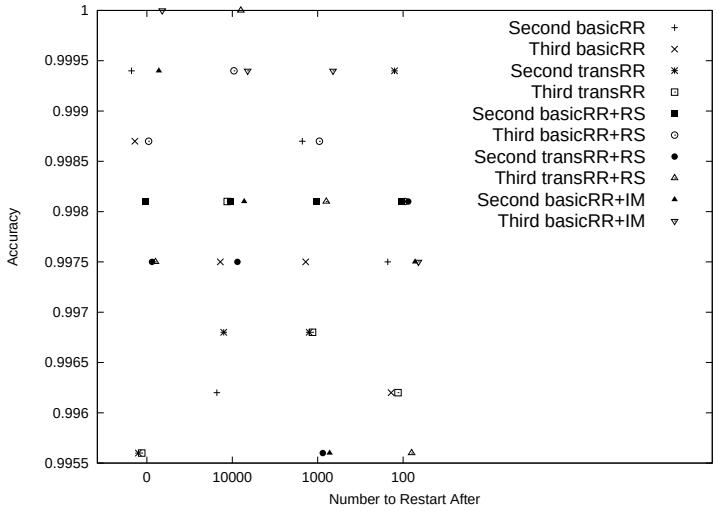



Figure B.565: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f100_415

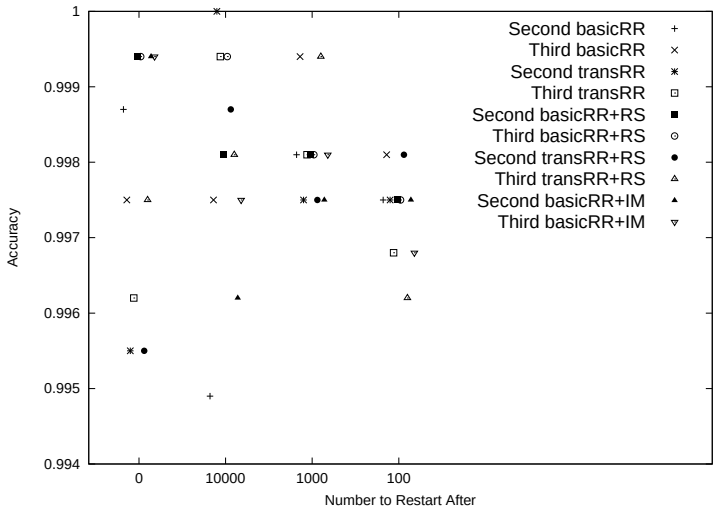



Figure B.566: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f100_512

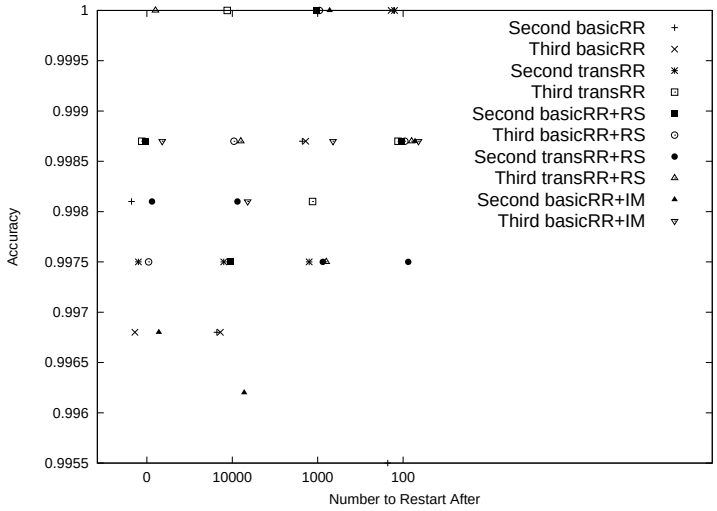



Figure B.567: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f508_354

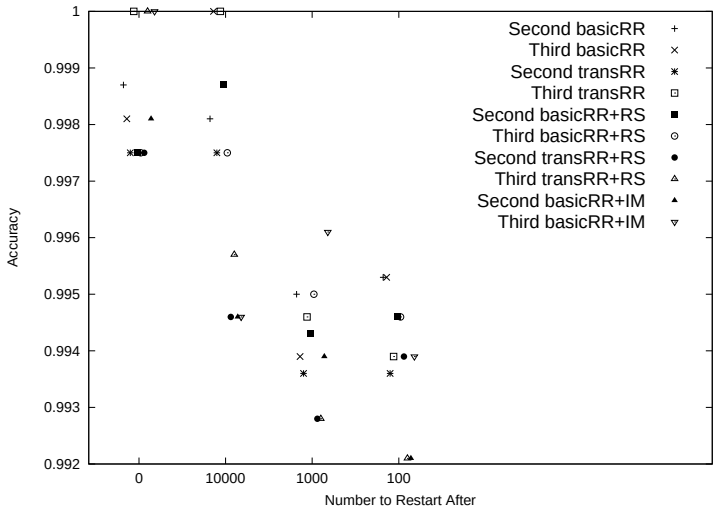



Figure B.568: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f635_350

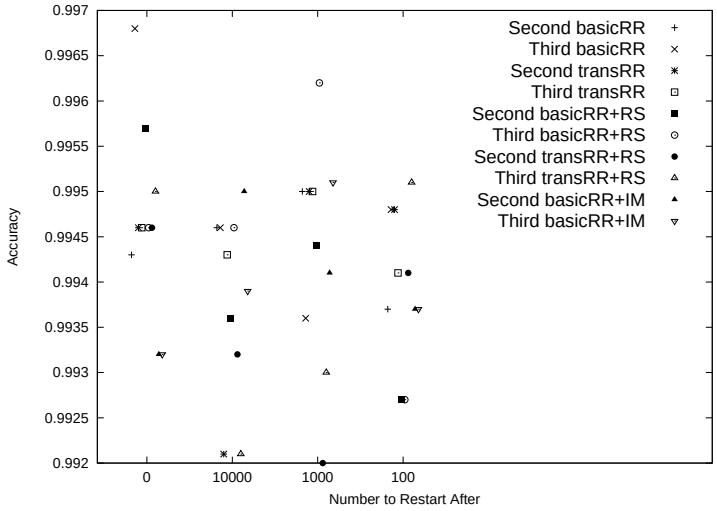



Figure B.569: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f737_355

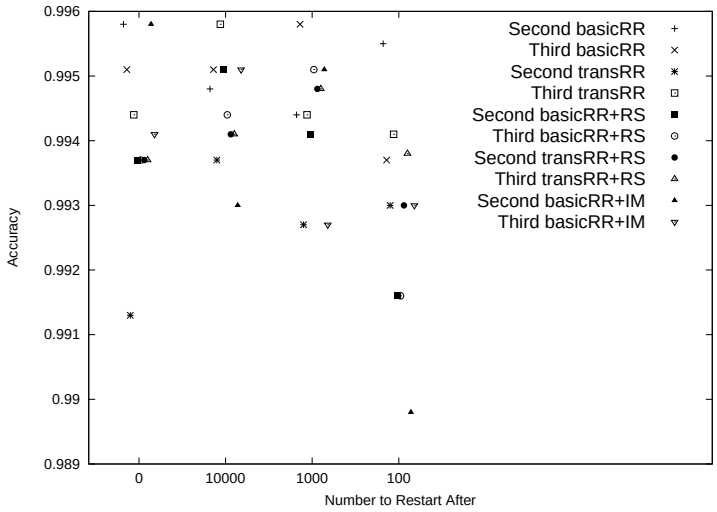



Figure B.570: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f1343_354

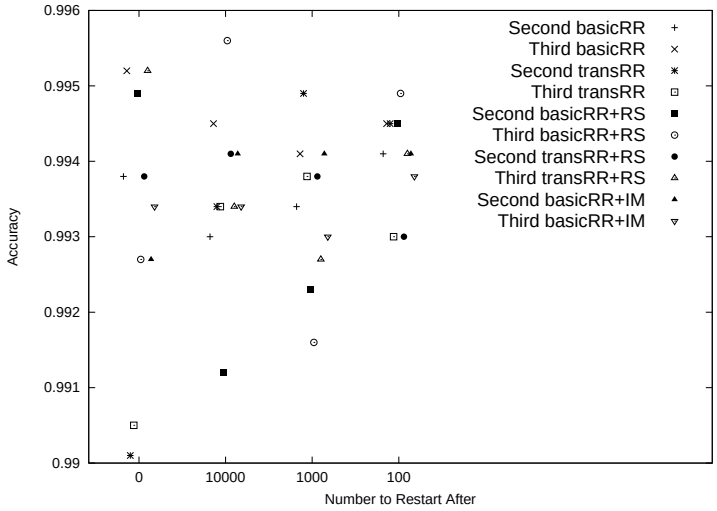



Figure B.571: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f1577_354

### B.5.4 Fourth Set of Results

**Results With No Post Optimization and No Forced Recentre**

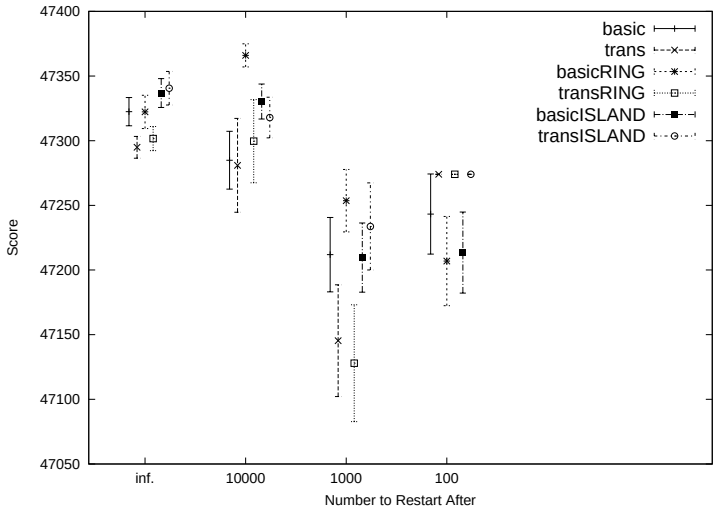



Figure B.572: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin1

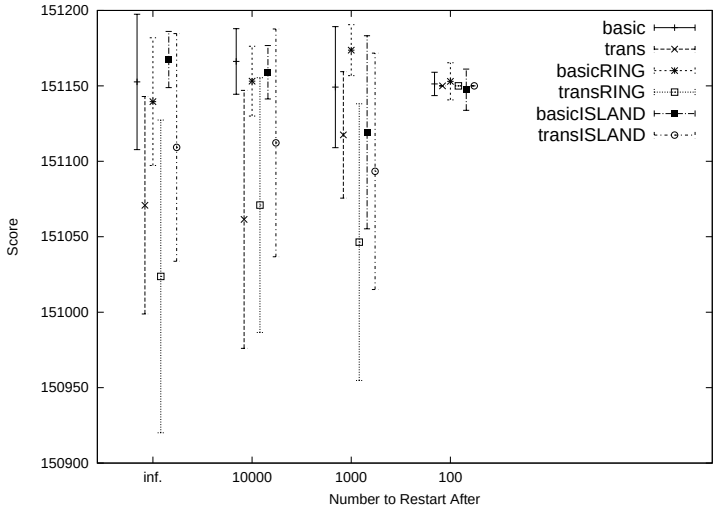



Figure B.573: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin2

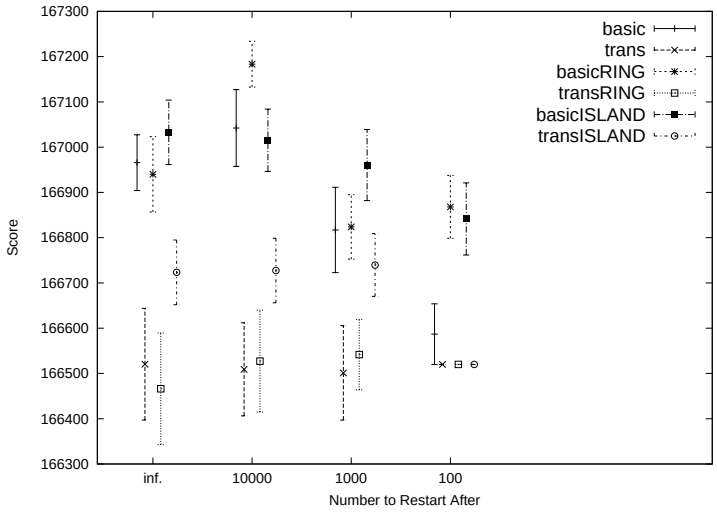



Figure B.574: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin3

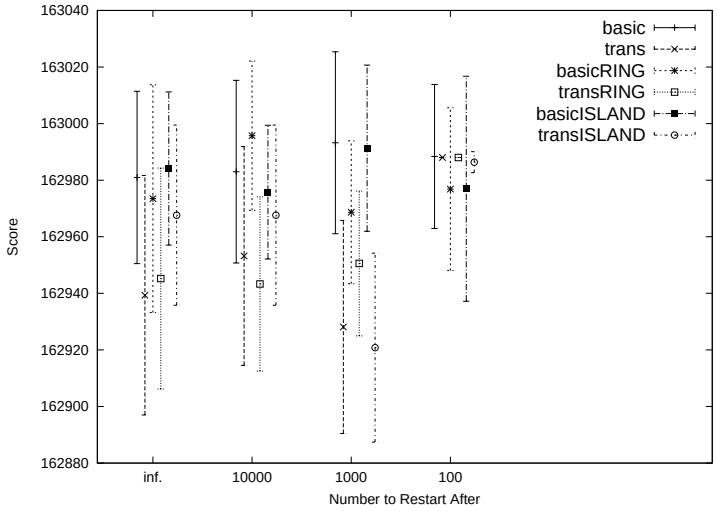



Figure B.575: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin5

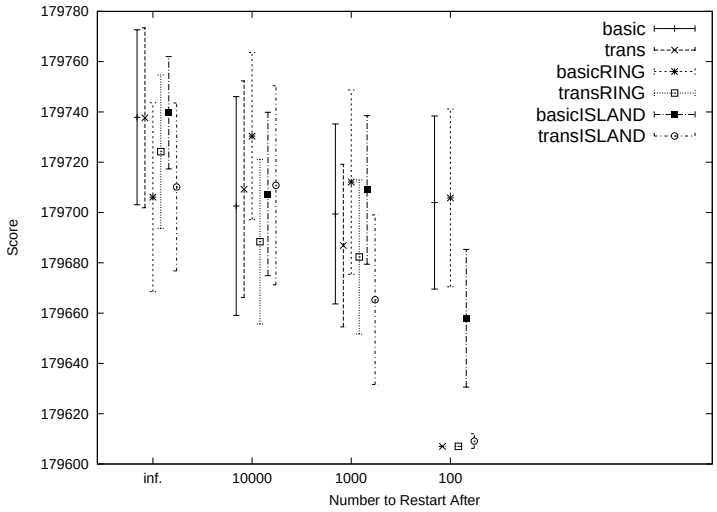



Figure B.576: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin7

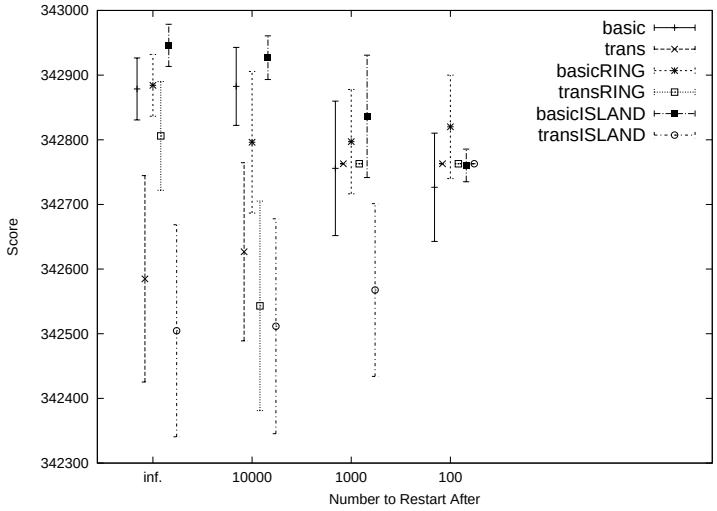



Figure B.577: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance acin9

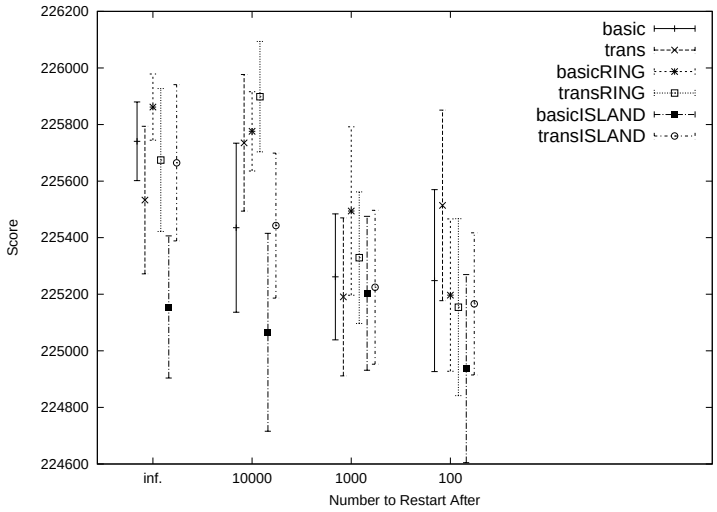



Figure B.578: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_4

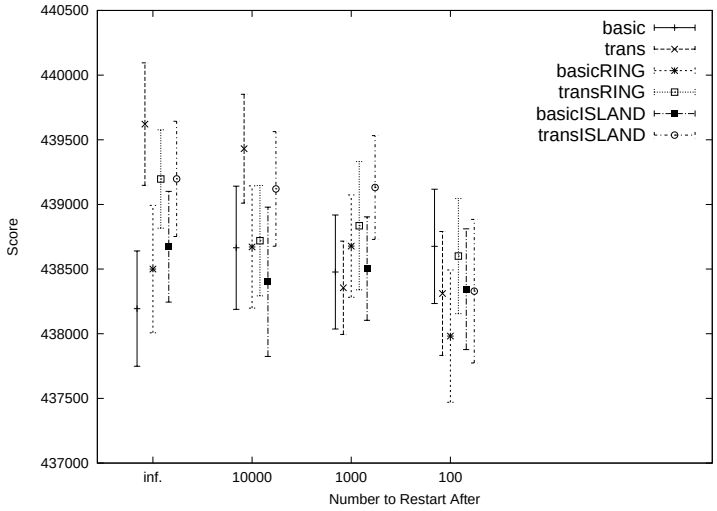



Figure B.579: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_7

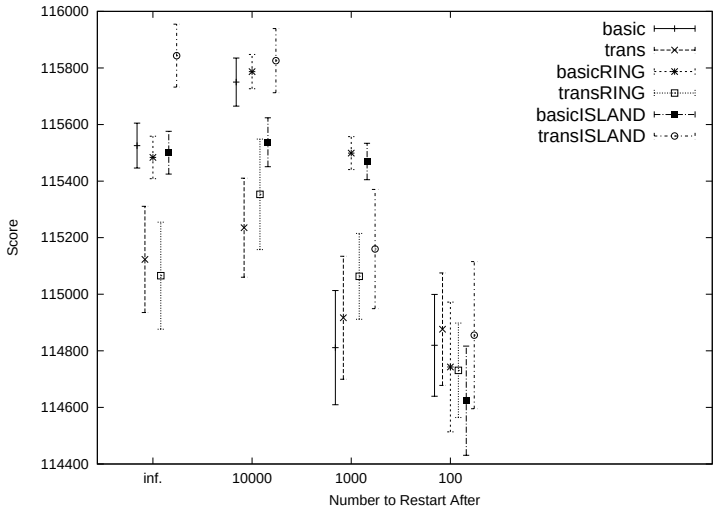



Figure B.580: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance j02459_7

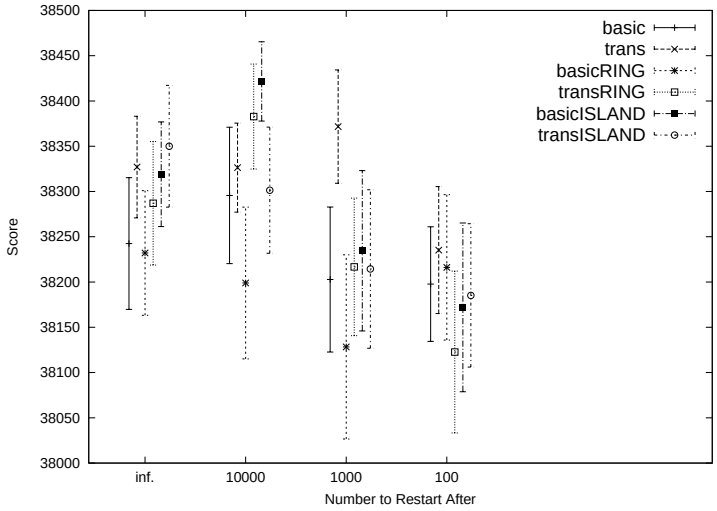



Figure B.581: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance m15421_5

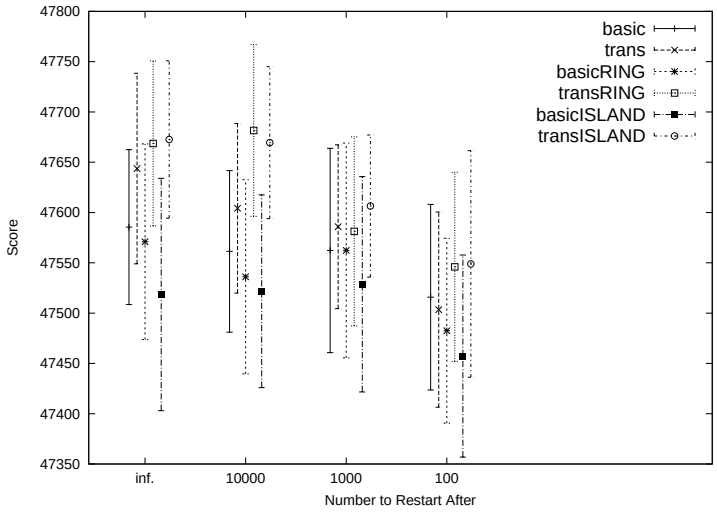



Figure B.582: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance m15421_6

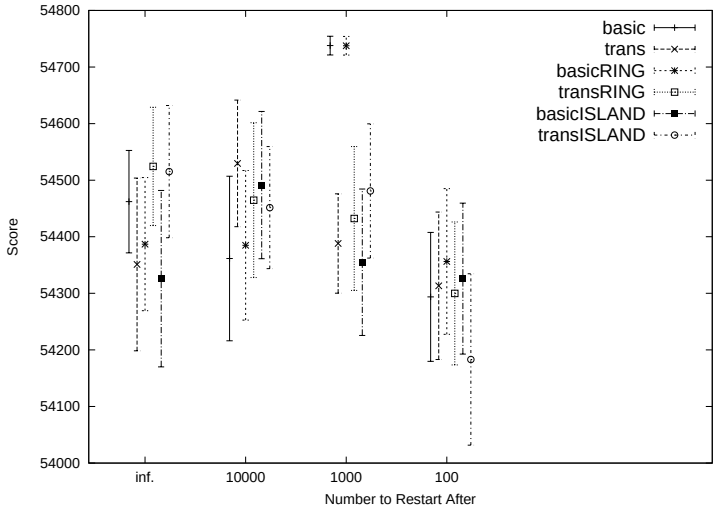



Figure B.583: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance m15421_7

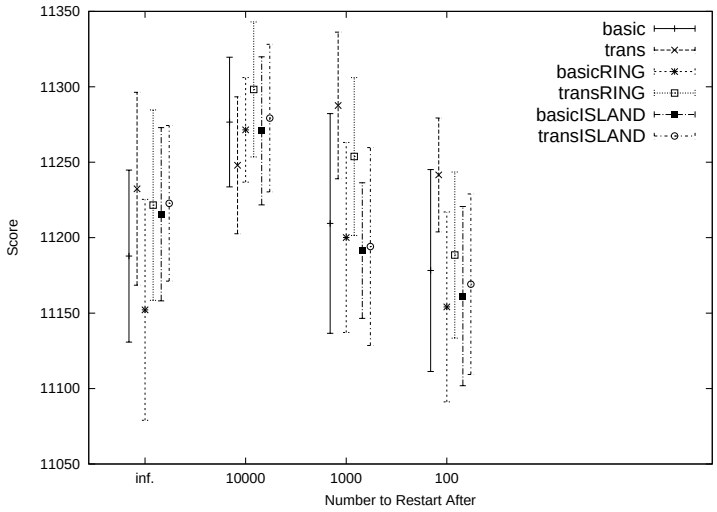



Figure B.584: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance x60189_4

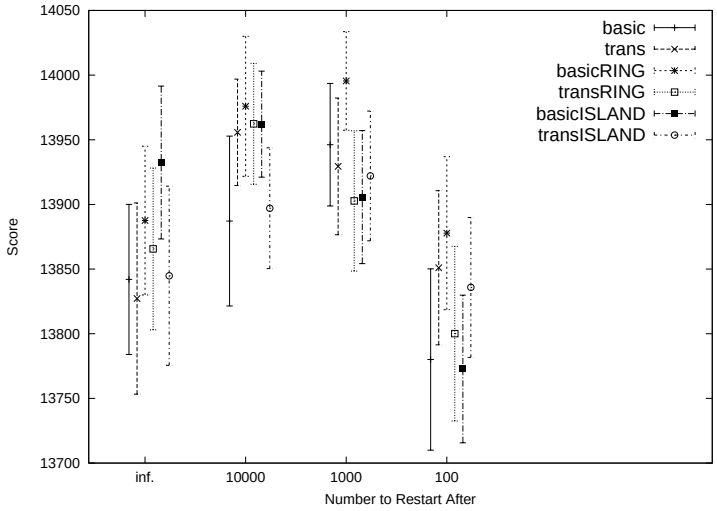



Figure B.585: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance x60189_5

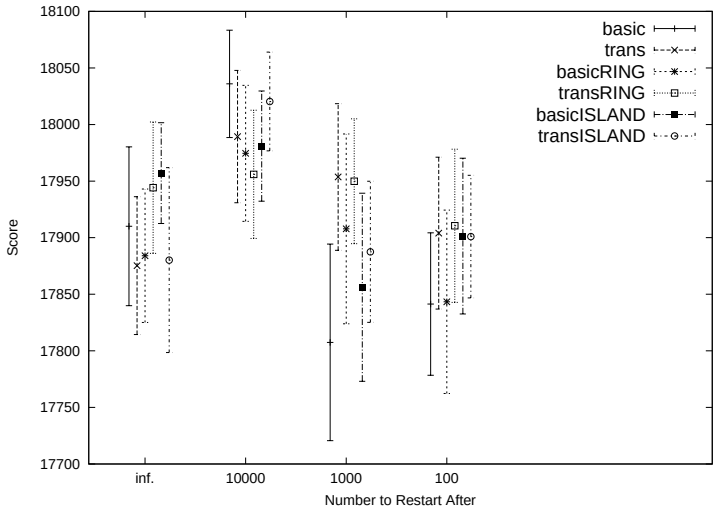



Figure B.586: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance x60189_6

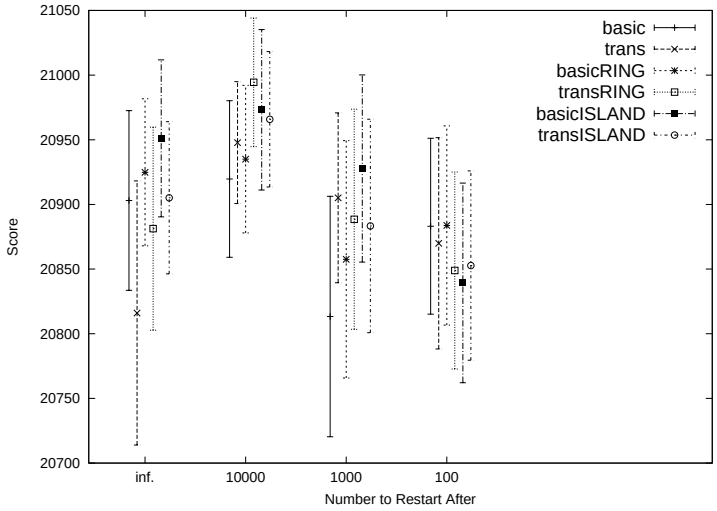



Figure B.587: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance x60189_7

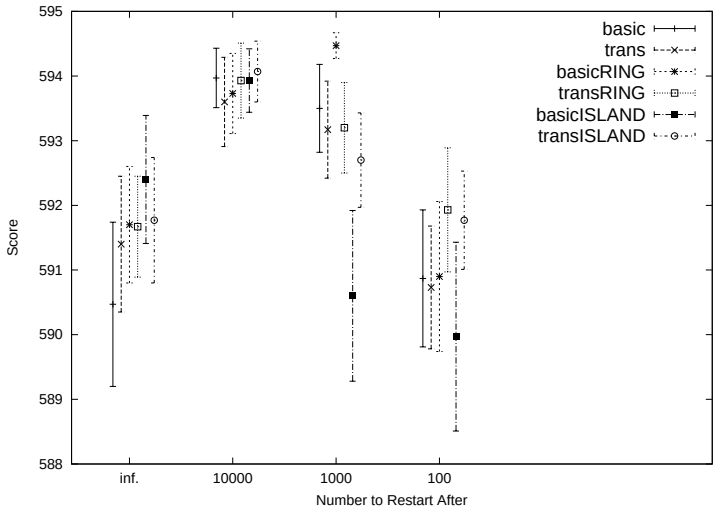



Figure B.588: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f25_305

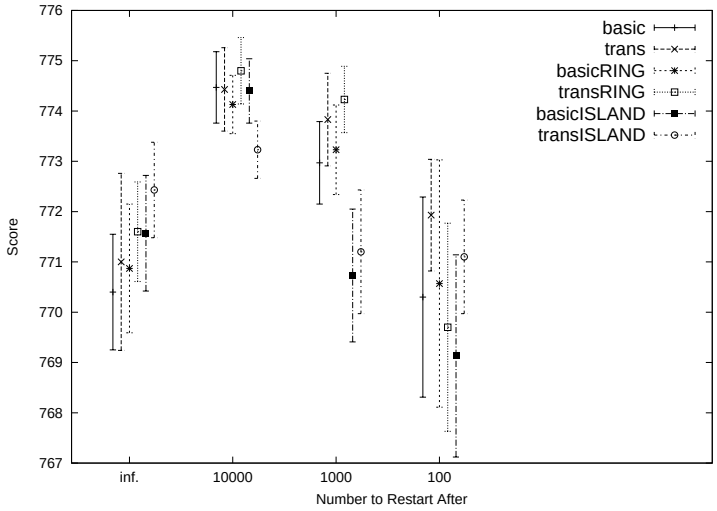



Figure B.589: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f25_400

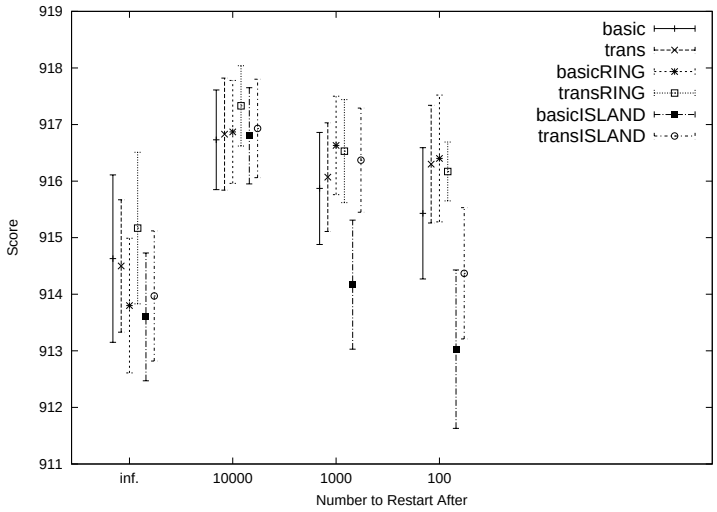



Figure B.590: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f25_500

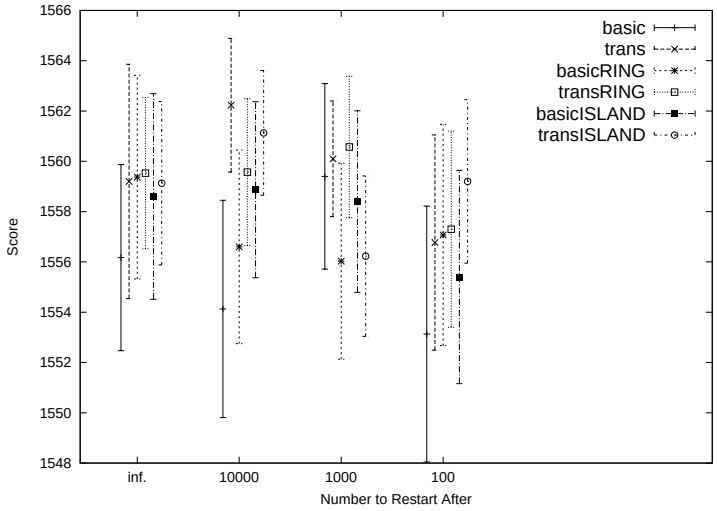



Figure B.591: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f50_315

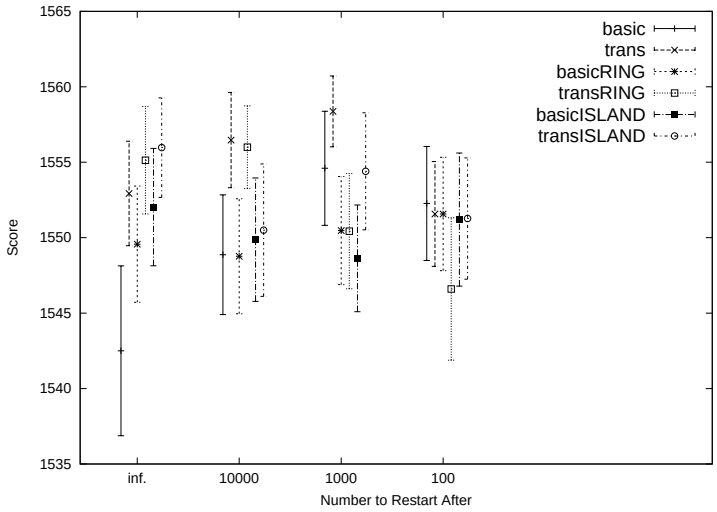



Figure B.592: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f50_412

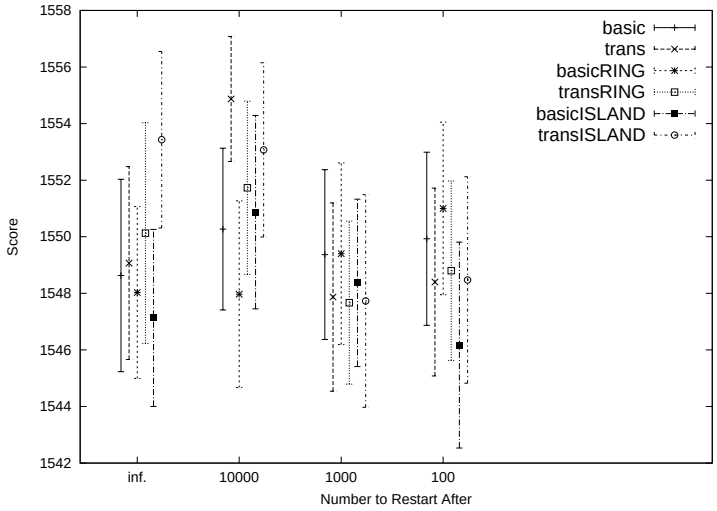



Figure B.593: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f50_498

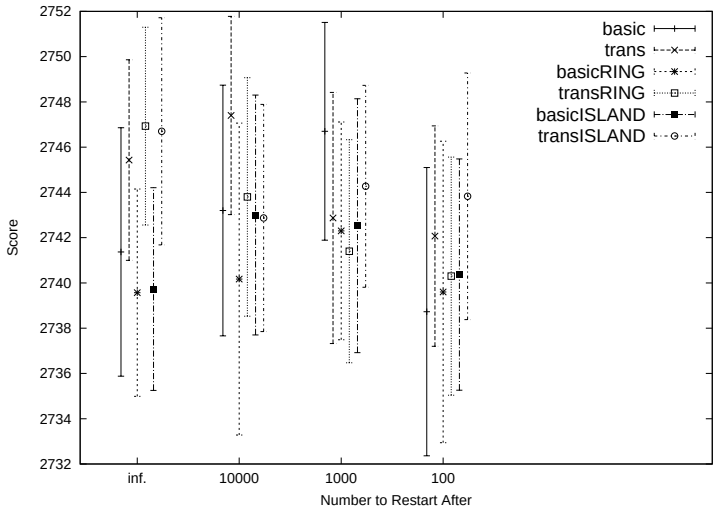



Figure B.594: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f100_307

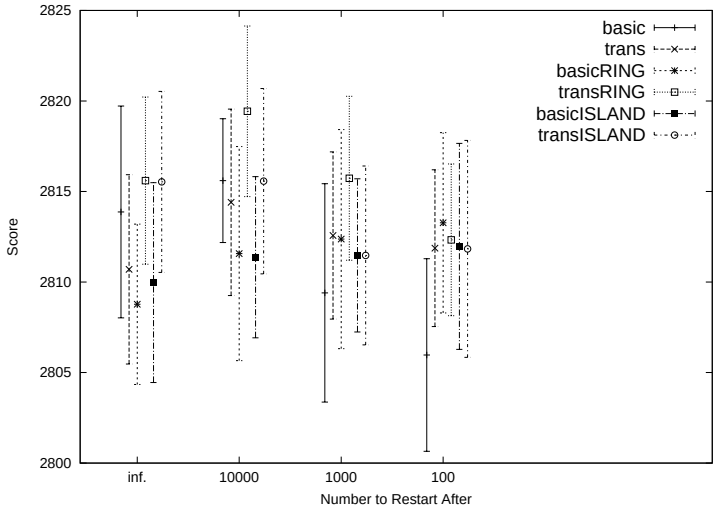



Figure B.595: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f100_415

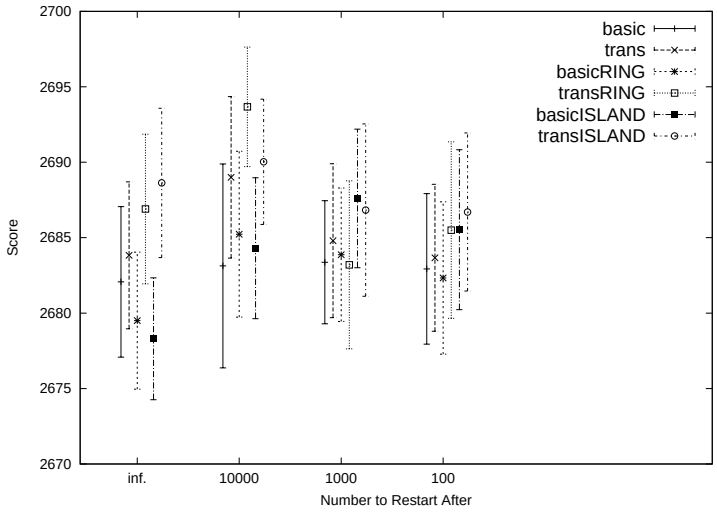



Figure B.596: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f100_512

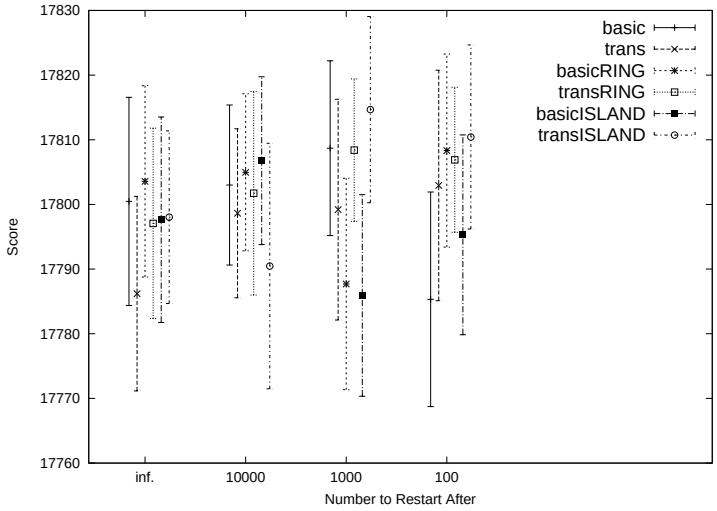



Figure B.597: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f508_354

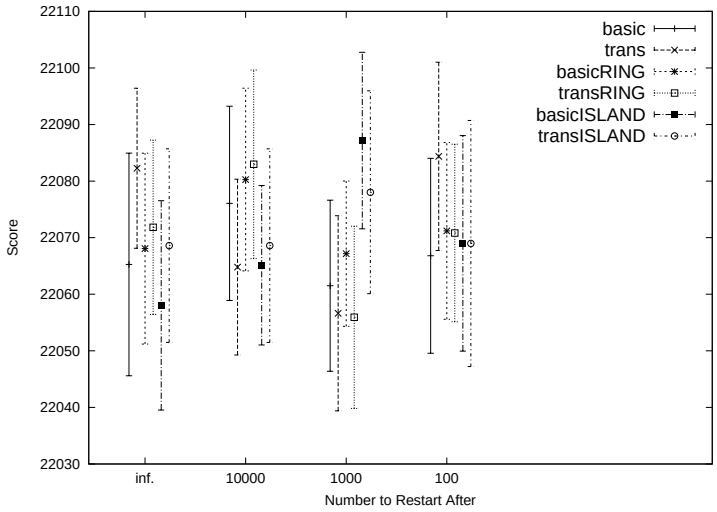



Figure B.598: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f635_350

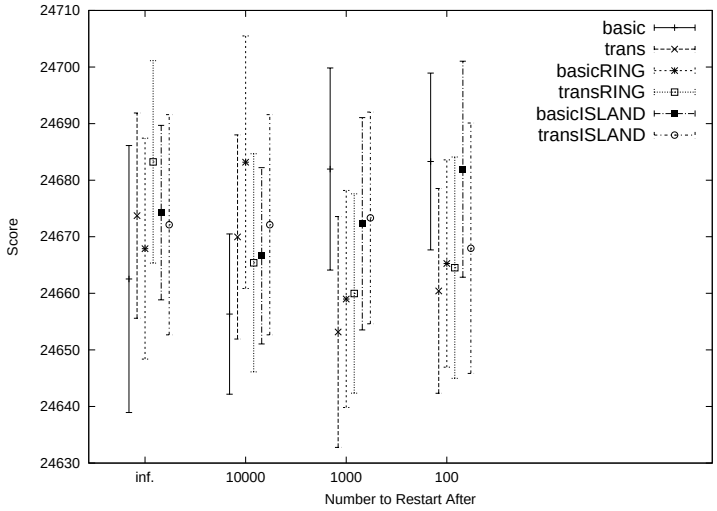



Figure B.599: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f737_355

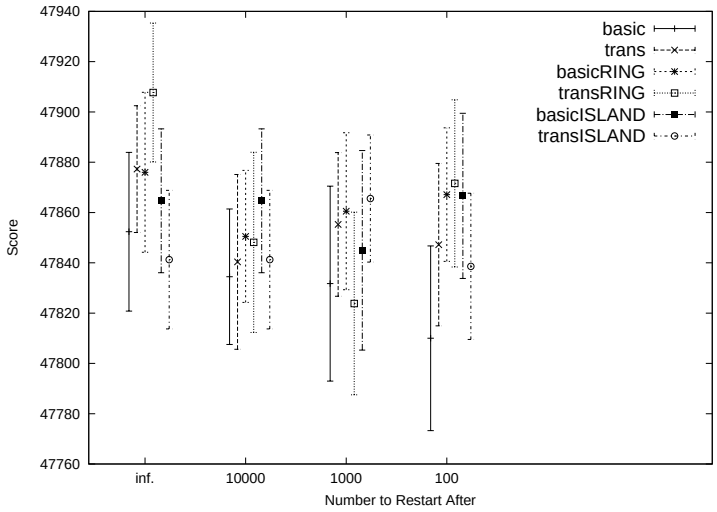



Figure B.600: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f1343_354

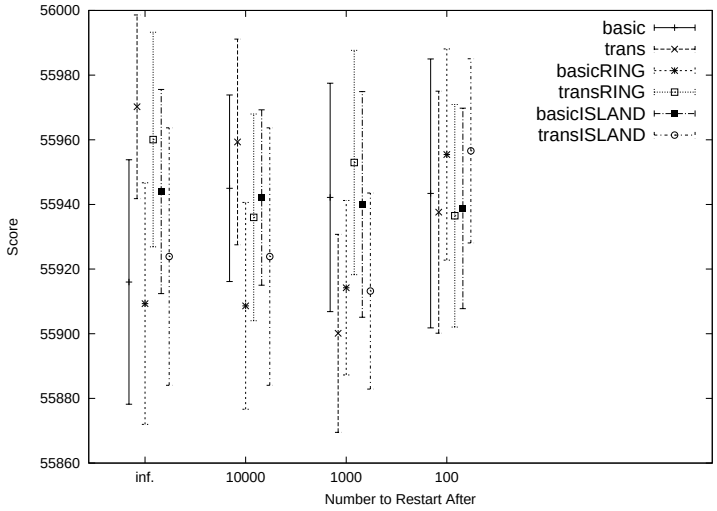



Figure B.601: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and No Forced Recentre on Problem Instance f1577_354

**Results With Post Optimization and No Forced Recentre**

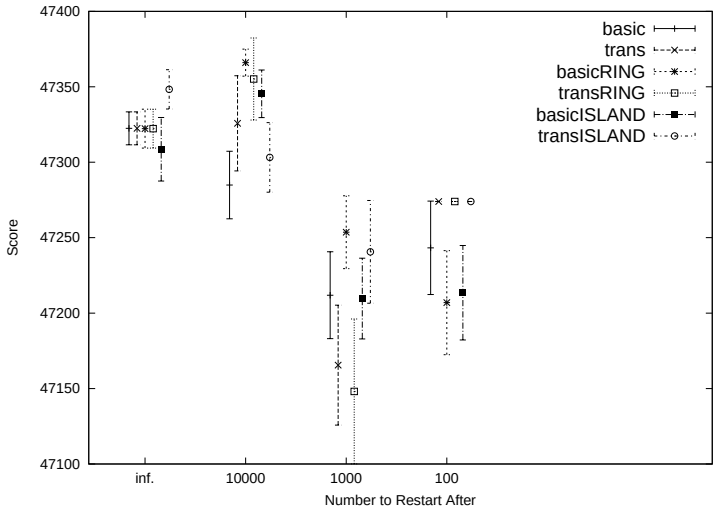



Figure B.602: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin1

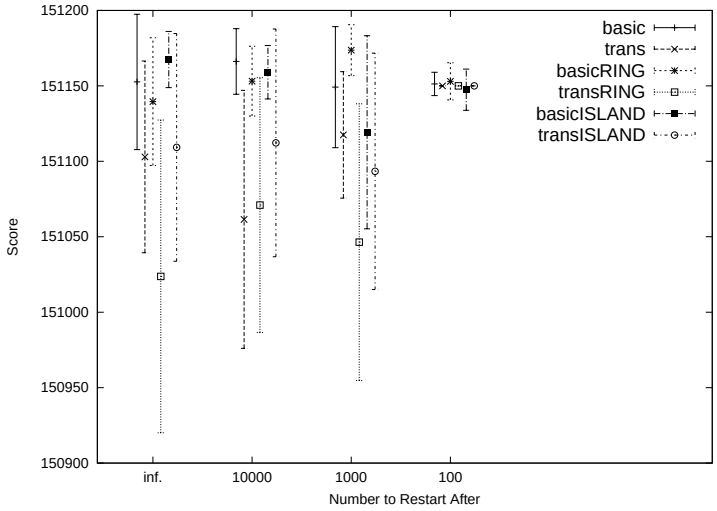



Figure B.603: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin2

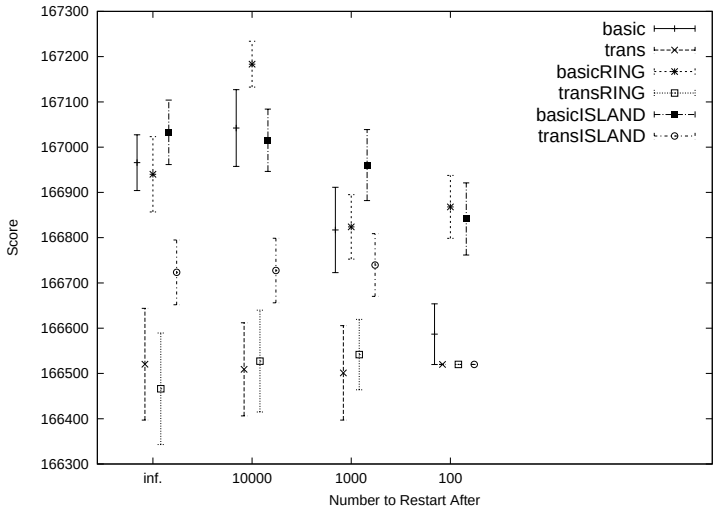



Figure B.604: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin3

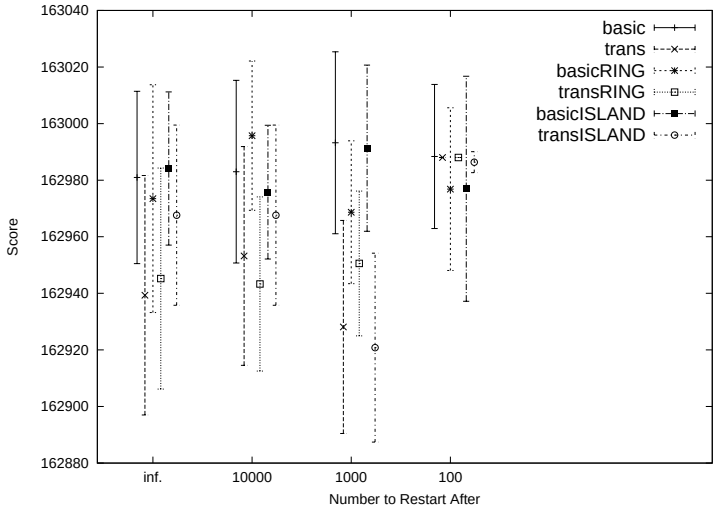



Figure B.605: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin5

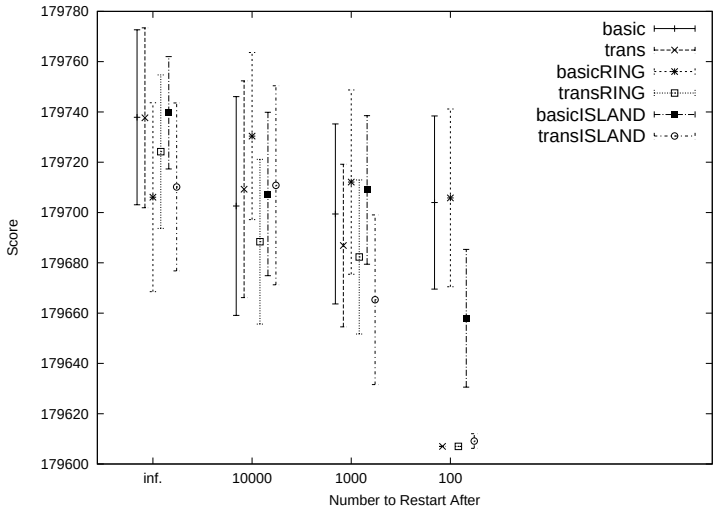



Figure B.606: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin7

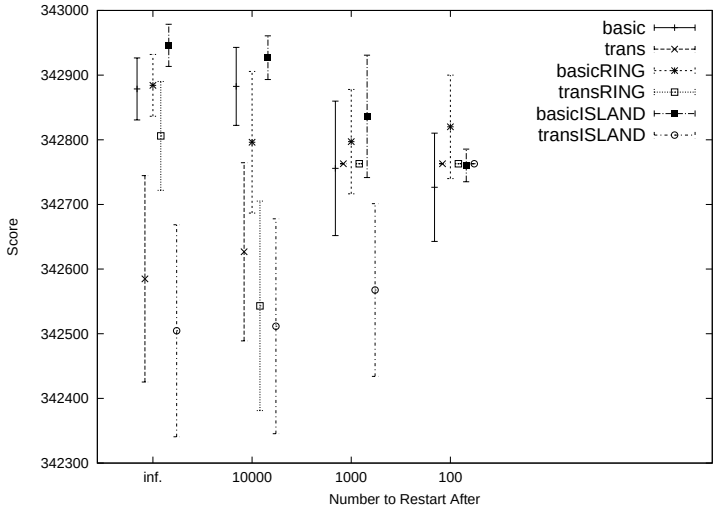



Figure B.607: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance acin9

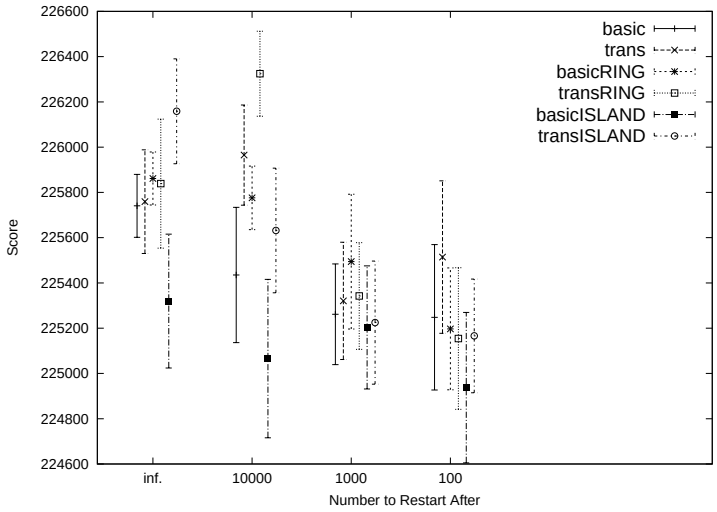



Figure B.608: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_4

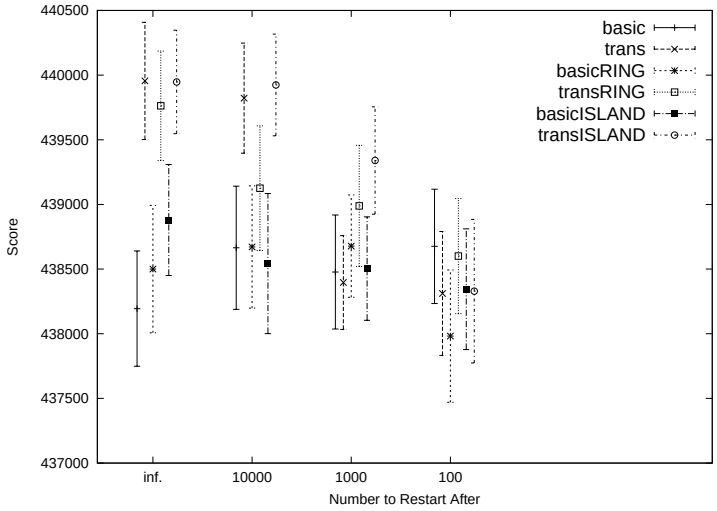



Figure B.609: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance bx842596_7

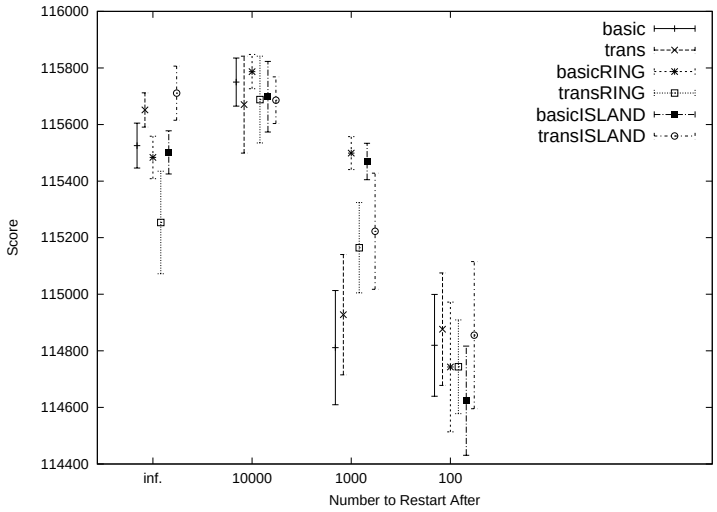



Figure B.610: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance j02459_7

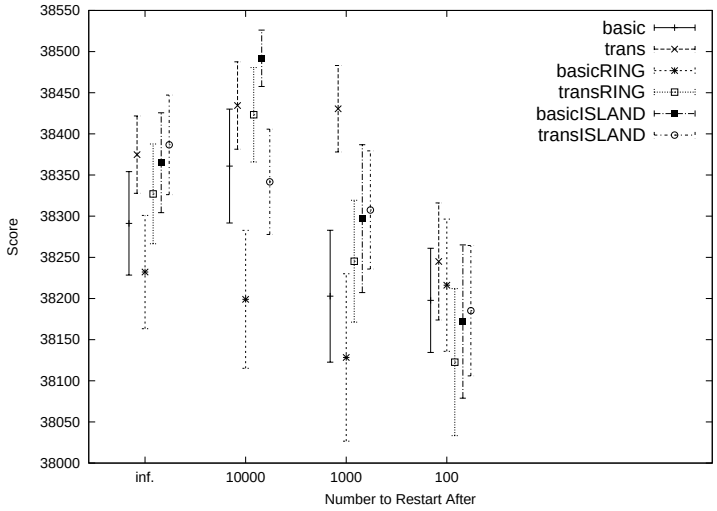



Figure B.611: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance m15421_5

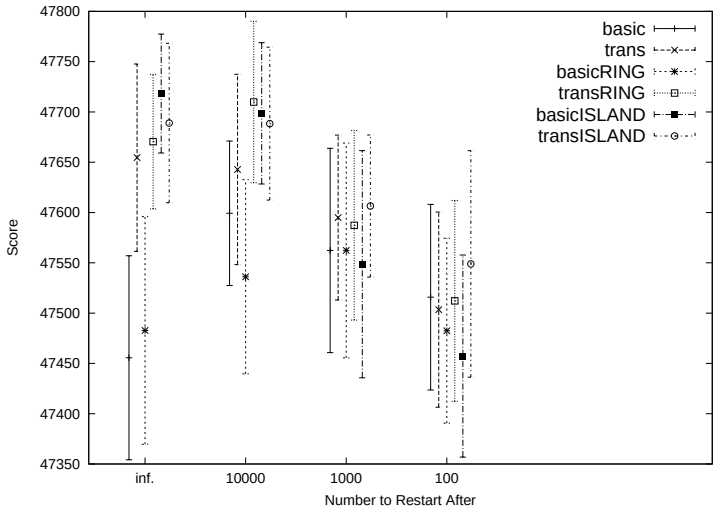



Figure B.612: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance m15421_6

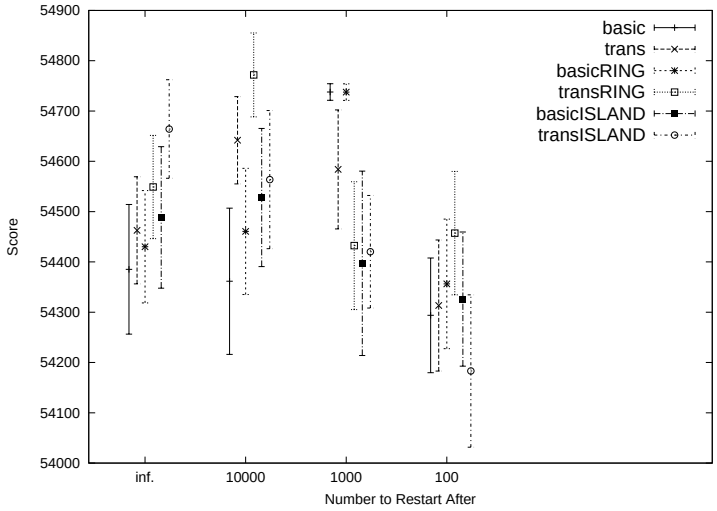



Figure B.613: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance m15421_7

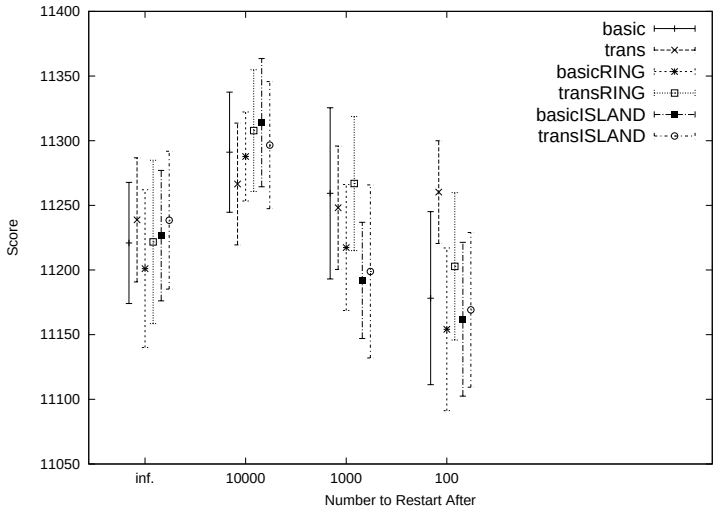



Figure B.614: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_4

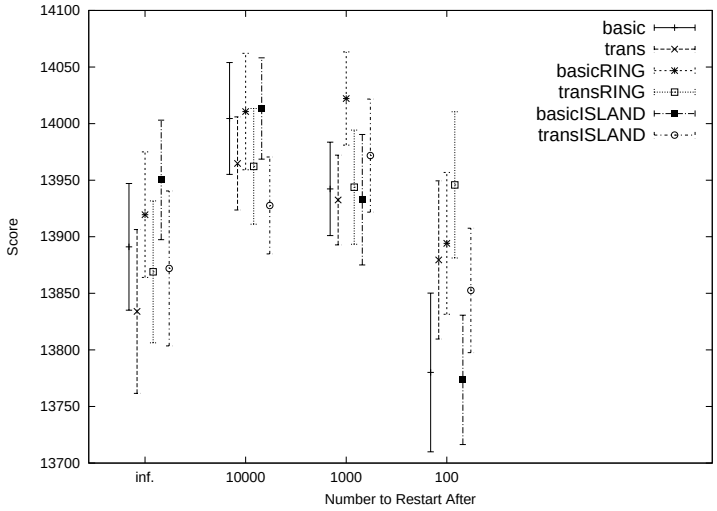



Figure B.615: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_5

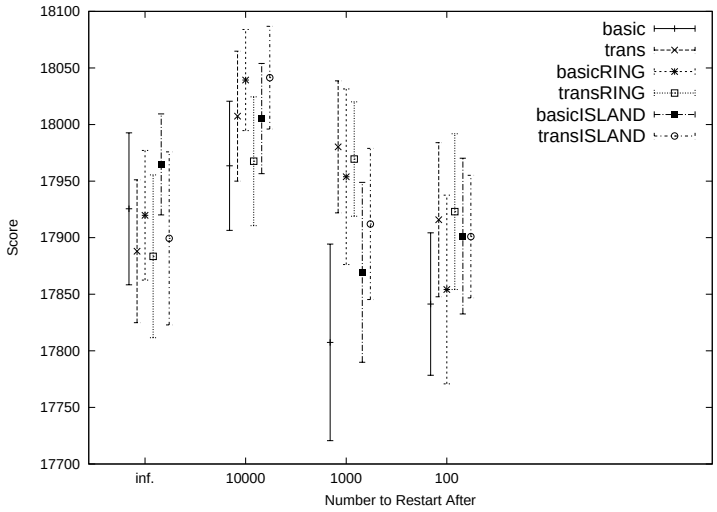



Figure B.616: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_6

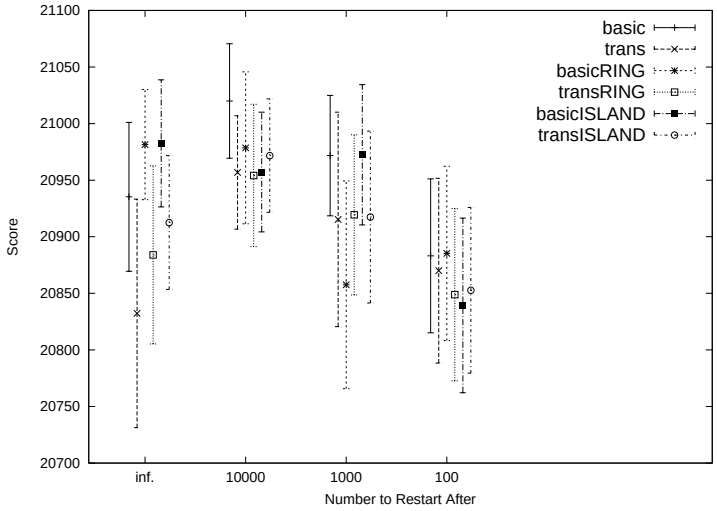



Figure B.617: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance x60189_7

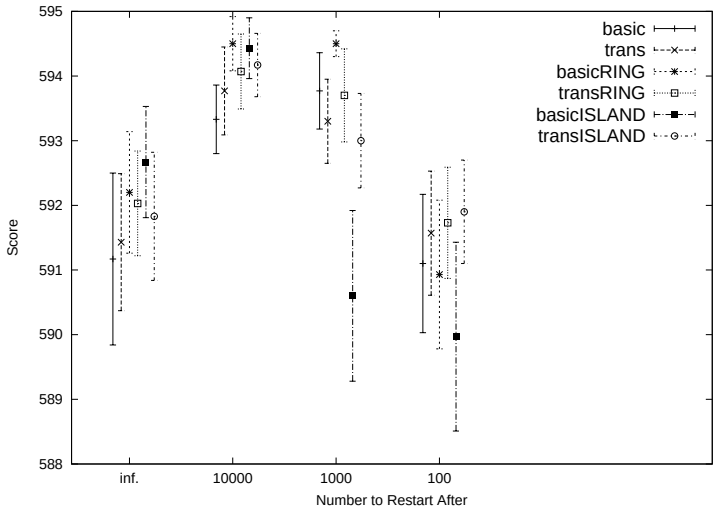



Figure B.618: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f25_305

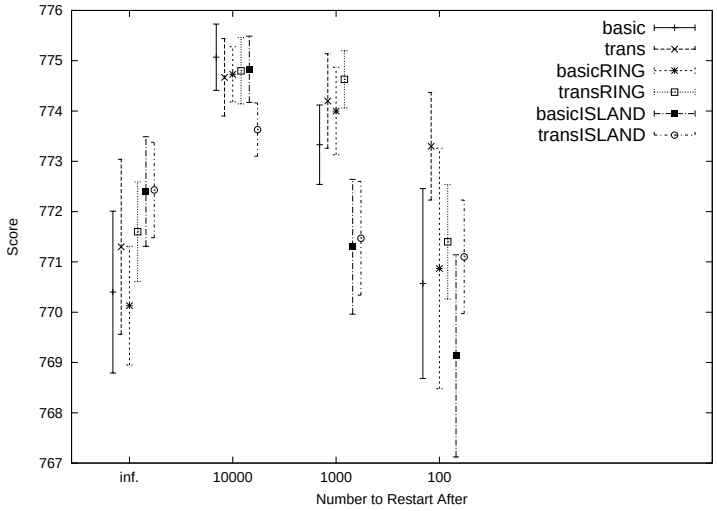



Figure B.619: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f25_400

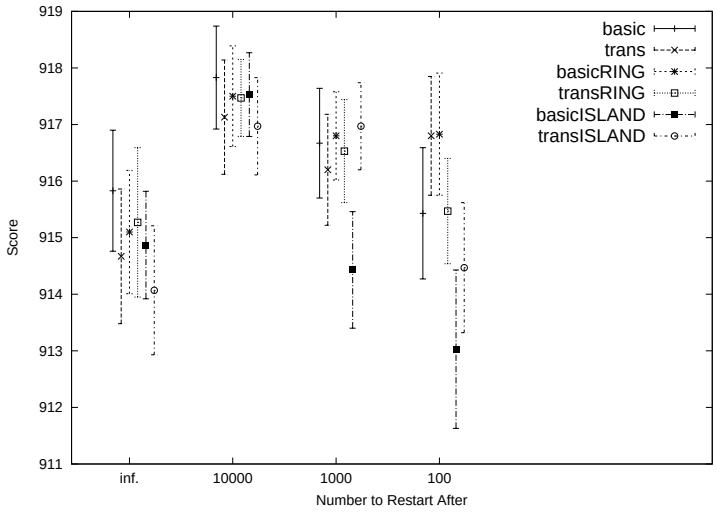



Figure B.620: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f25_500

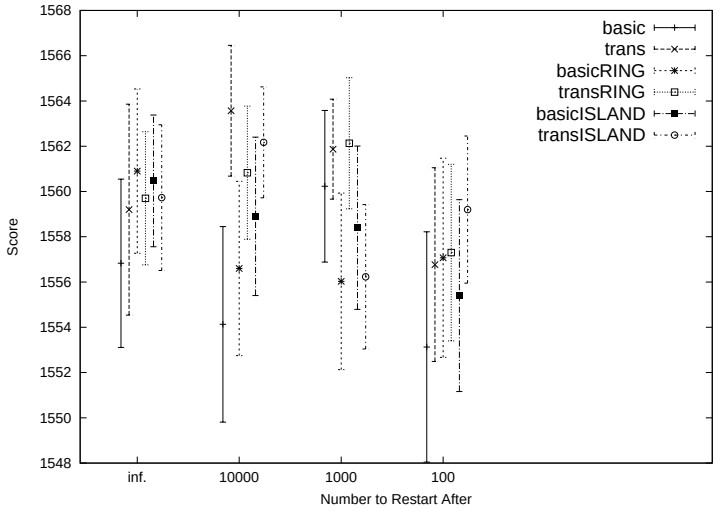



Figure B.621: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f50_315

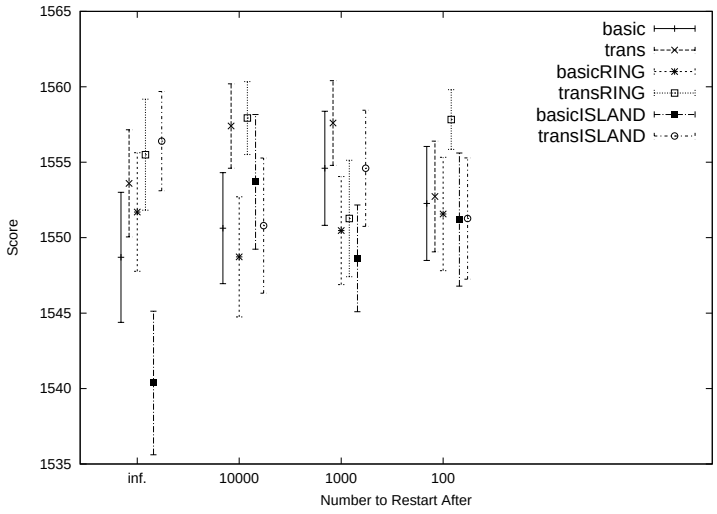



Figure B.622: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f50_412

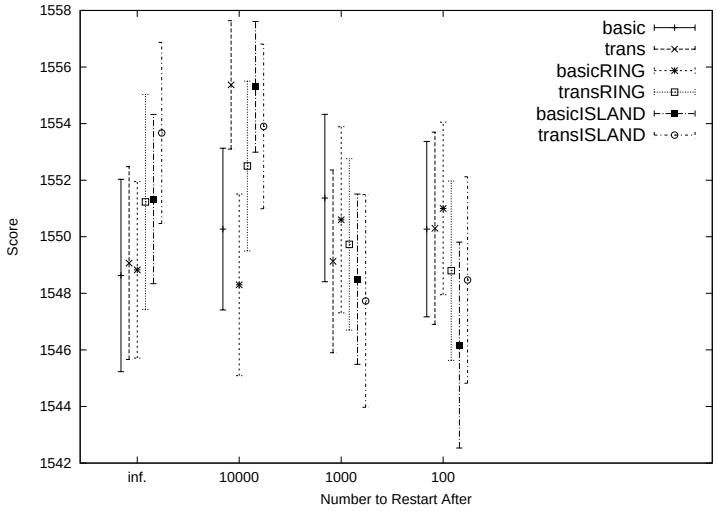



Figure B.623: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f50_498

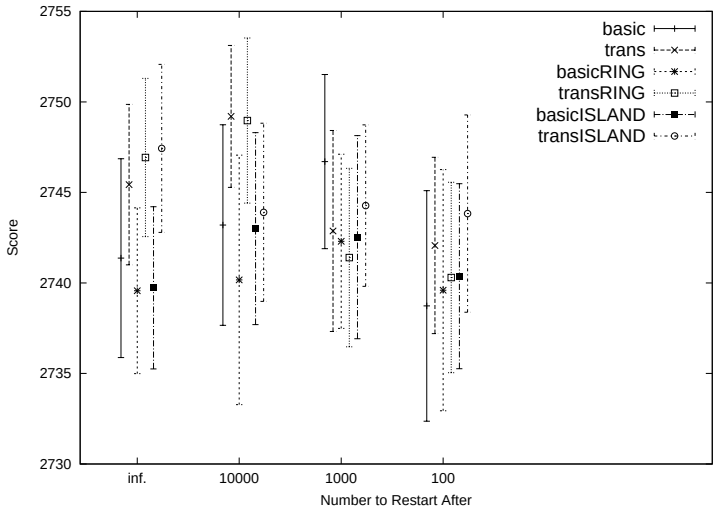



Figure B.624: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f100_307

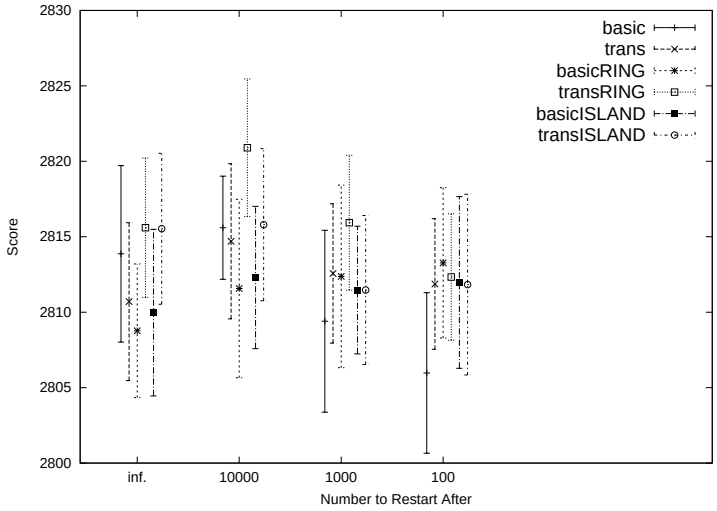



Figure B.625: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f100_415

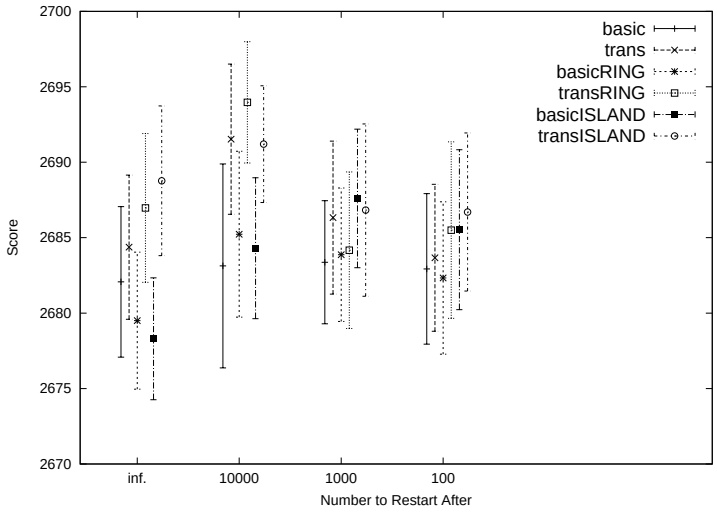



Figure B.626: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f100_512

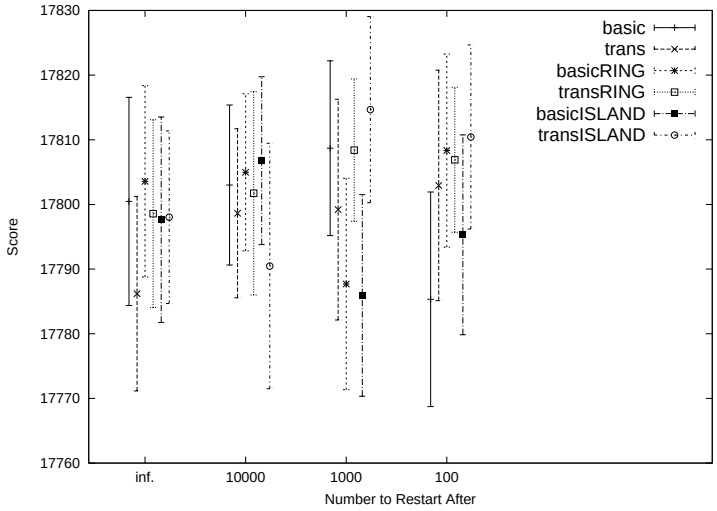



Figure B.627: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f508_354

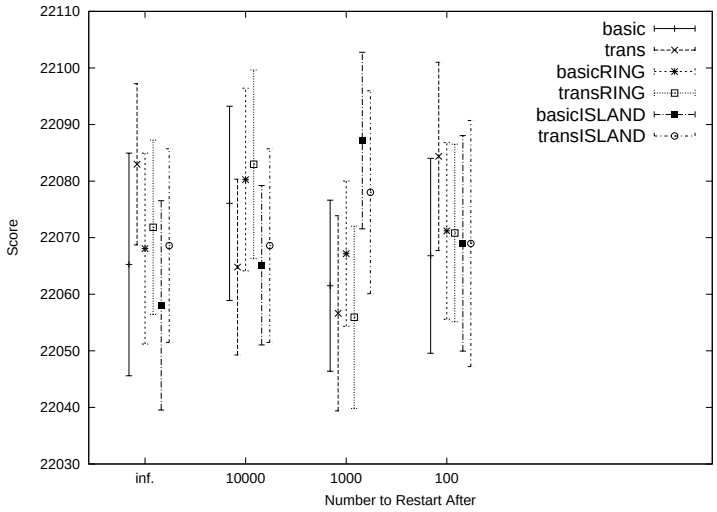



Figure B.628: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f635_350

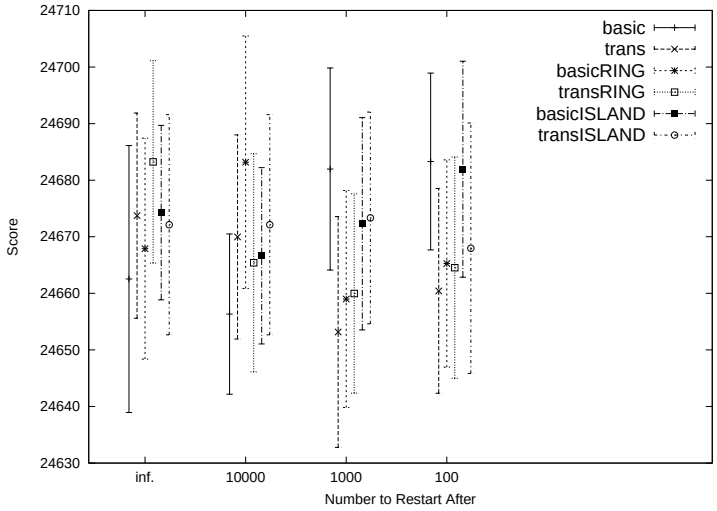



Figure B.629: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f737_355

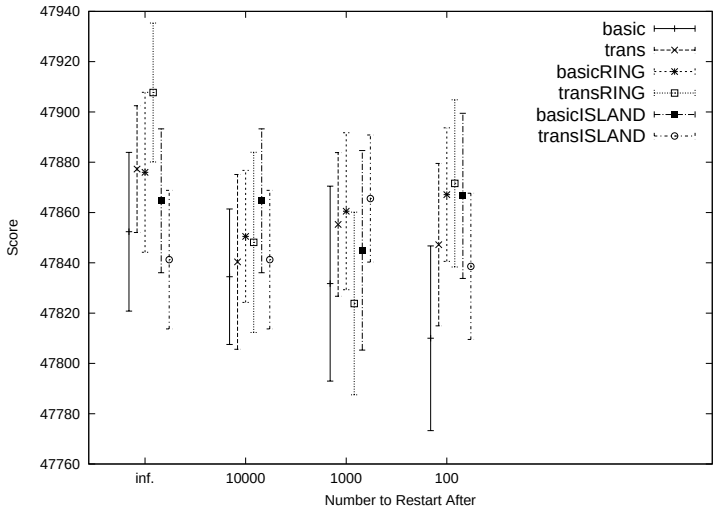



Figure B.630: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f1343_354

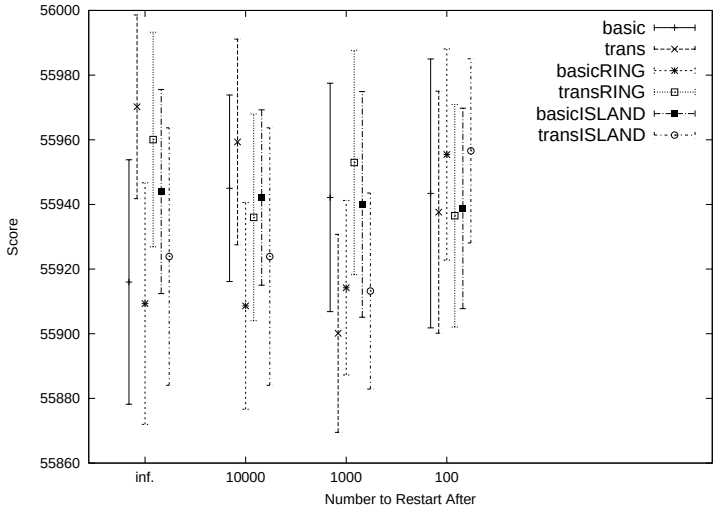



Figure B.631: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and No Forced Recentre on Problem Instance f1577_354

**Results With No Post Optimization and Forced Recentre**

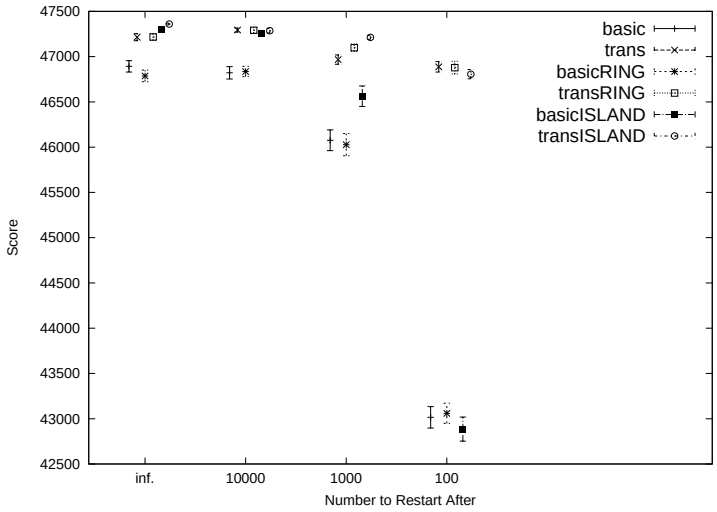



Figure B.632: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance acin1

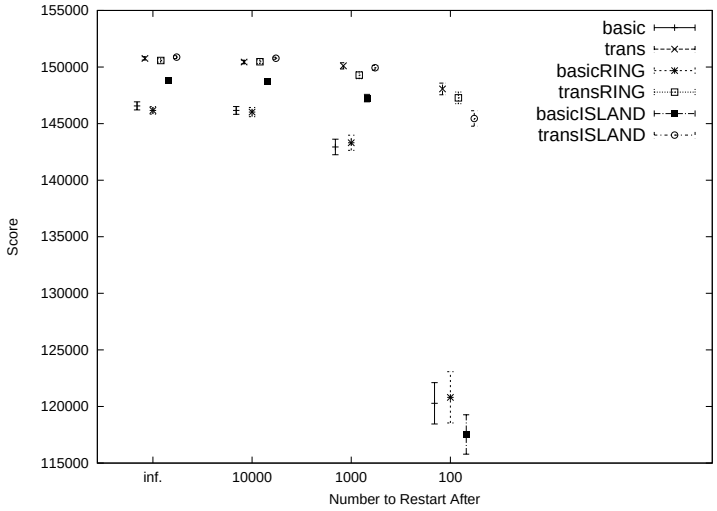



Figure B.633: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance acin2

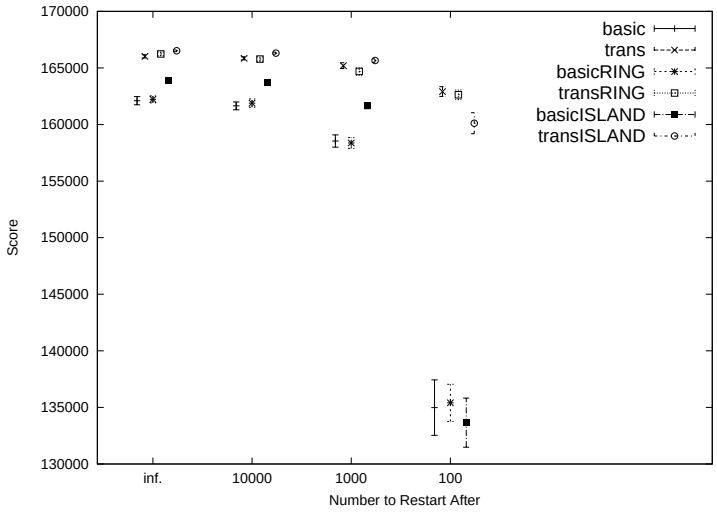



Figure B.634: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance acin3

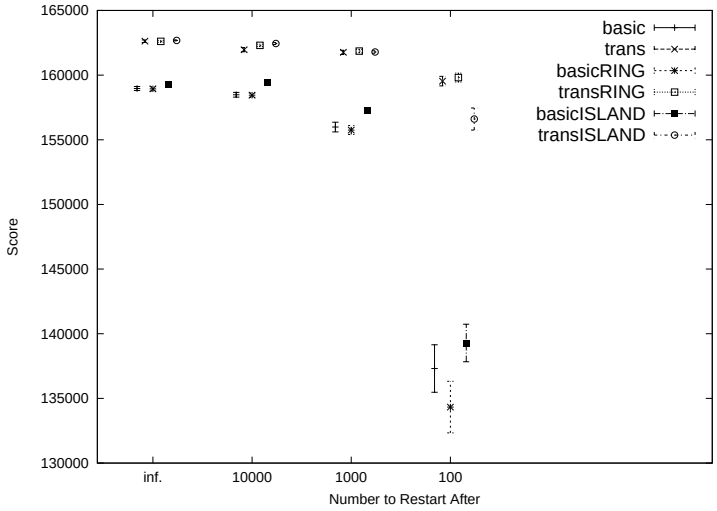



Figure B.635: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance acin5

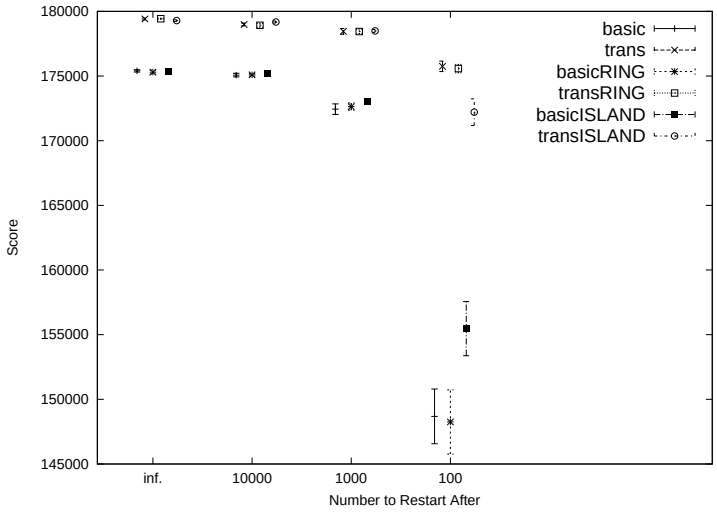



Figure B.636: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance acin7

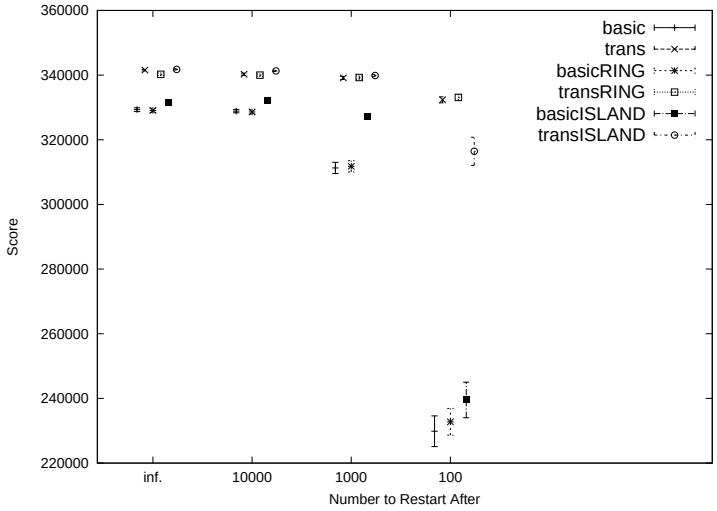



Figure B.637: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance acin9

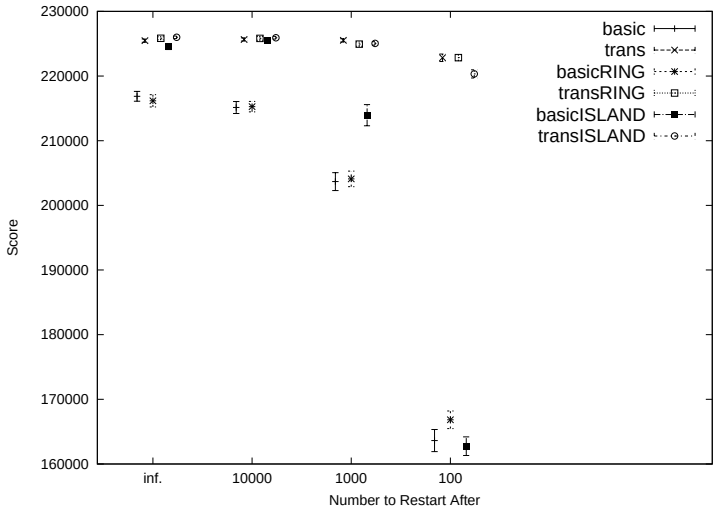



Figure B.638: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance bx842596_4

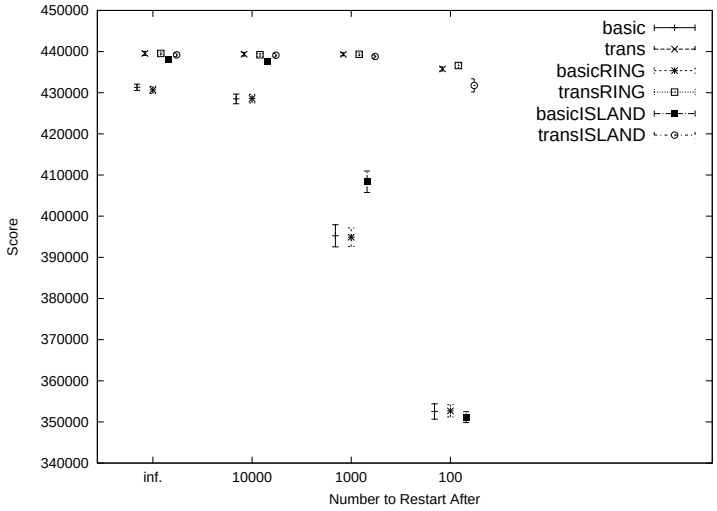



Figure B.639: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance bx842596_7

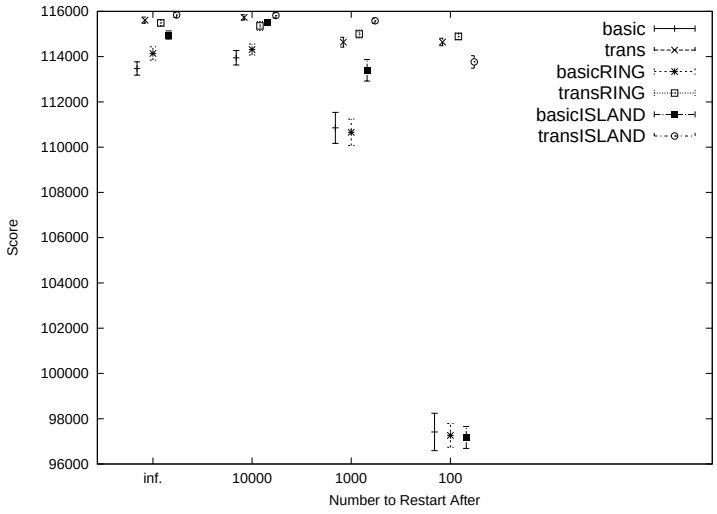



Figure B.640: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance j02459_7

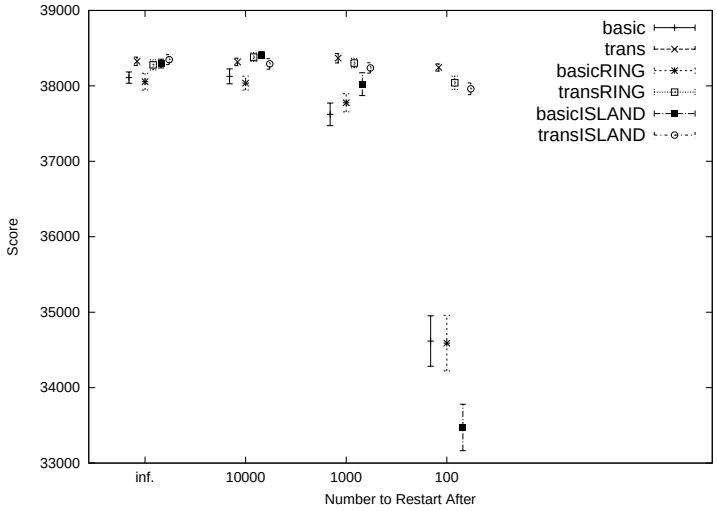



Figure B.641: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance m15421_5

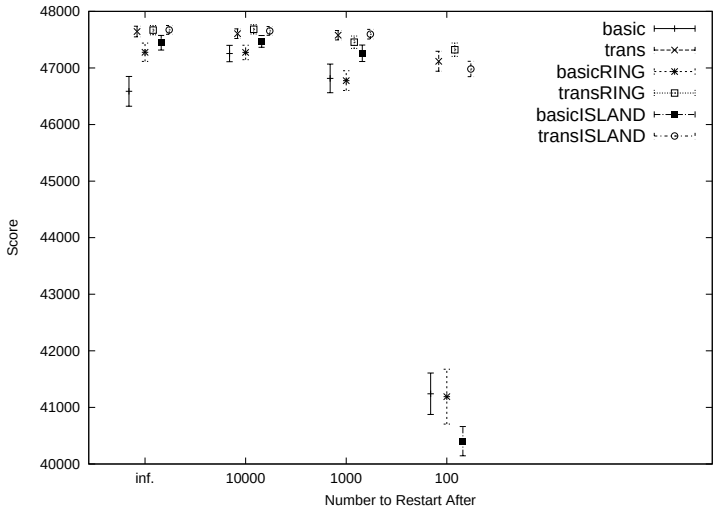



Figure B.642: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance m15421_6

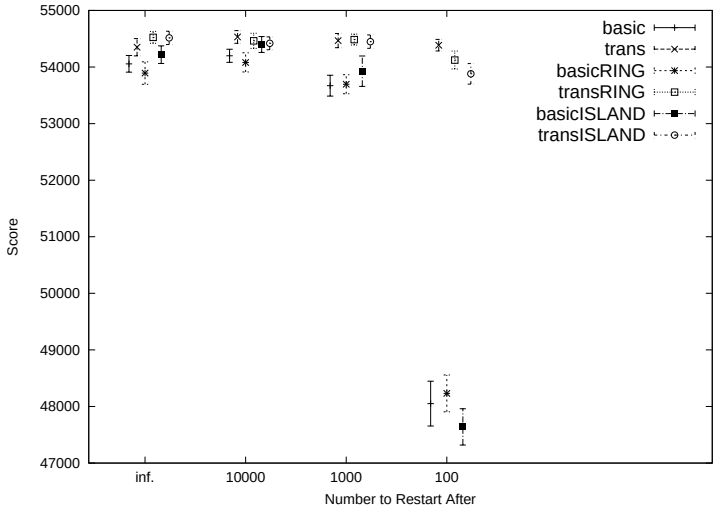



Figure B.643: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance m15421_7

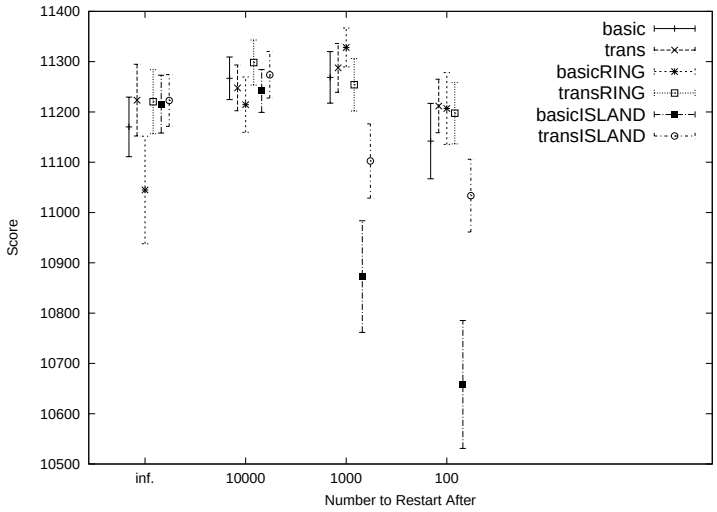



Figure B.644: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance x60189_4

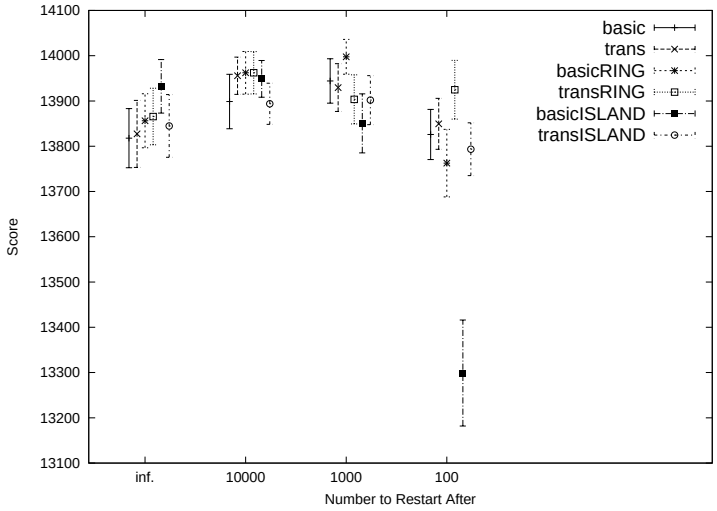



Figure B.645: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance x60189_5

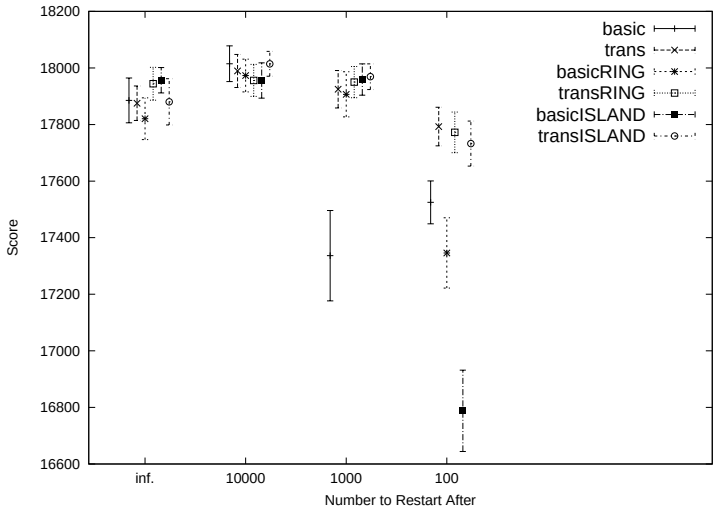



Figure B.646: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance x60189_6

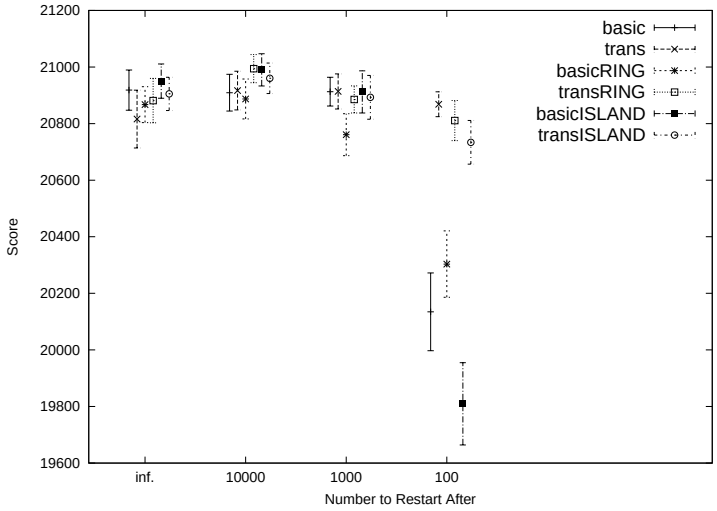



Figure B.647: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance x60189_7

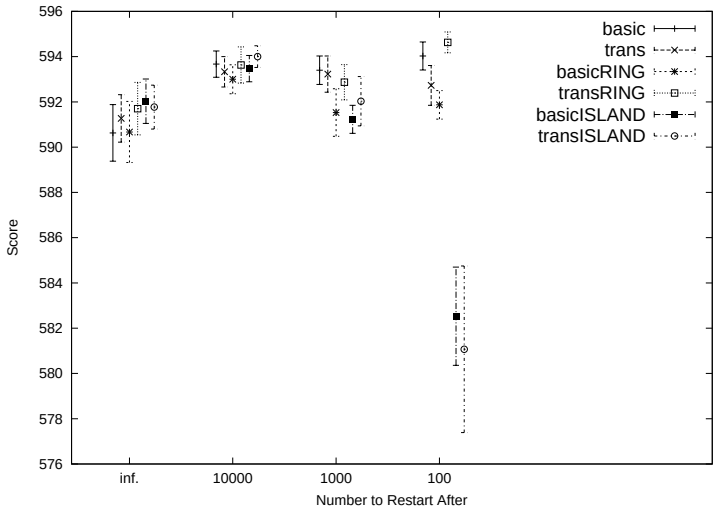



Figure B.648: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f25_305

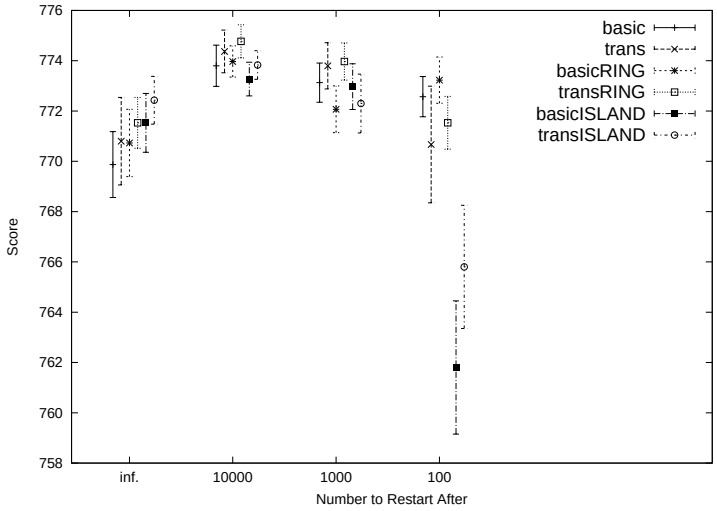



Figure B.649: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f25_400

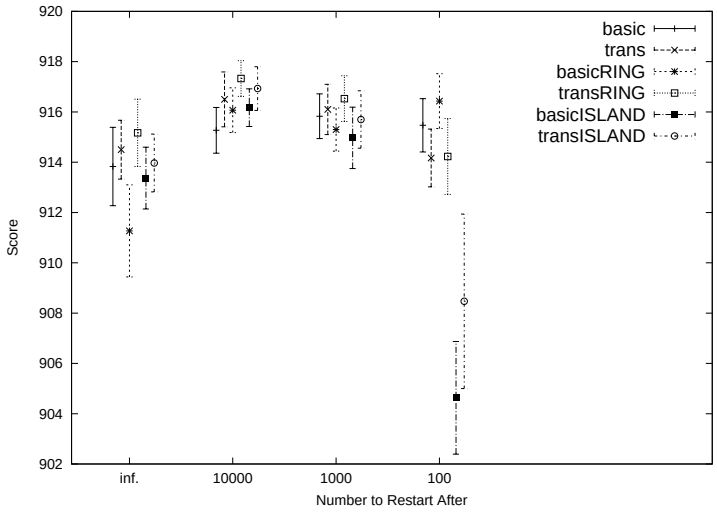



Figure B.650: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f25_500

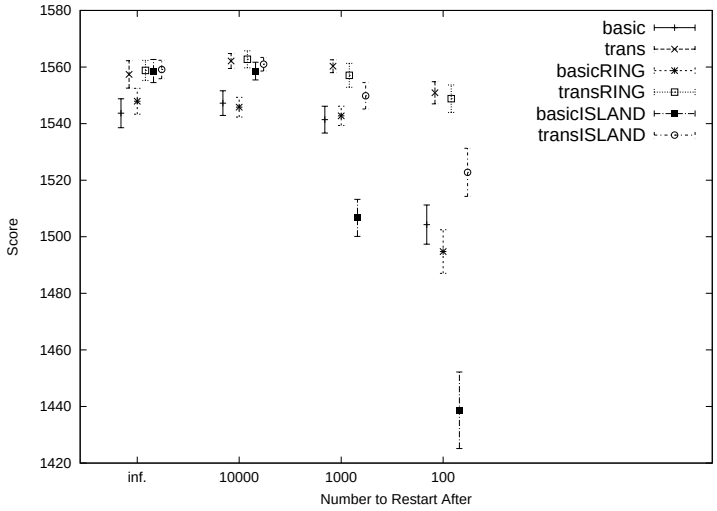



Figure B.651: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f50_315

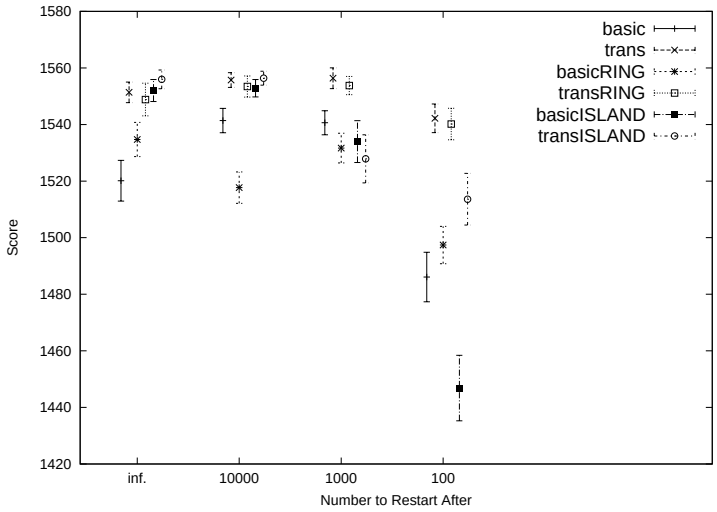



Figure B.652: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f50_412

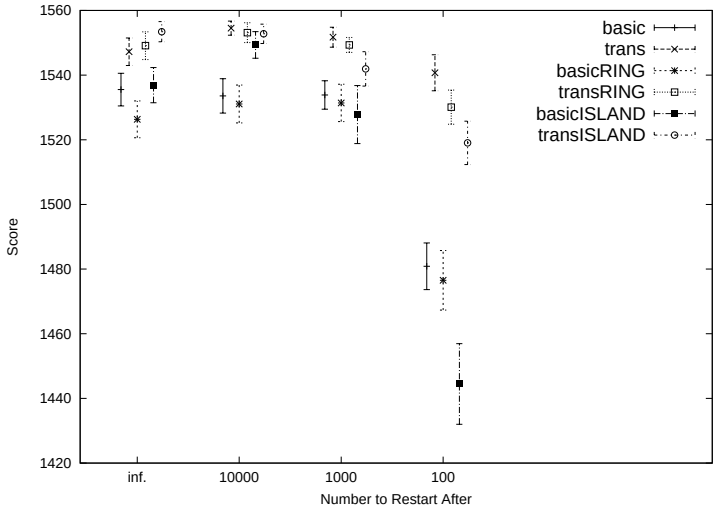



Figure B.653: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f50_498

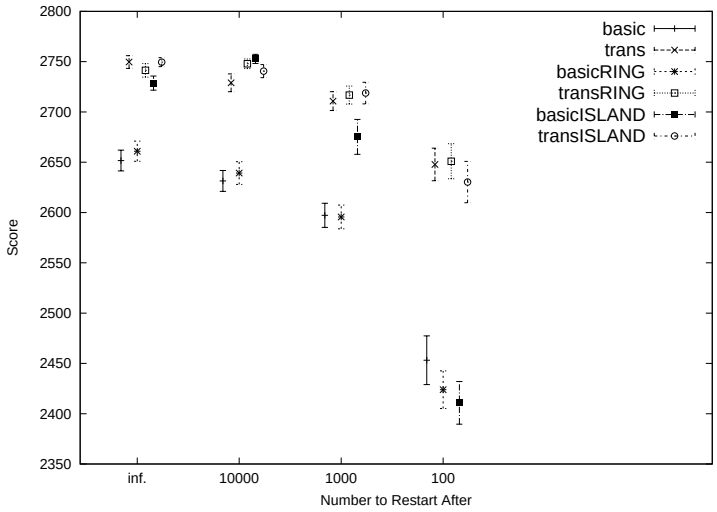



Figure B.654: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f100_307

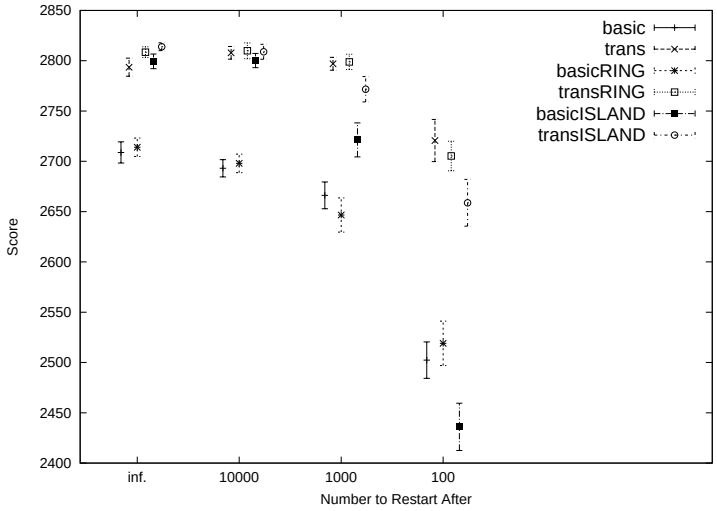



Figure B.655: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f100_415

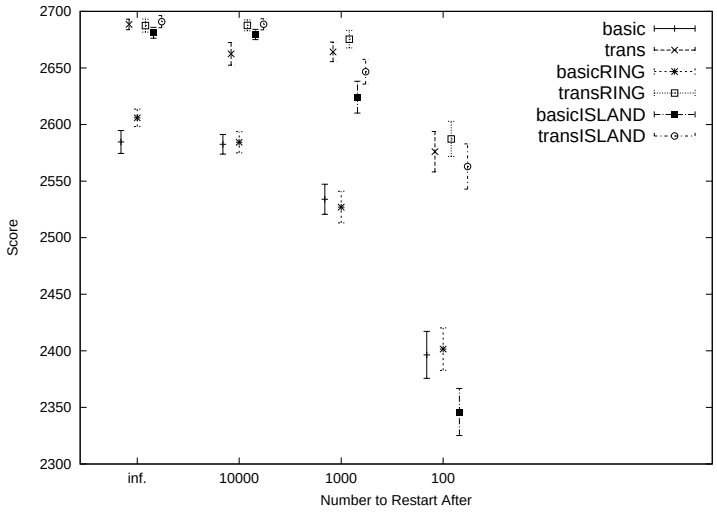



Figure B.656: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f100_512

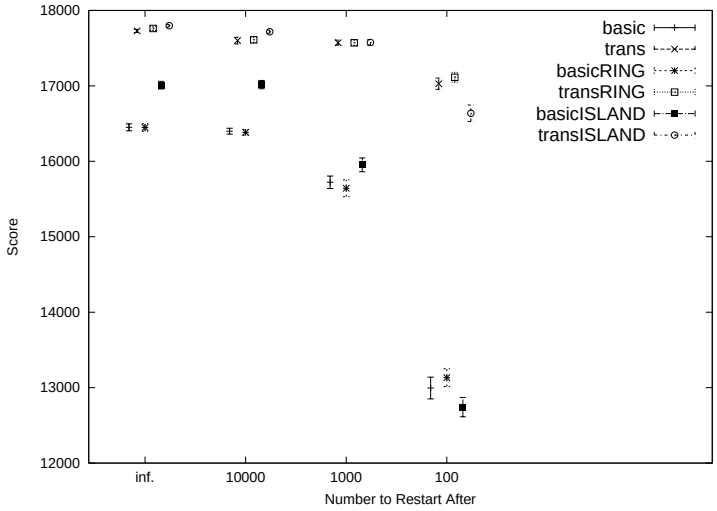



Figure B.657: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f508_354

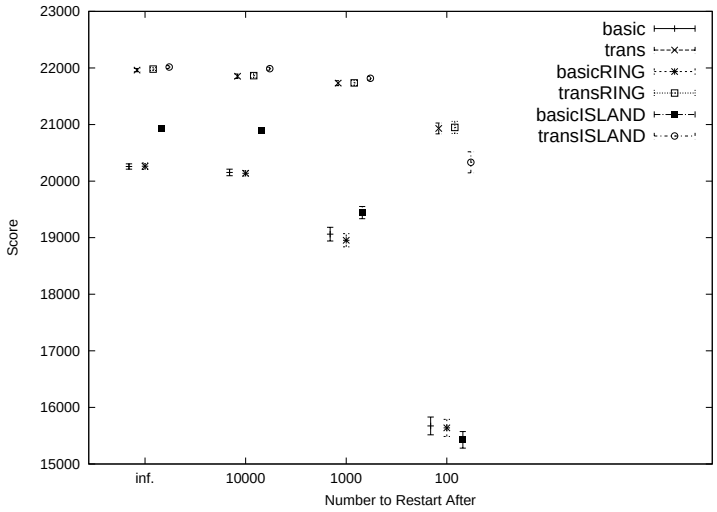



Figure B.658: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f635_350

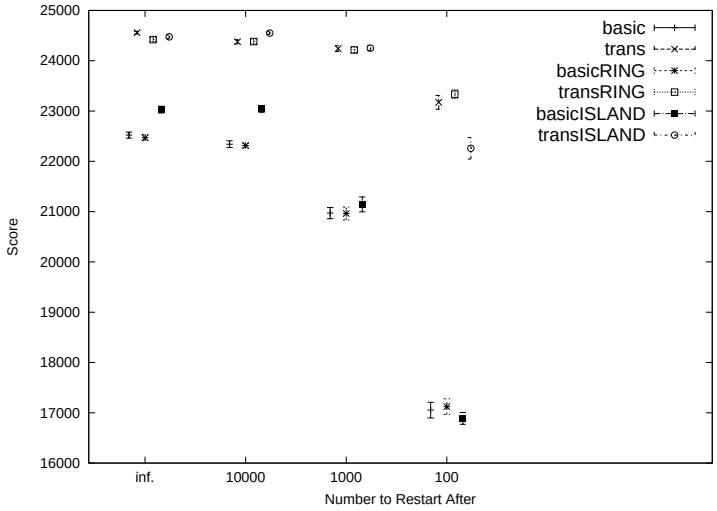



Figure B.659: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f737_355

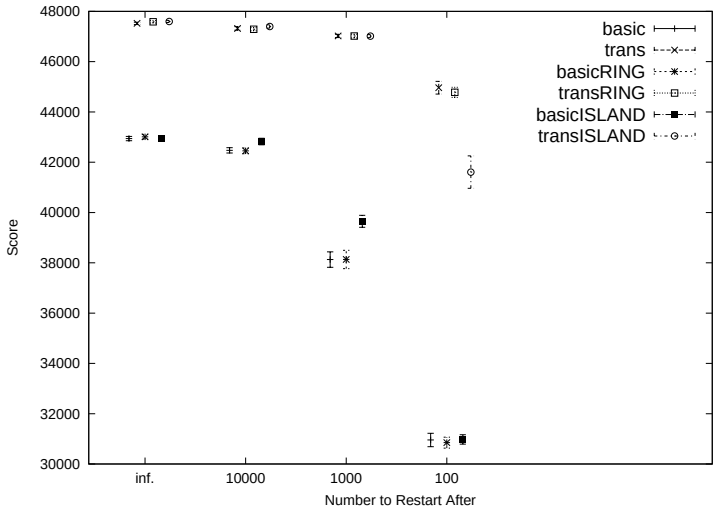



Figure B.660: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f1343_354

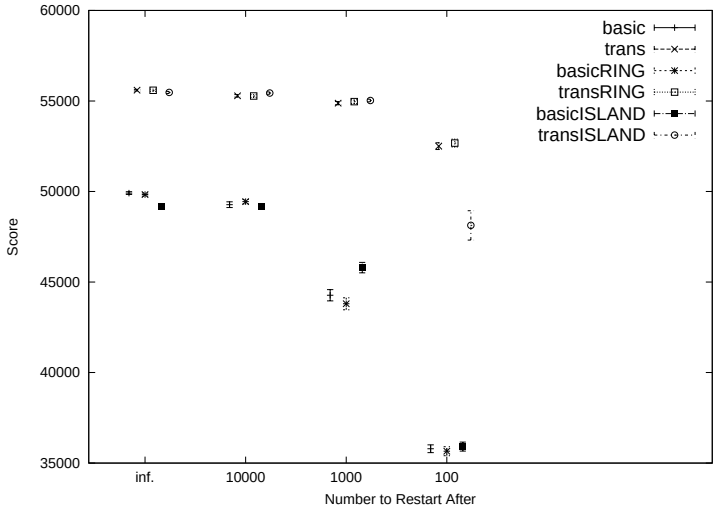



Figure B.661: Comparison of Best Results Between Algorithm Variaions with No Post Optimizaiton and Forced Recentre on Problem Instance f1577_354

**Results With Post Optimization and Forced Recentre**

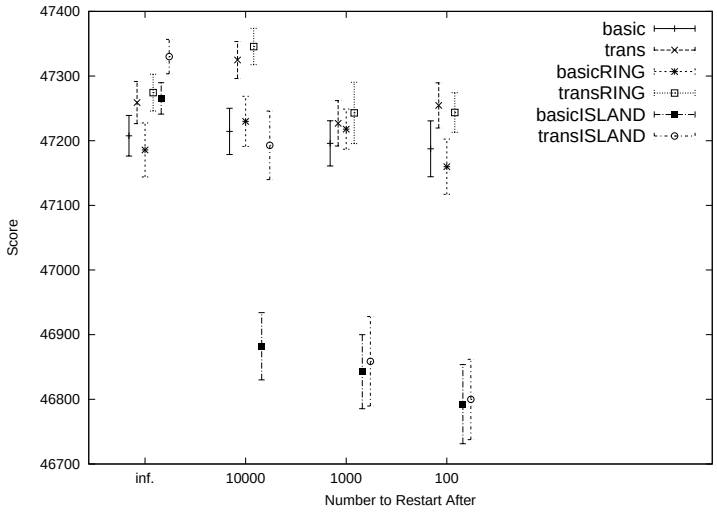



Figure B.662: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance acin1

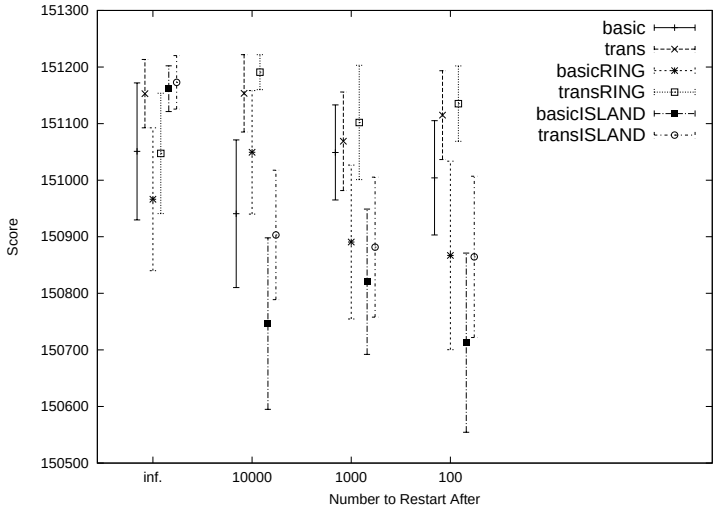



Figure B.663: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance acin2

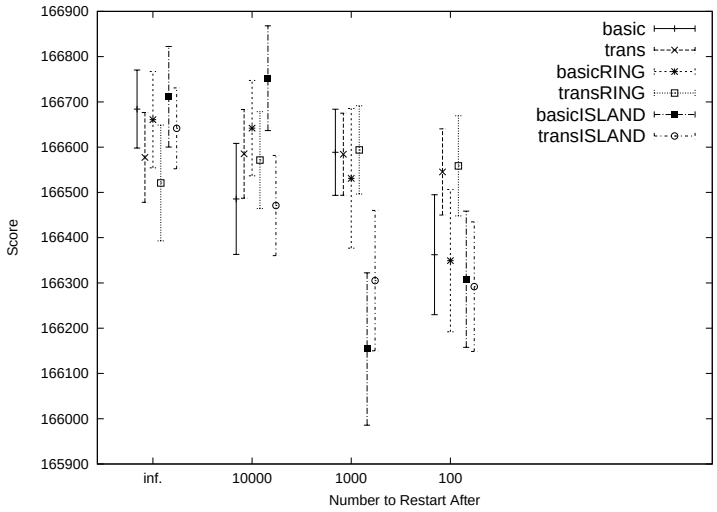



Figure B.664: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance acin3

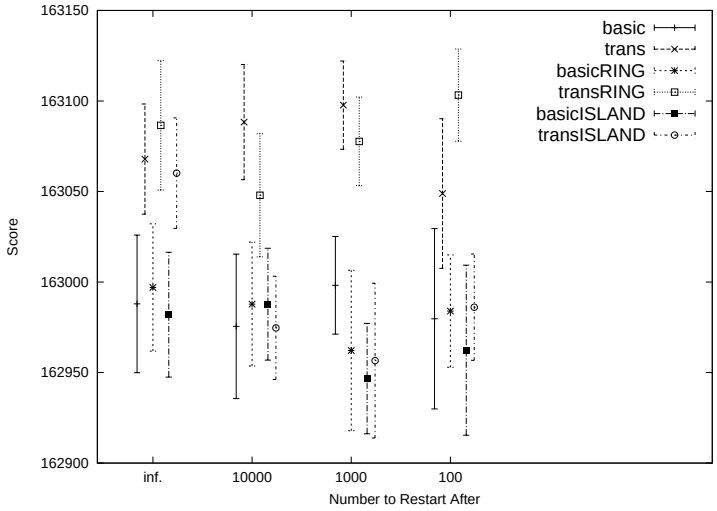



Figure B.665: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance acin5

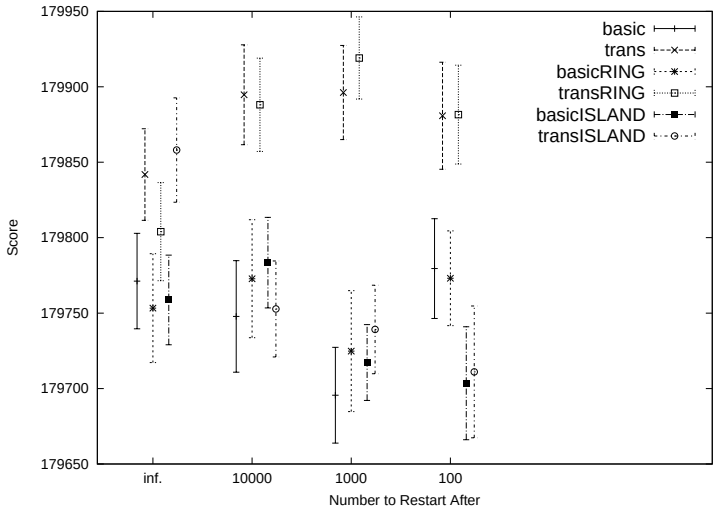



Figure B.666: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance acin7

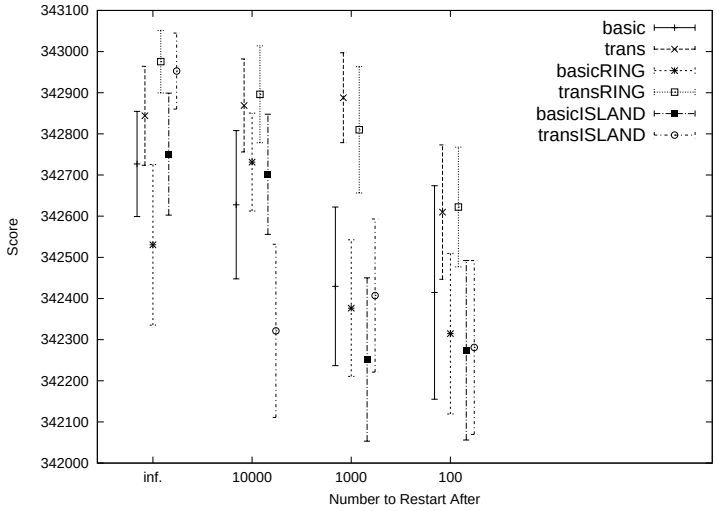



Figure B.667: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance acin9

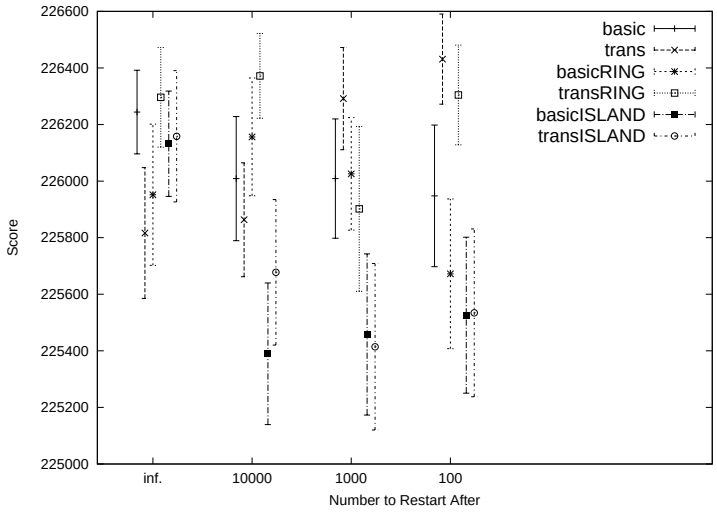



Figure B.668: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance bx842596_4

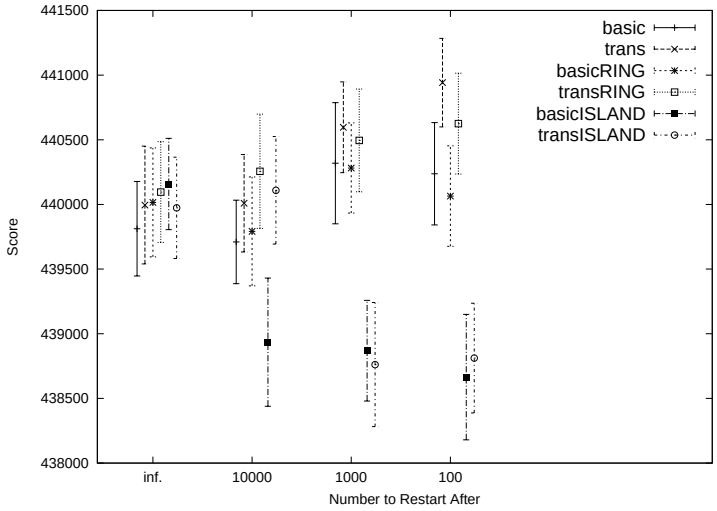



Figure B.669: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance bx842596_7

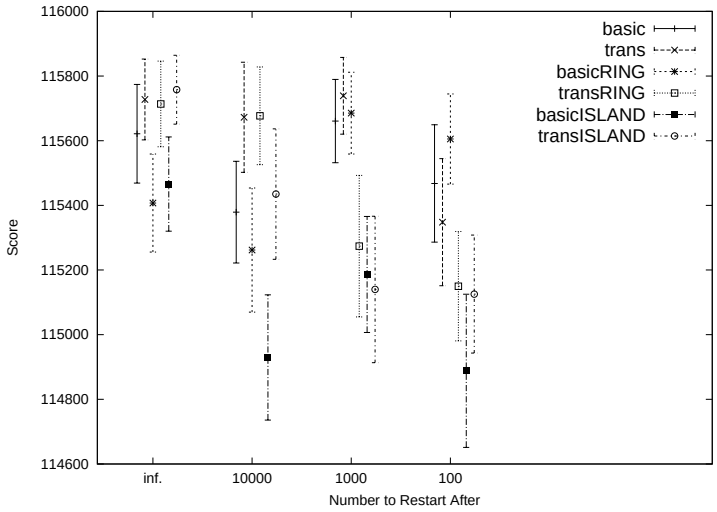



Figure B.670: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance j02459_7

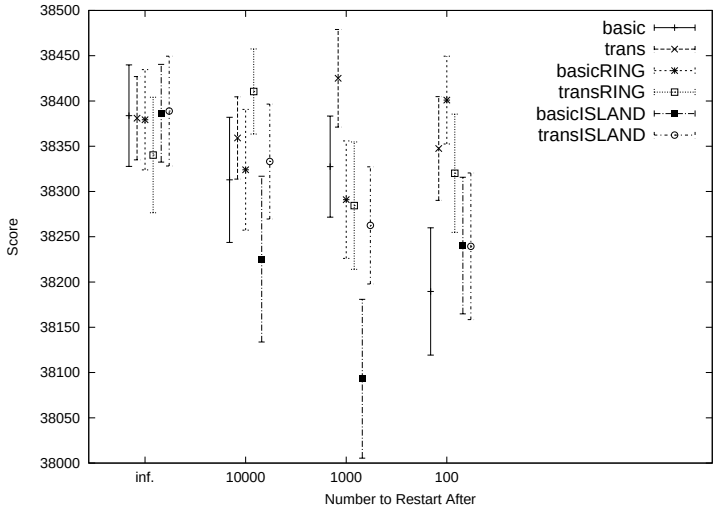



Figure B.671: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance m15421_5

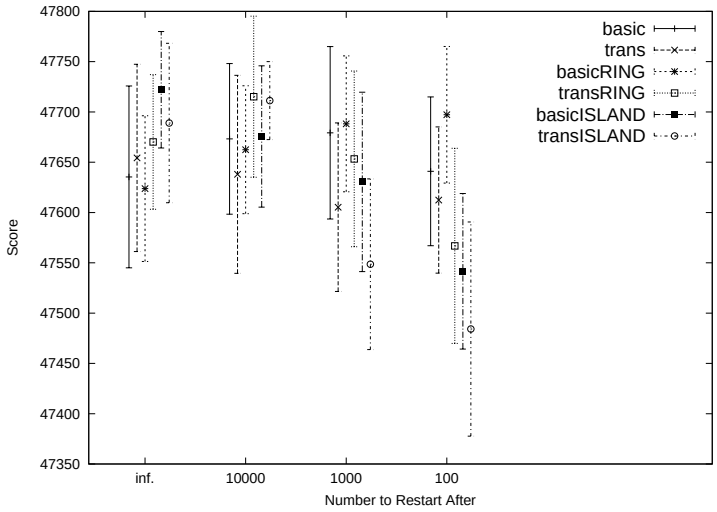



Figure B.672: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance m15421_6

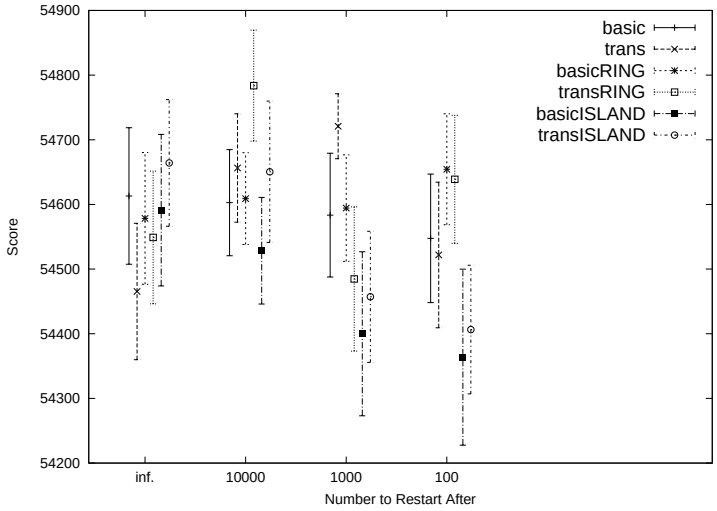



Figure B.673: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance m15421_7

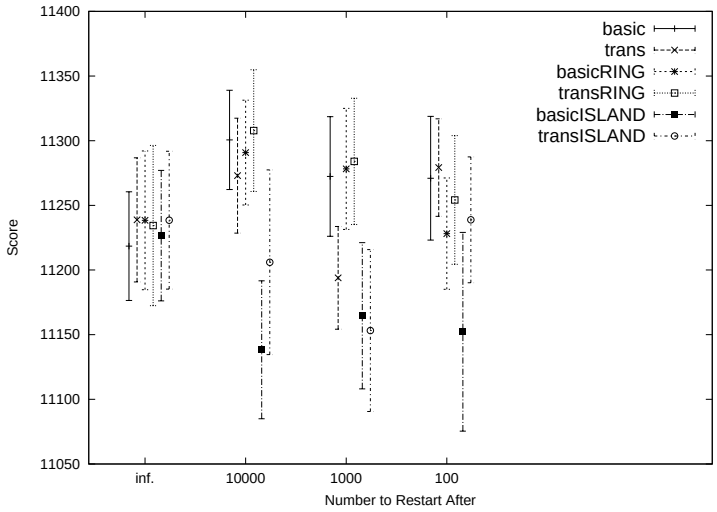



Figure B.674: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance x60189_4

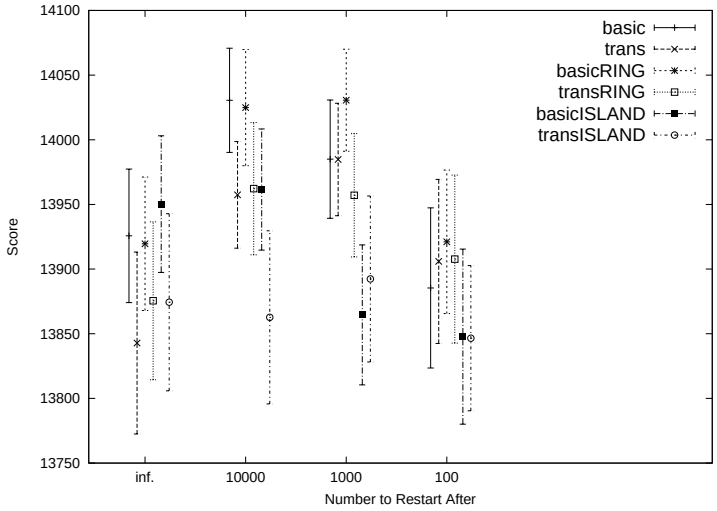



Figure B.675: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance x60189_5

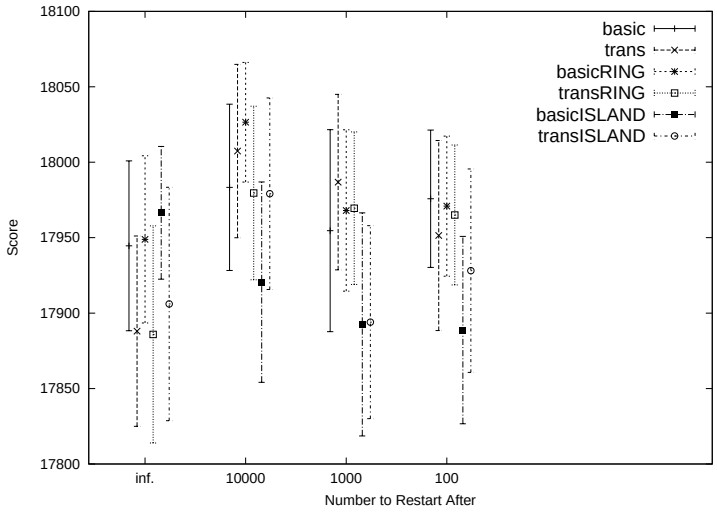



Figure B.676: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance x60189_6

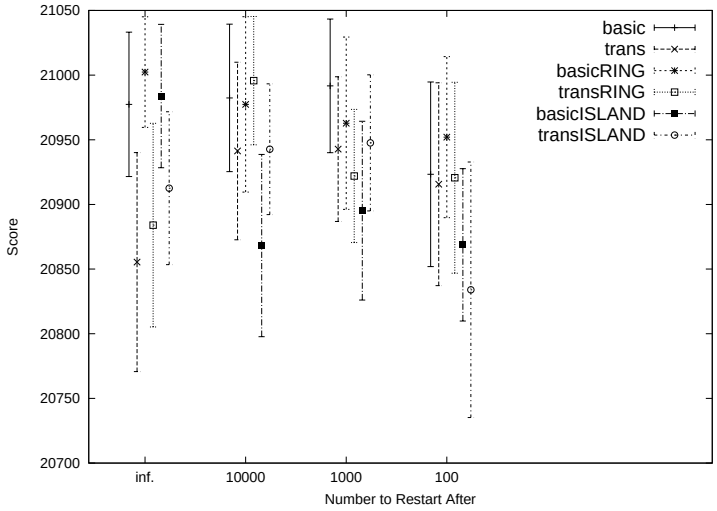



Figure B.677: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance x60189_7

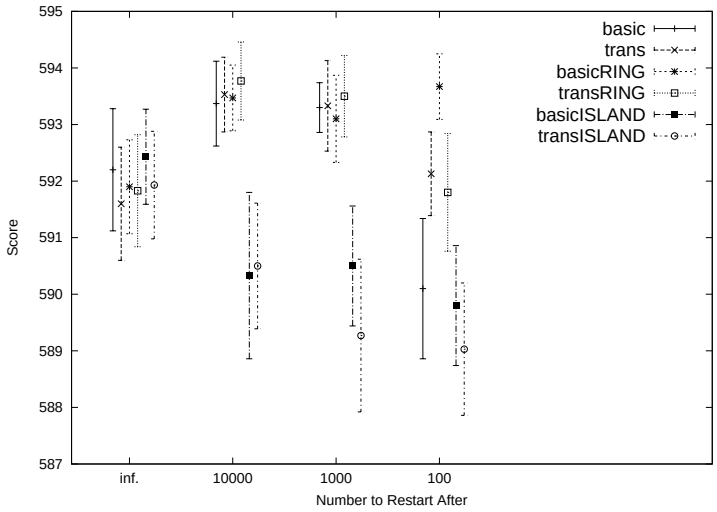



Figure B.678: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f25_305

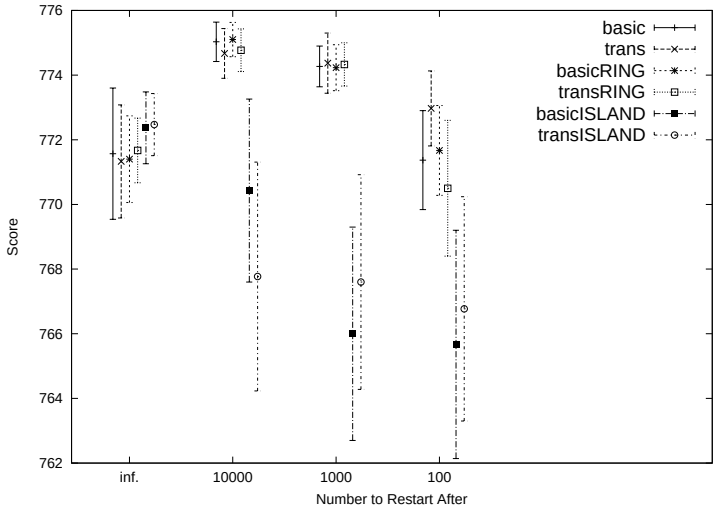



Figure B.679: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f25_400

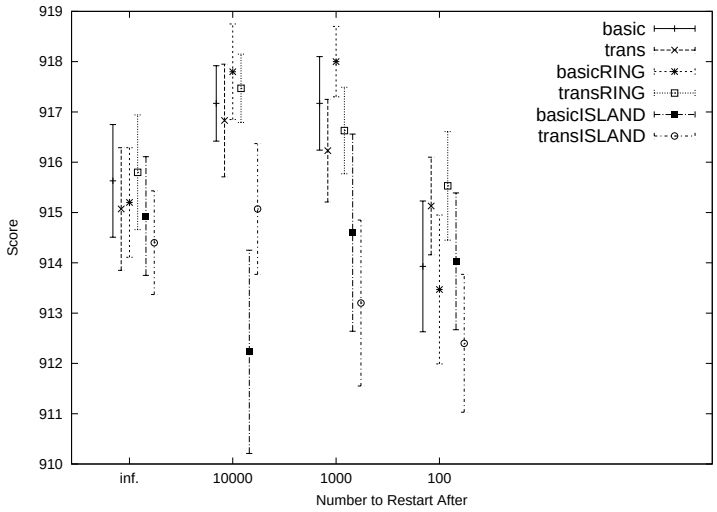



Figure B.680: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f25_500

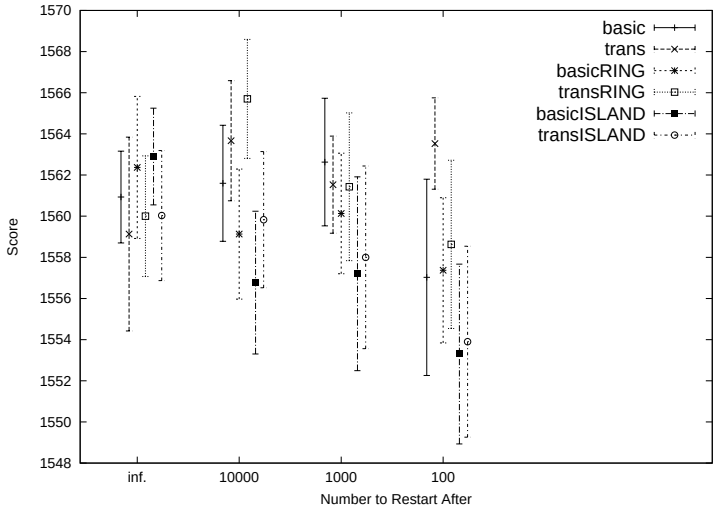



Figure B.681: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f50_315

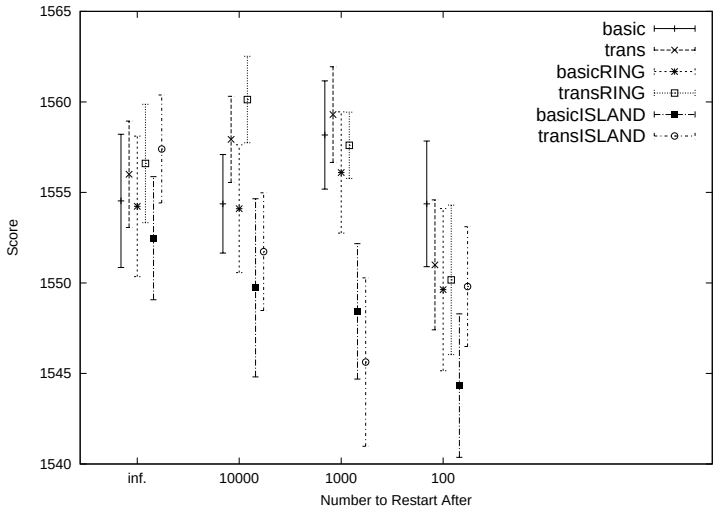



Figure B.682: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f50_412

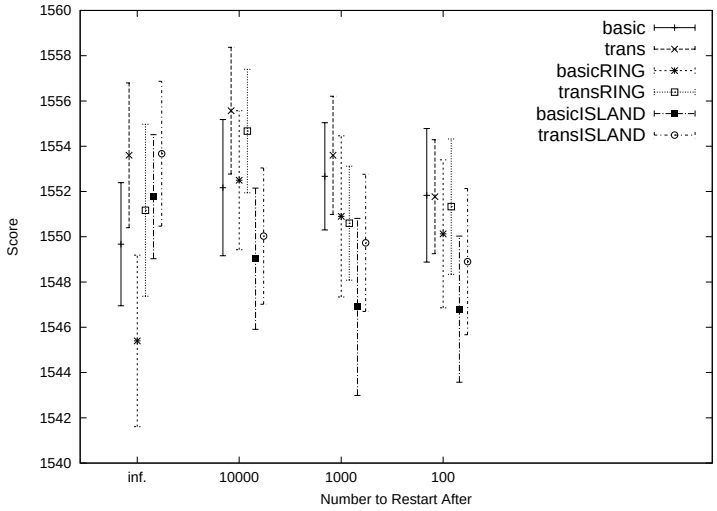



Figure B.683: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f50_498

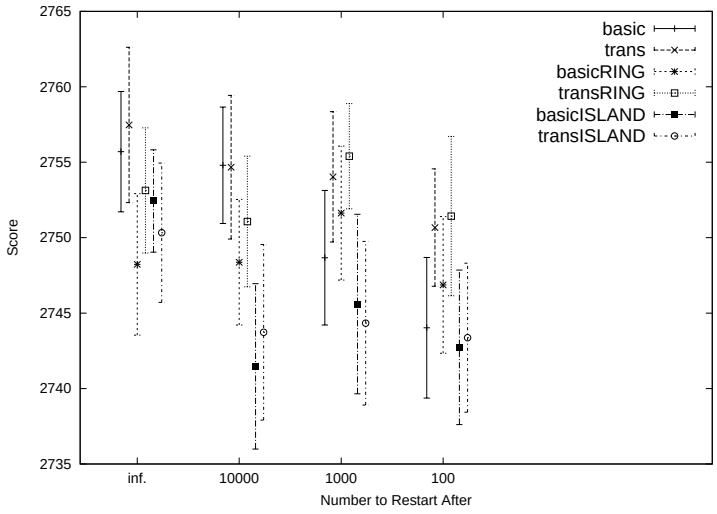



Figure B.684: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f100_307

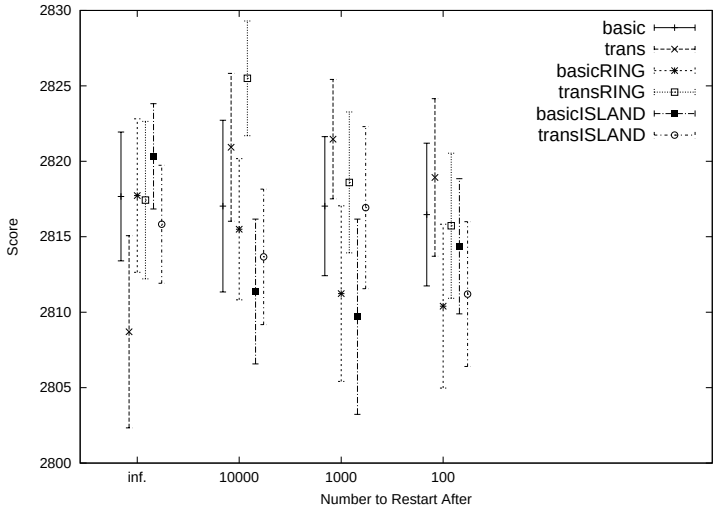



Figure B.685: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f100_415

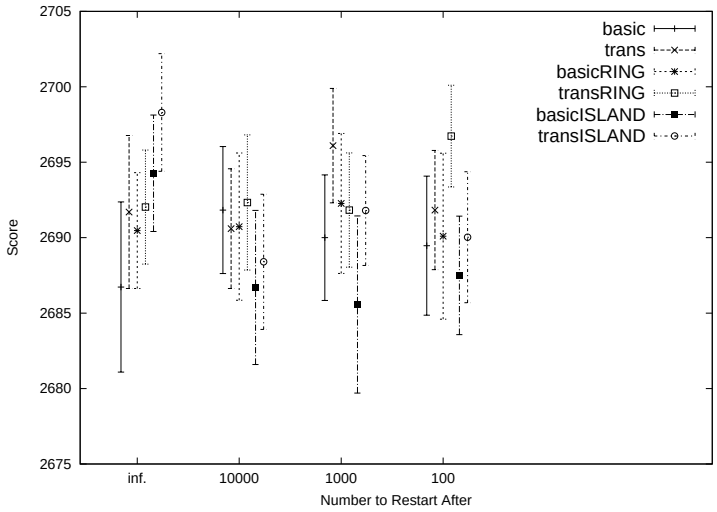



Figure B.686: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f100_512

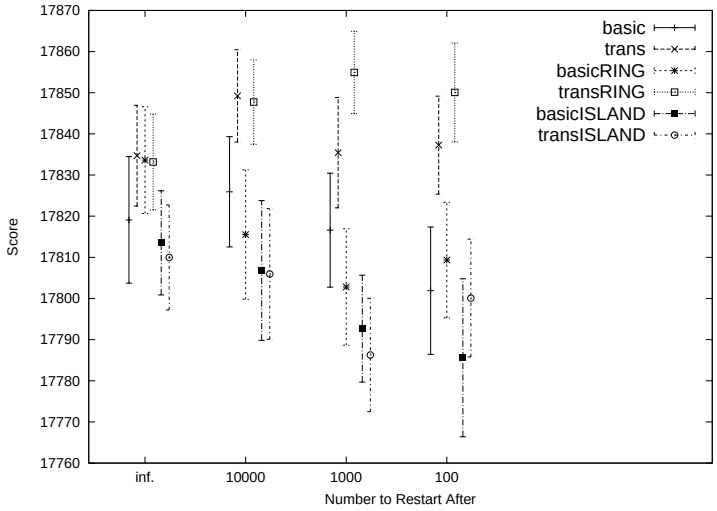



Figure B.687: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f508_354

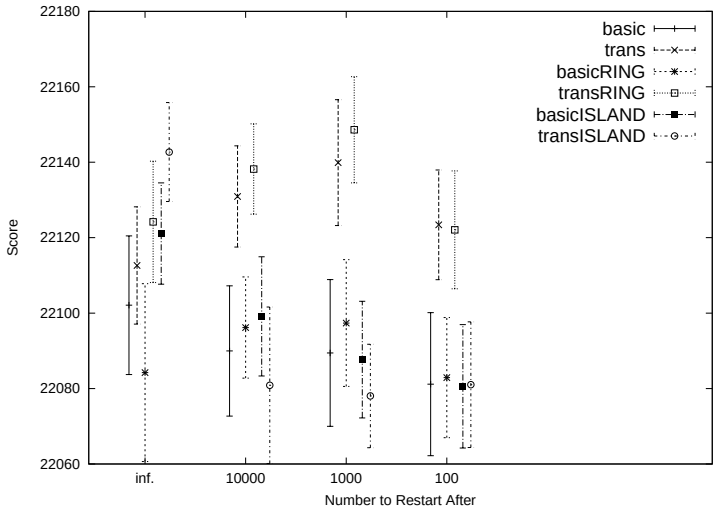



Figure B.688: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f635_350

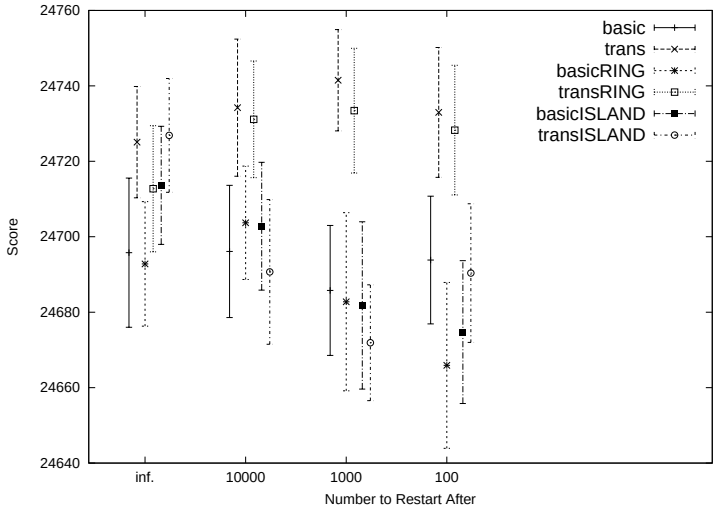



Figure B.689: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f737_355

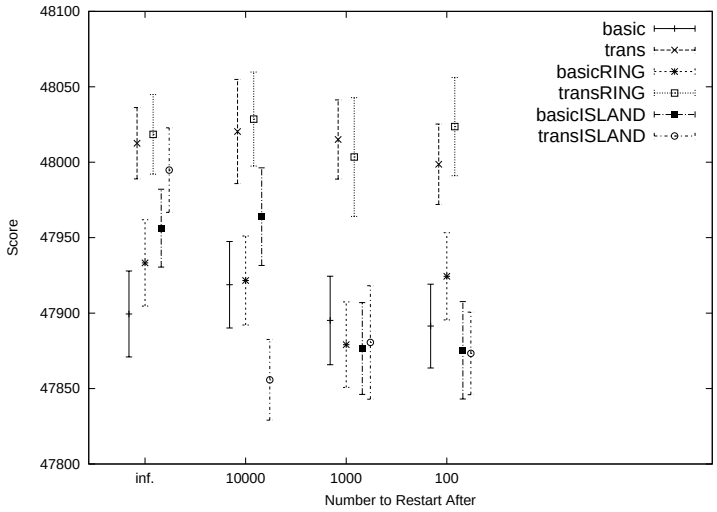



Figure B.690: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f1343_354

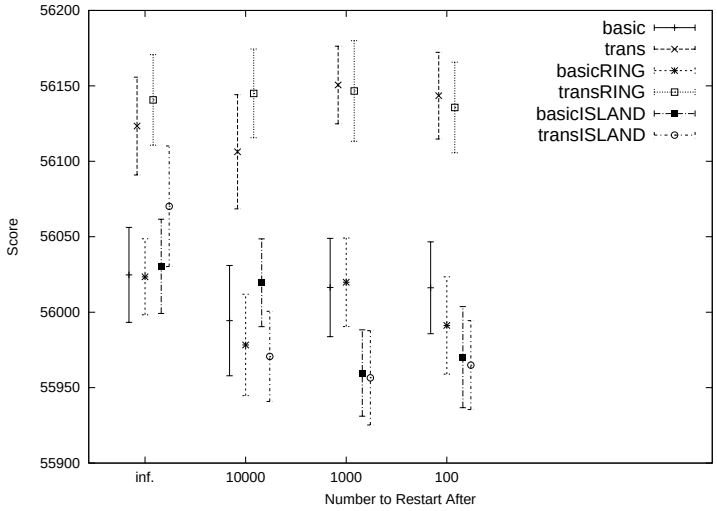



Figure B.691: Comparison of Best Results Between Algorithm Variaions with Post Optimizaiton and Forced Recentre on Problem Instance f1577_354

**Comparison of No Forced and Forced Recentre Experimental Results**

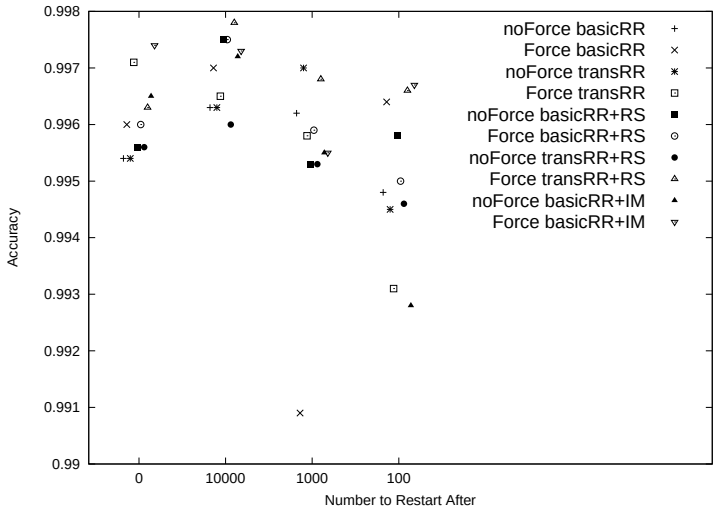



Figure B.692: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin1

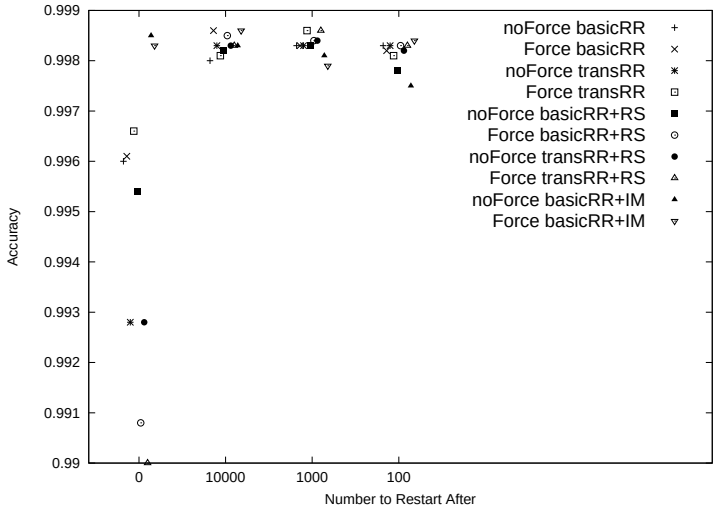



Figure B.693: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin2

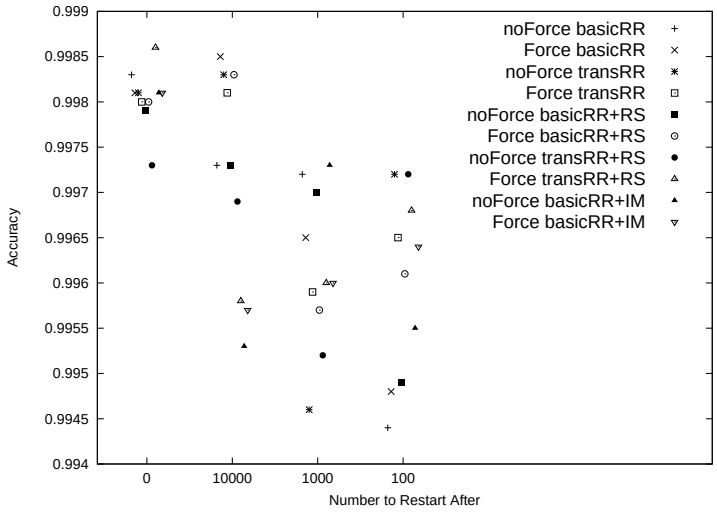



Figure B.694: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin3

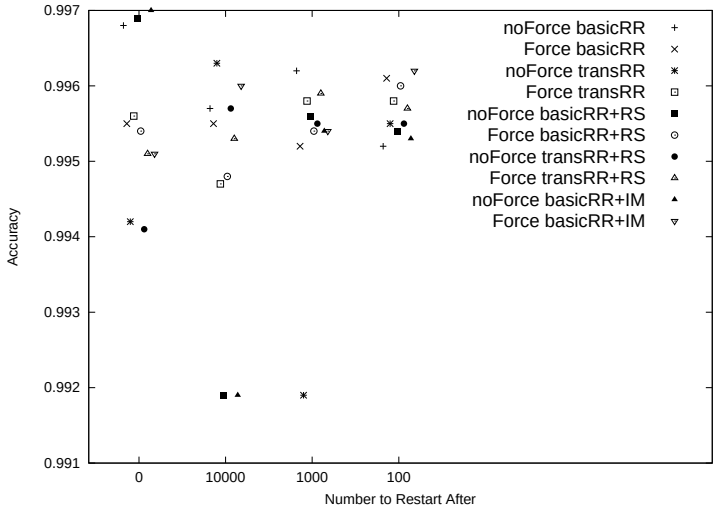



Figure B.695: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin5

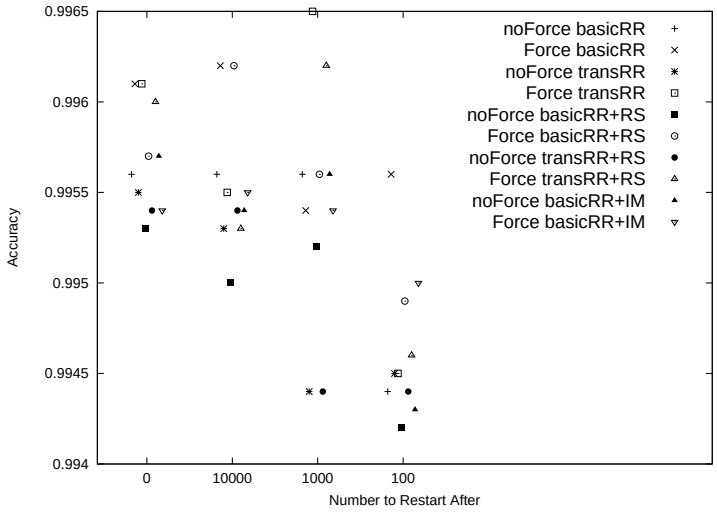



Figure B.696: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin7

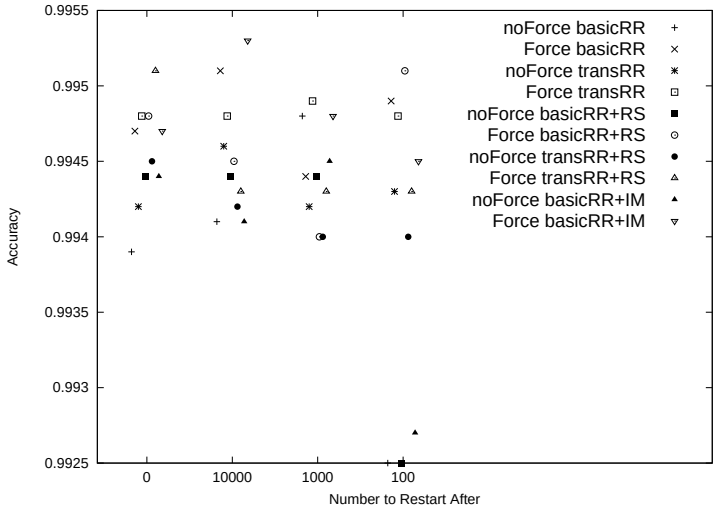



Figure B.697: Comparison of No Forced Recentre and Forced Recentre on Problem Instance acin9

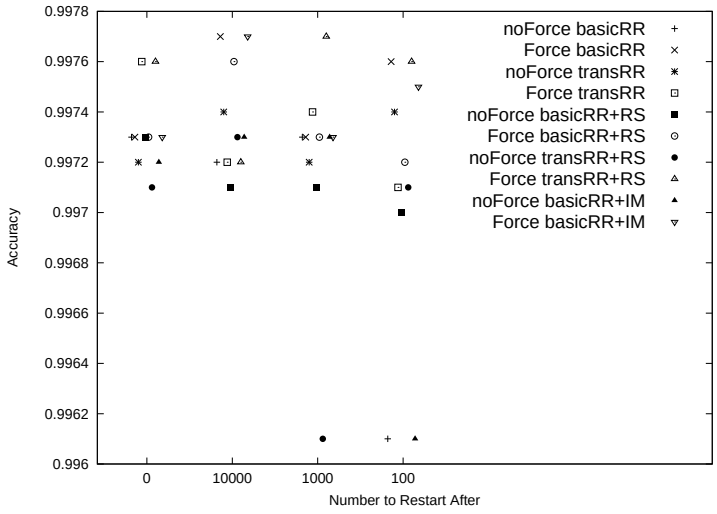



Figure B.698: Comparison of No Forced Recentre and Forced Recentre on Problem Instance bx842596_4

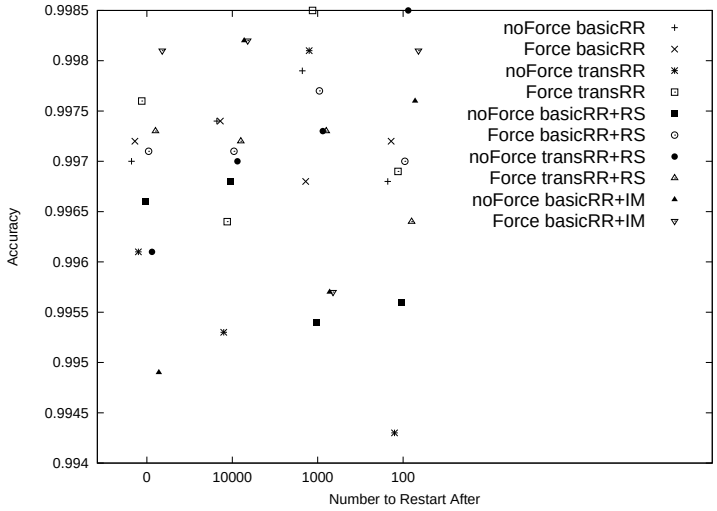



Figure B.699: Comparison of No Forced Recentre and Forced Recentre on Problem Instance bx842596_7

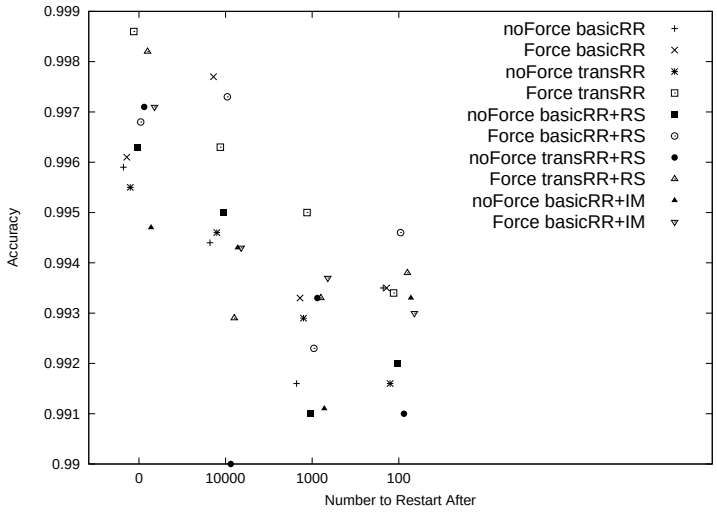



Figure B.700: Comparison of No Forced Recentre and Forced Recentre on Problem Instance j02459_7

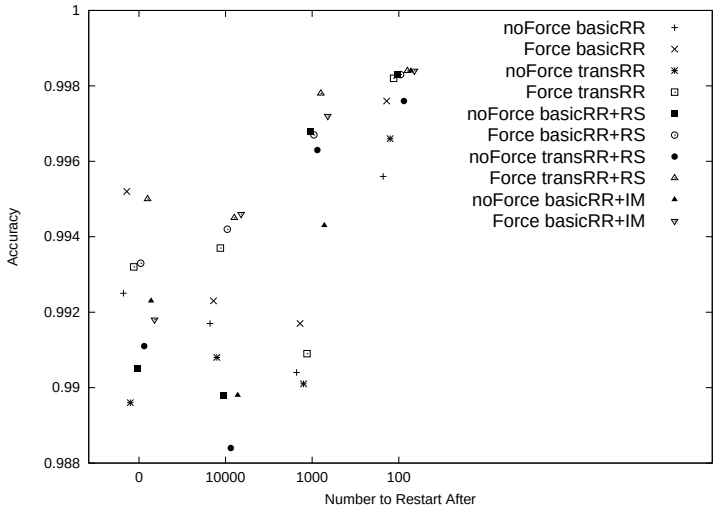



Figure B.701: Comparison of No Forced Recentre and Forced Recentre on Problem Instance m15421_5

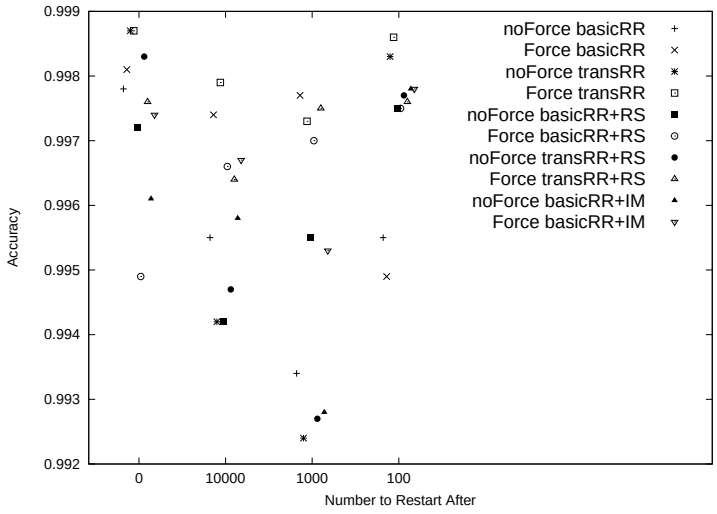



Figure B.702: Comparison of No Forced Recentre and Forced Recentre on Problem Instance m15421_6

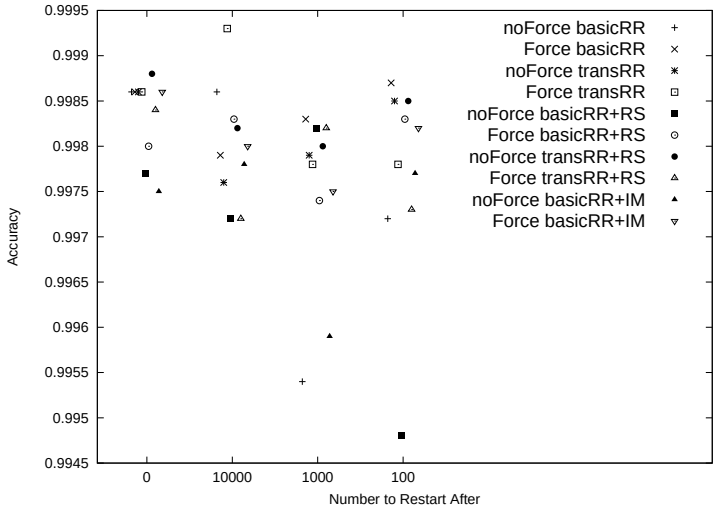



Figure B.703: Comparison of No Forced Recentre and Forced Recentre on Problem Instance m15421_7

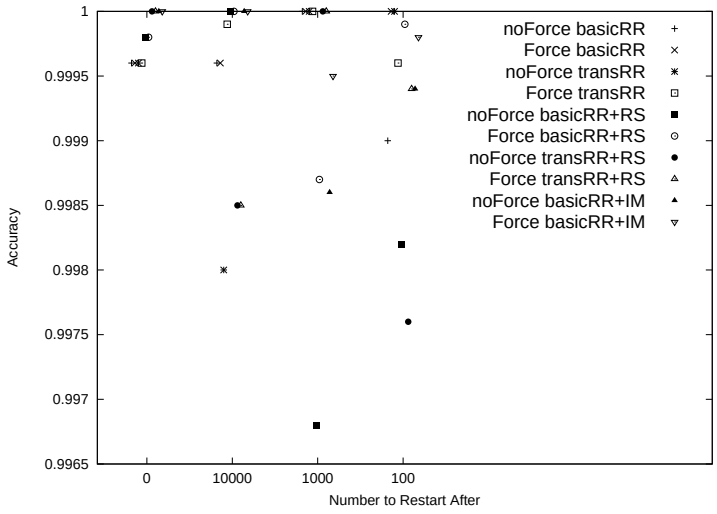



Figure B.704: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_4

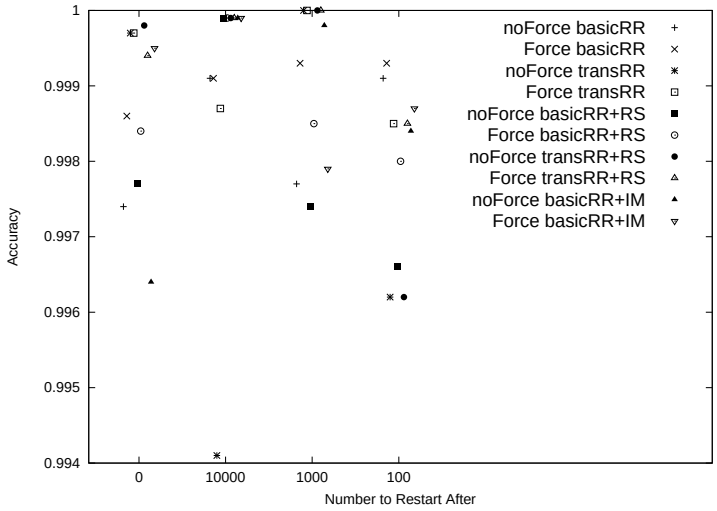



Figure B.705: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_5

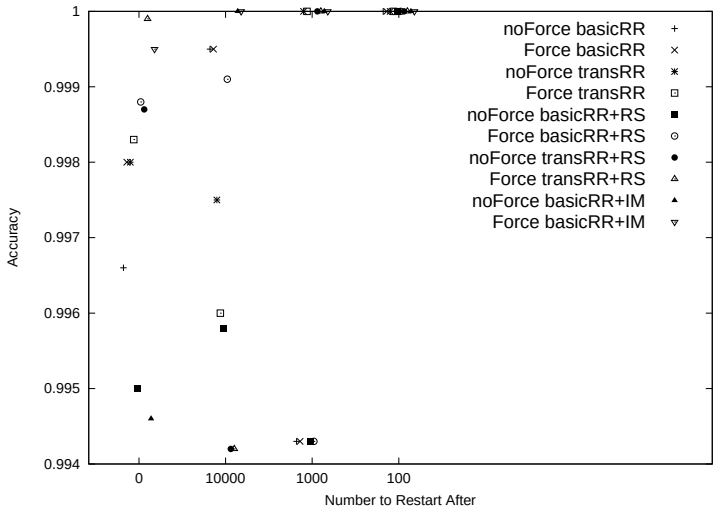



Figure B.706: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_6

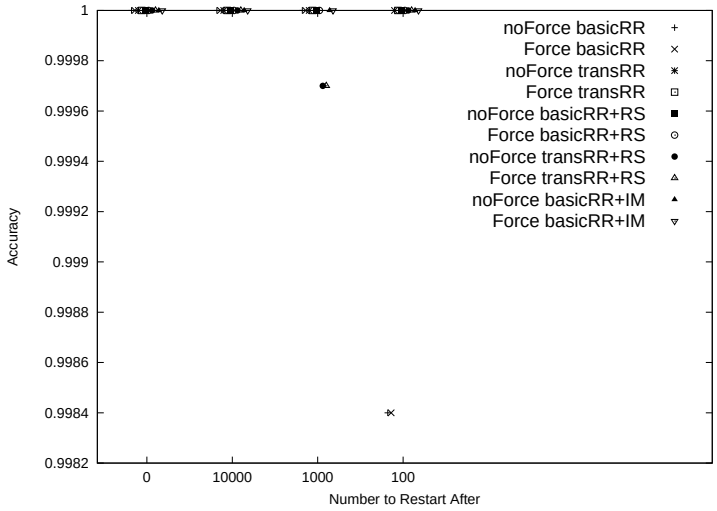



Figure B.707: Comparison of No Forced Recentre and Forced Recentre on Problem Instance x60189_7

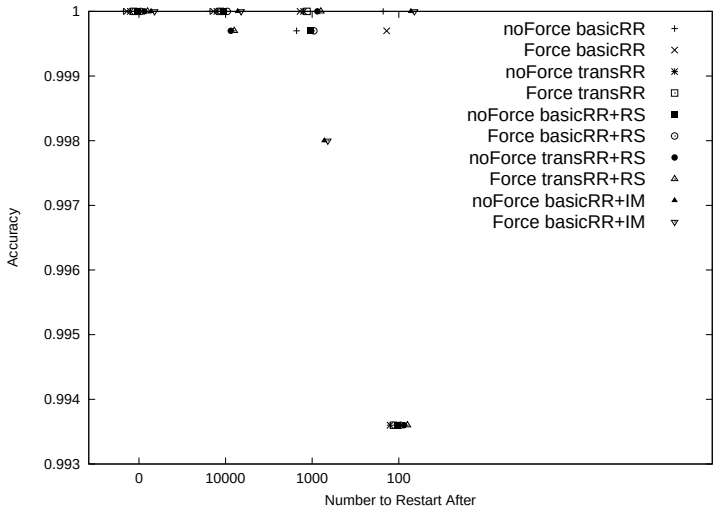



Figure B.708: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f25_305

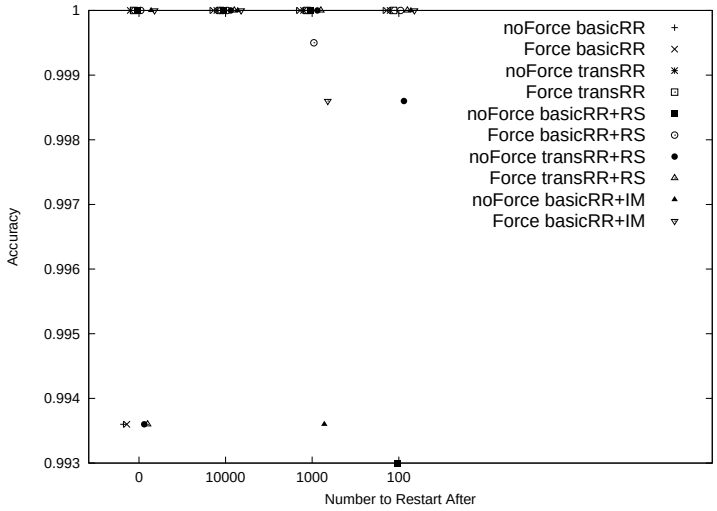



Figure B.709: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f25_400

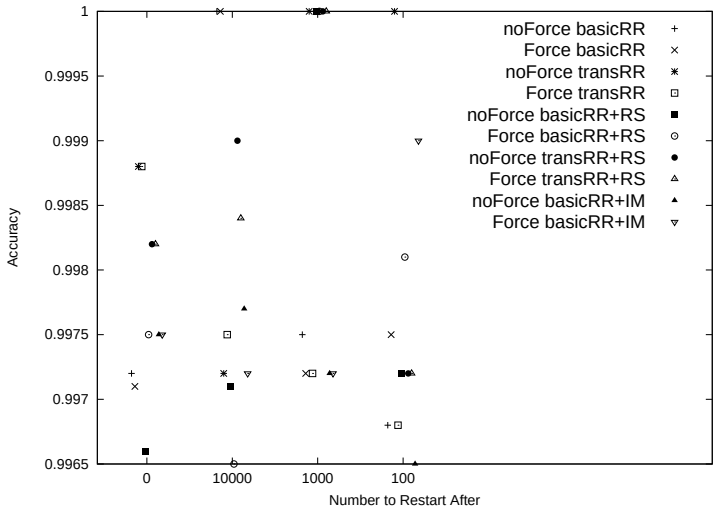



Figure B.710: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f25_500

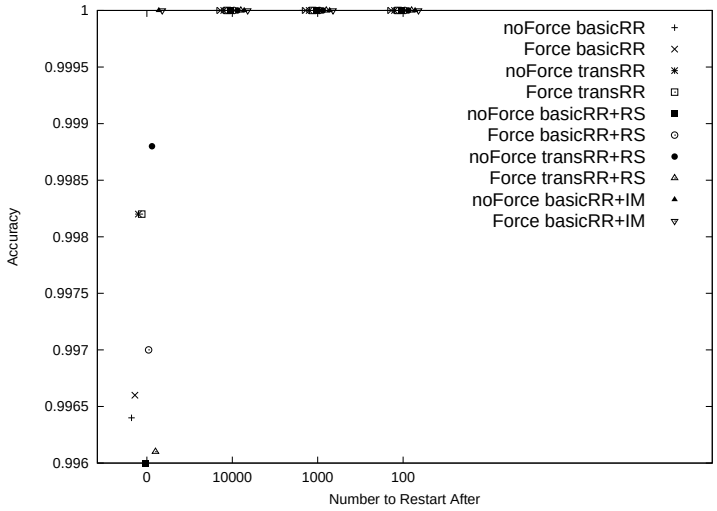



Figure B.711: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f50_315

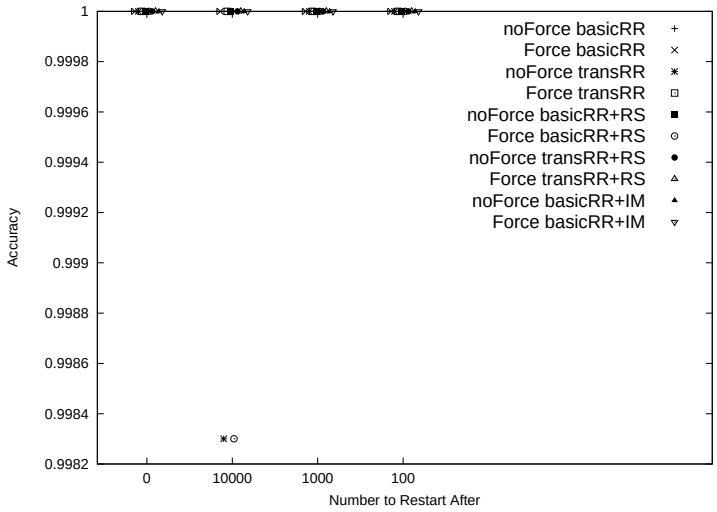



Figure B.712: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f50_412

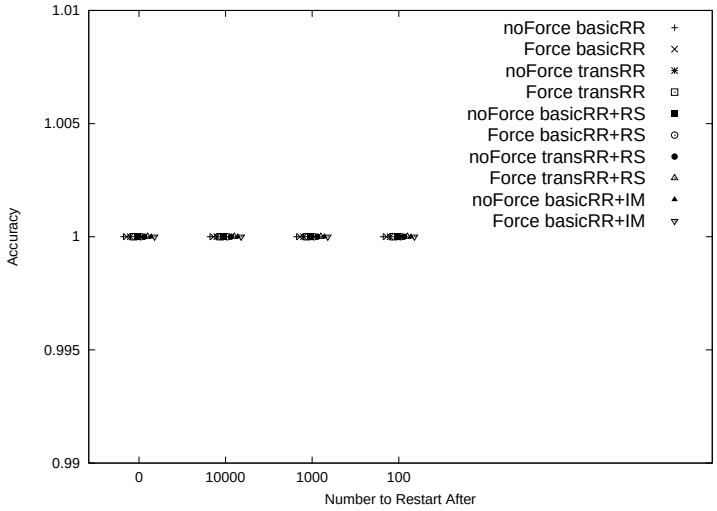



Figure B.713: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f50_498

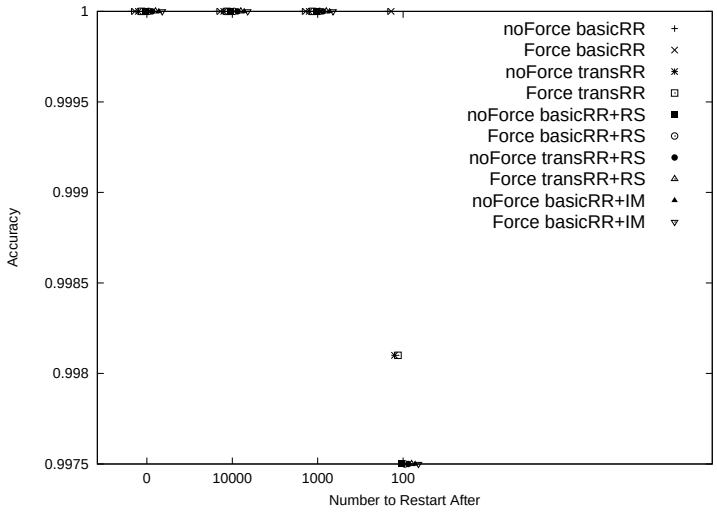



Figure B.714: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f100_307

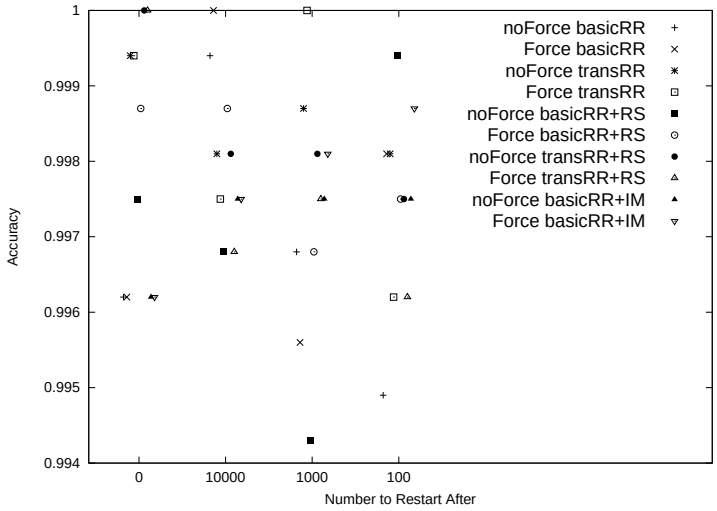



Figure B.715: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f100_415

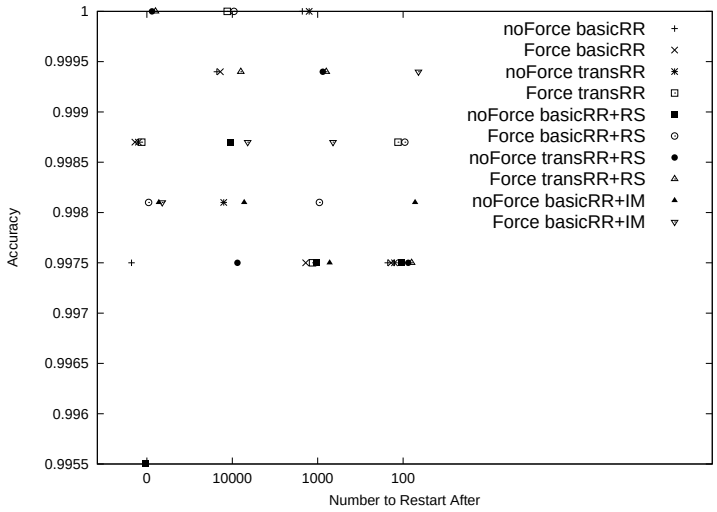



Figure B.716: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f100_512

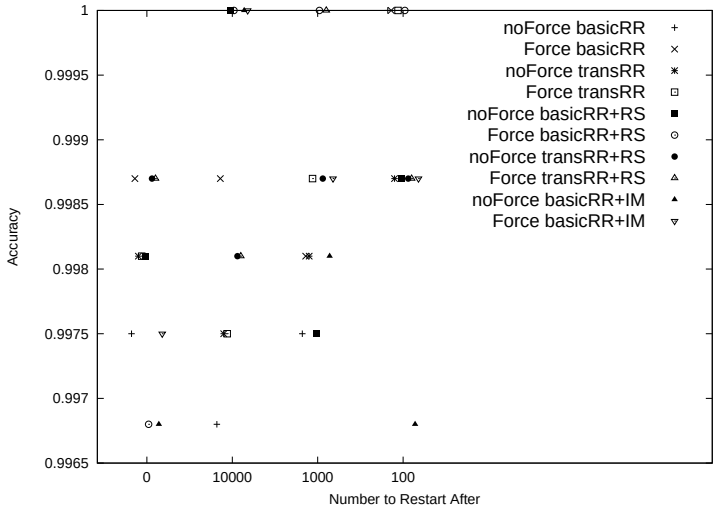



Figure B.717: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f508_354

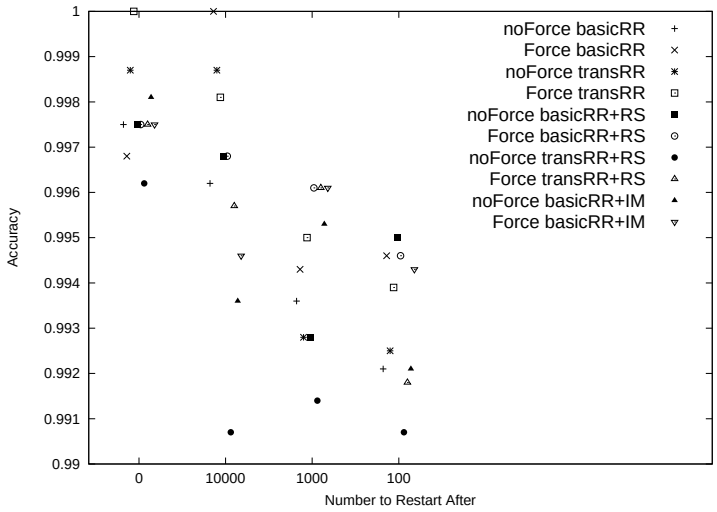



Figure B.718: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f635_350

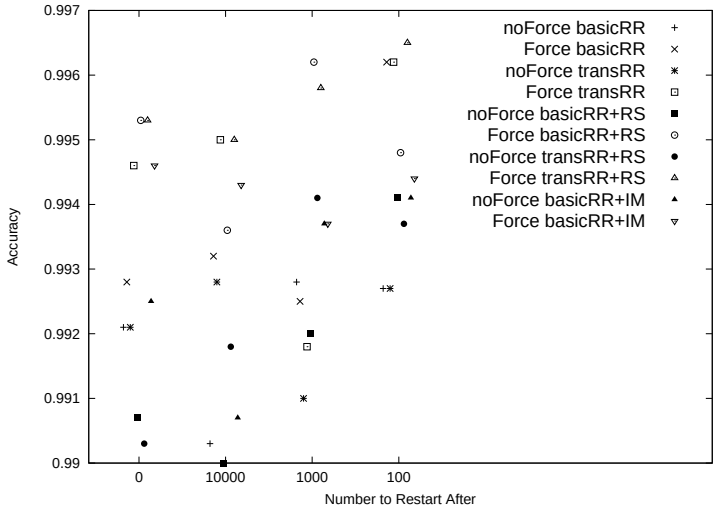



Figure B.719: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f737_355

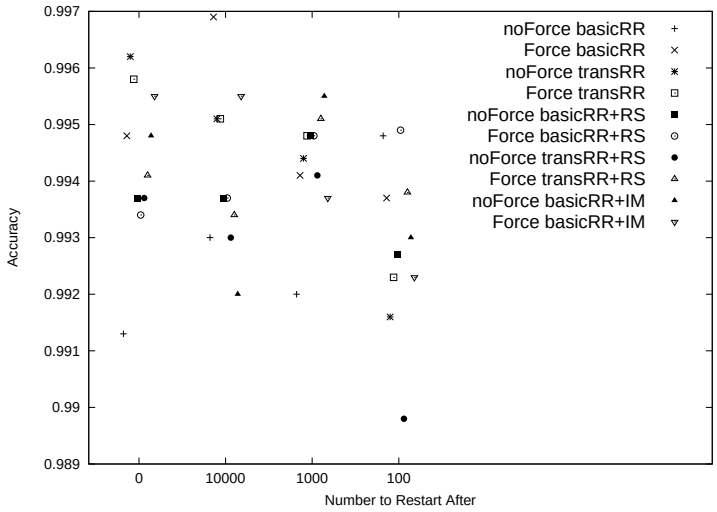



Figure B.720: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f1343_354

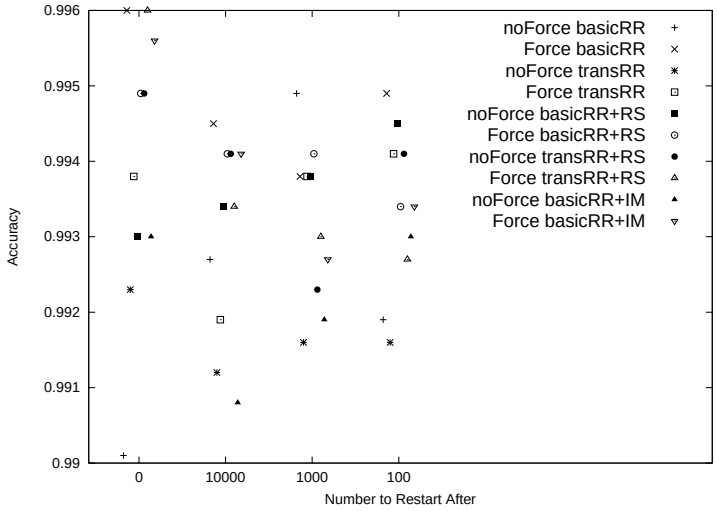



Figure B.721: Comparison of No Forced Recentre and Forced Recentre on Problem Instance f1577_354

**Comparison of Third and Fourth Set of Experimental Results With Forced Restarts**

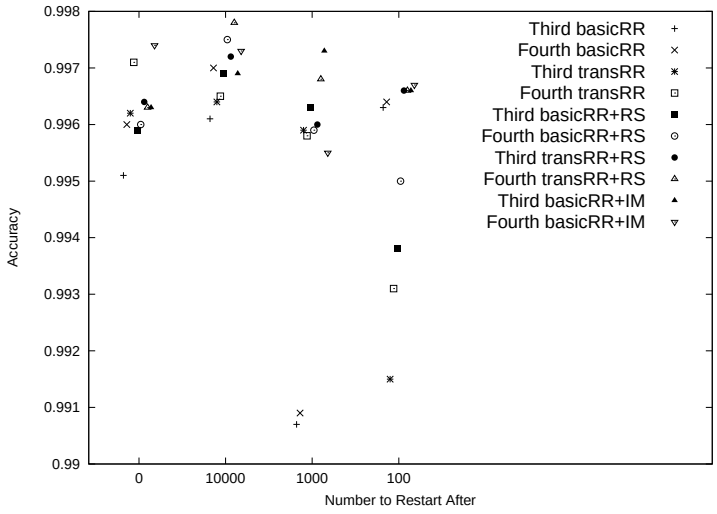



Figure B.722: Comparison of Third and Fourth Experimental Results on Problem Instance acin1

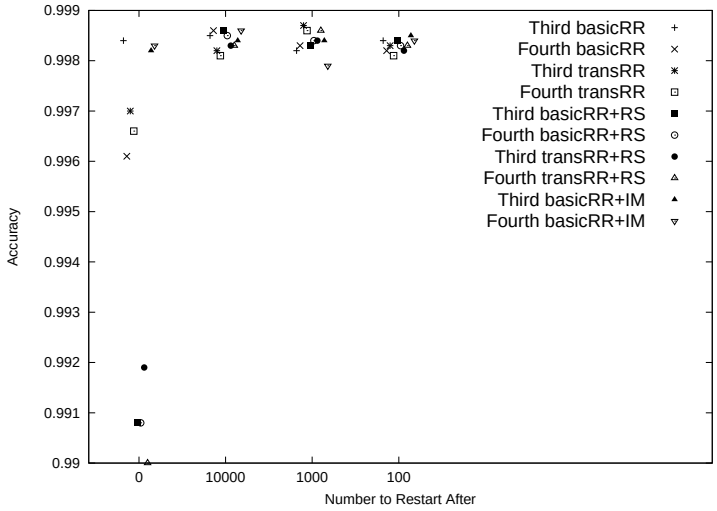



Figure B.723: Comparison of Third and Fourth Experimental Results on Problem Instance acin2

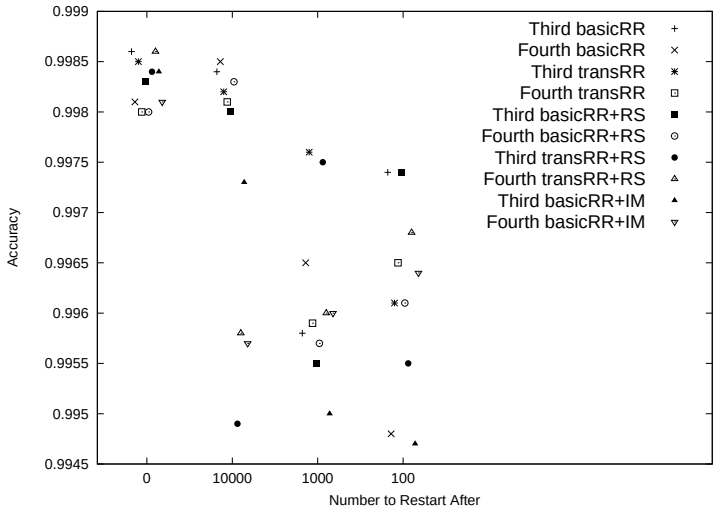



Figure B.724: Comparison of Third and Fourth Experimental Results on Problem Instance acin3

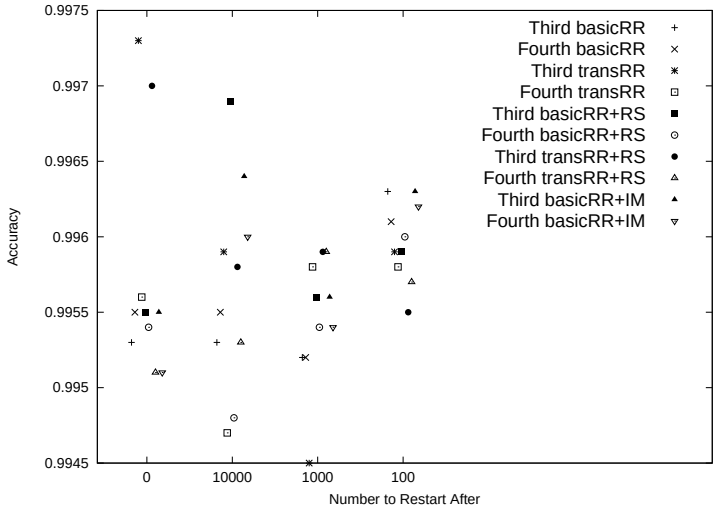



Figure B.725: Comparison of Third and Fourth Experimental Results on Problem Instance acin5

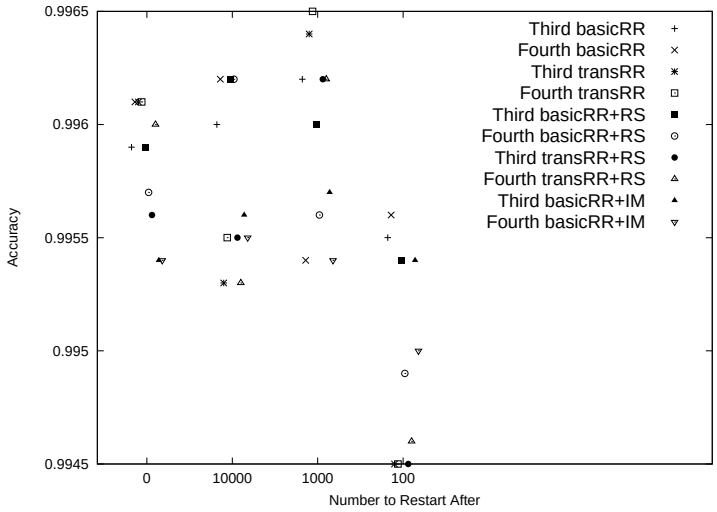



Figure B.726: Comparison of Third and Fourth Experimental Results on Problem Instance acin7

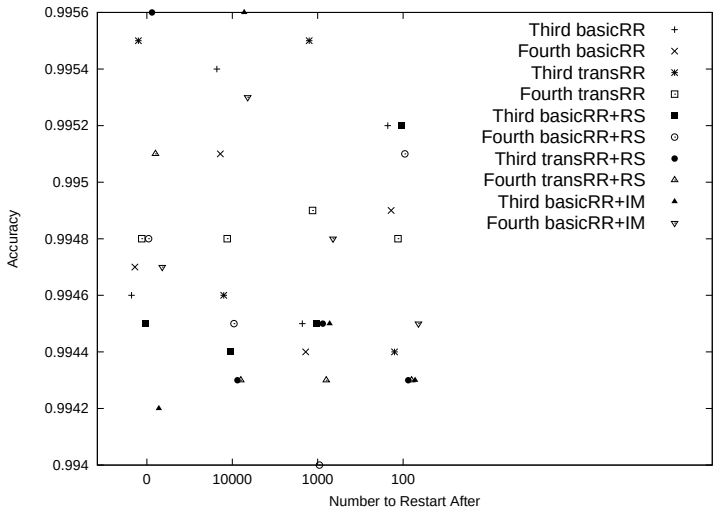



Figure B.727: Comparison of Third and Fourth Experimental Results on Problem Instance acin9

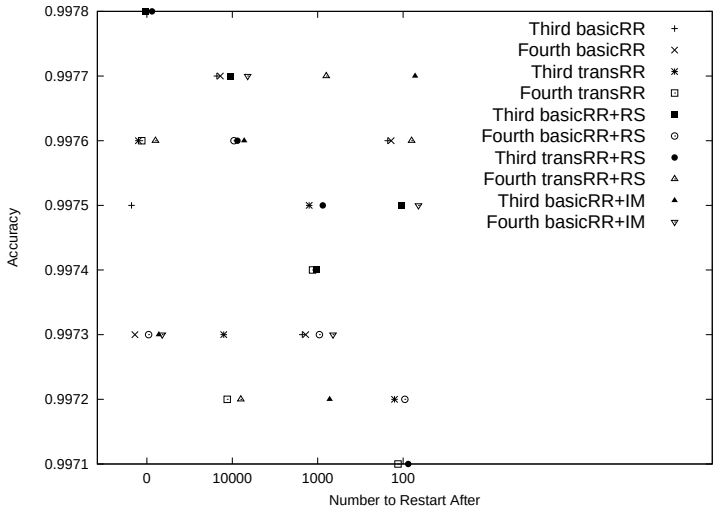



Figure B.728: Comparison of Third and Fourth Experimental Results on Problem Instance bx842596_4

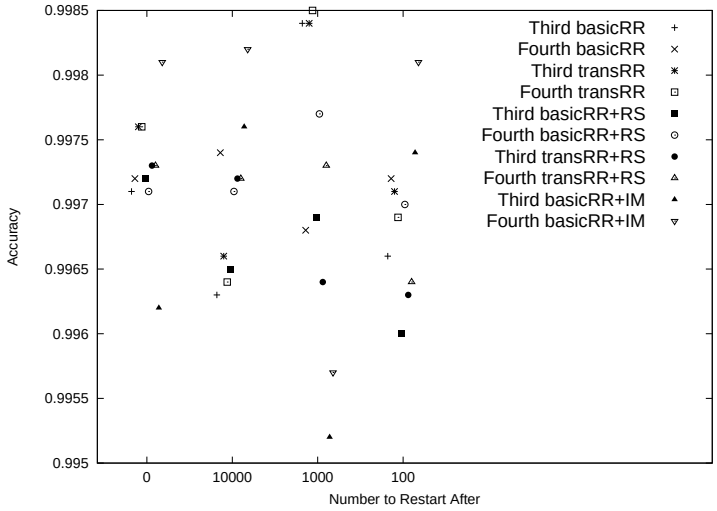



Figure B.729: Comparison of Third and Fourth Experimental Results on Problem Instance bx842596_7

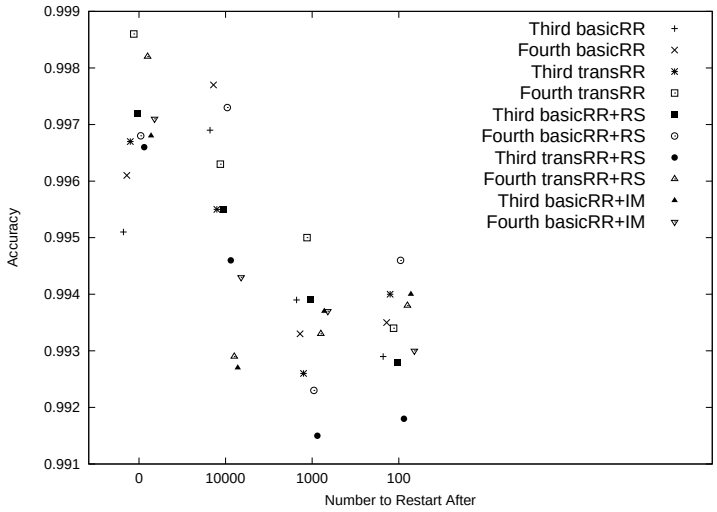



Figure B.730: Comparison of Third and Fourth Experimental Results on Problem Instance j02459_7

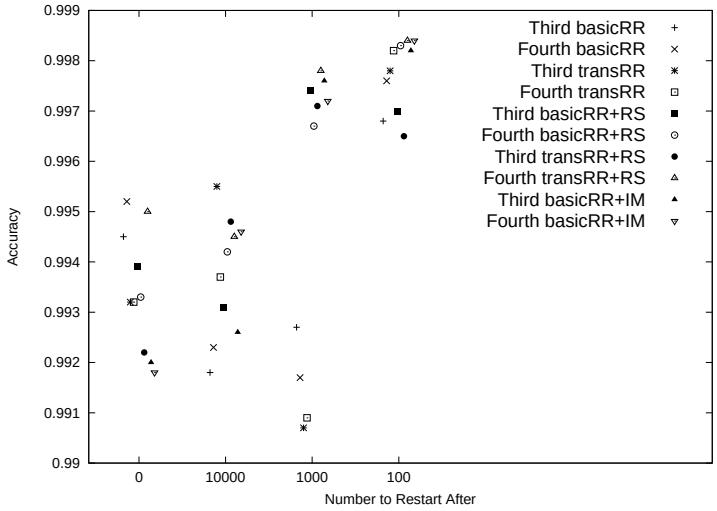



Figure B.731: Comparison of Third and Fourth Experimental Results on Problem Instance m15421_5

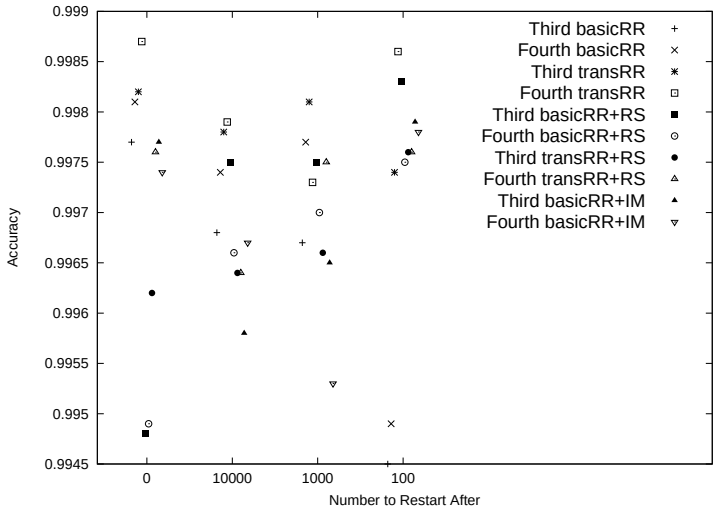



Figure B.732: Comparison of Third and Fourth Experimental Results on Problem Instance m15421_6

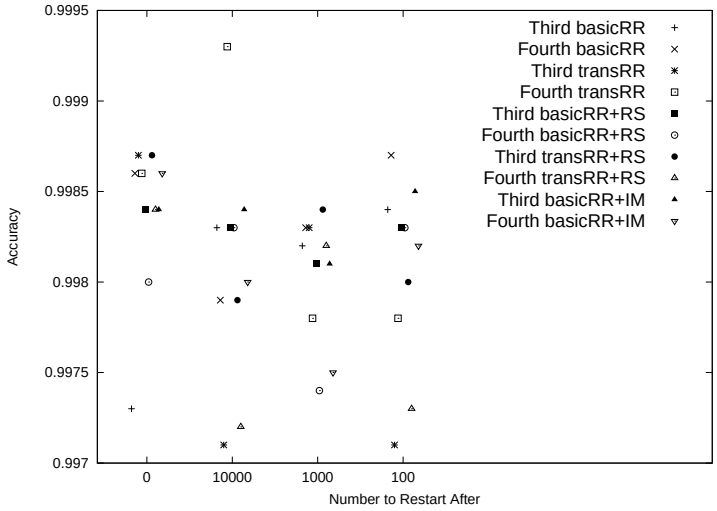



Figure B.733: Comparison of Third and Fourth Experimental Results on Problem Instance m15421_7

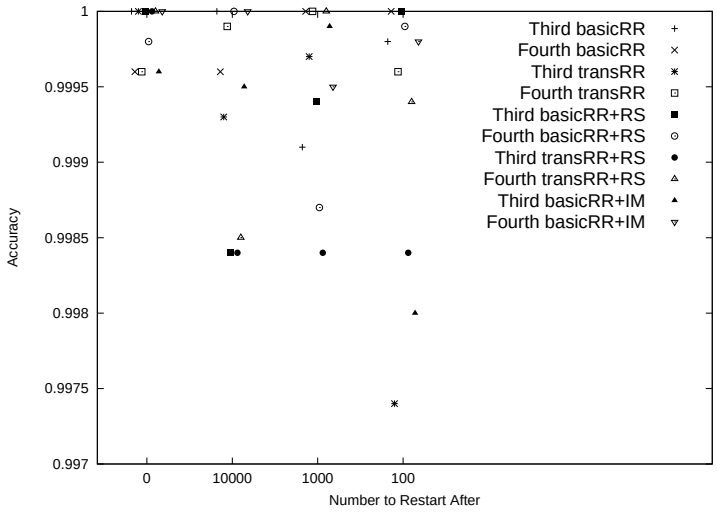



Figure B.734: Comparison of Third and Fourth Experimental Results on Problem Instance x60189_4

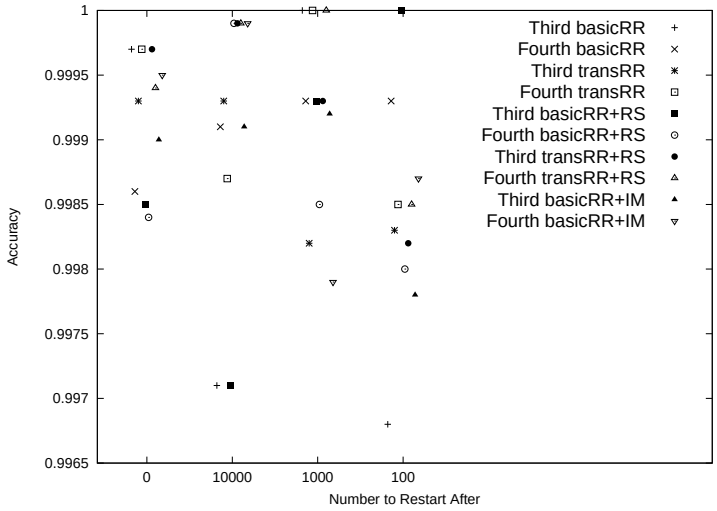



Figure B.735: Comparison of Third and Fourth Experimental Results on Problem Instance x60189_5

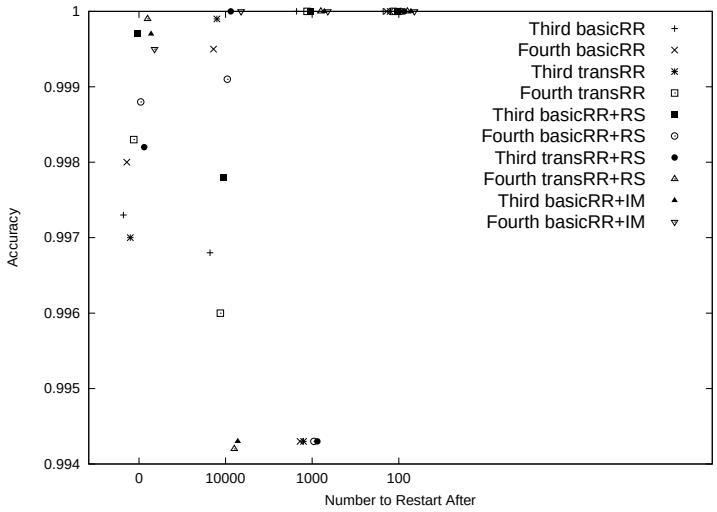



Figure B.736: Comparison of Third and Fourth Experimental Results on Problem Instance x60189_6

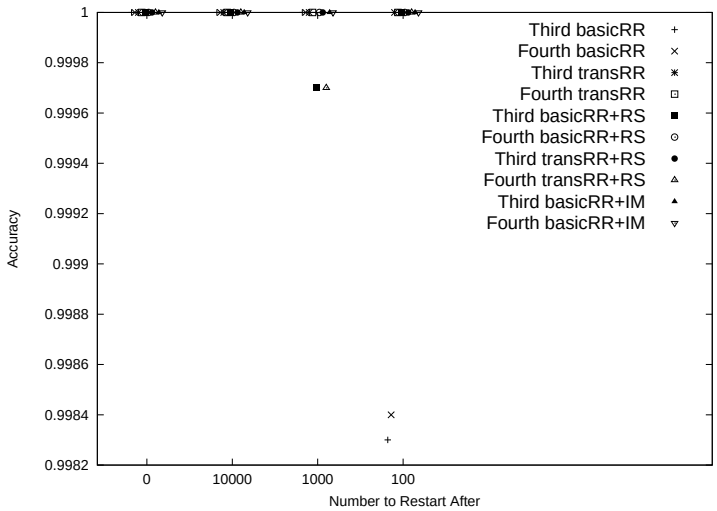



Figure B.737: Comparison of Third and Fourth Experimental Results on Problem Instance x60189_7

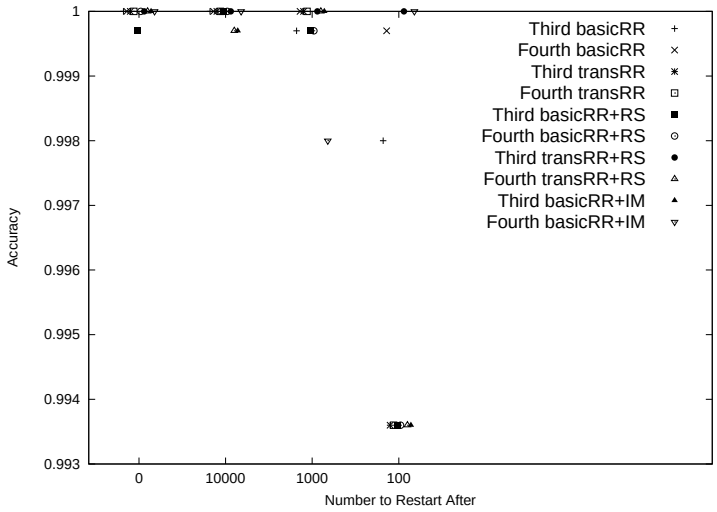



Figure B.738: Comparison of Third and Fourth Experimental Results on Problem Instance f25_305

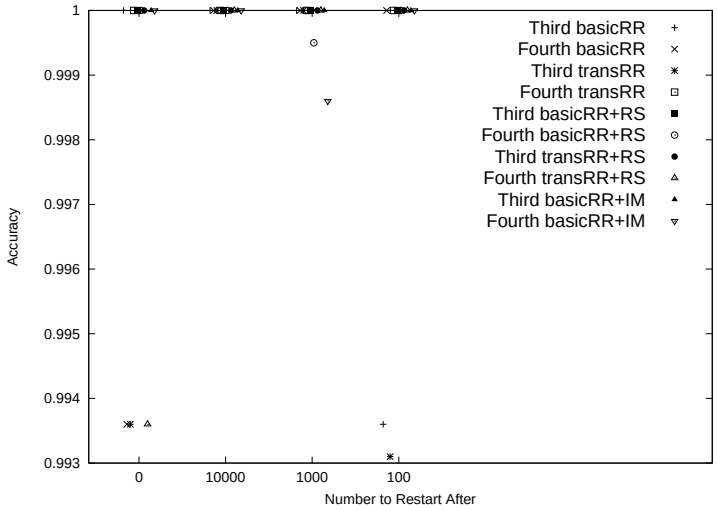



Figure B.739: Comparison of Third and Fourth Experimental Results on Problem Instance f25_400

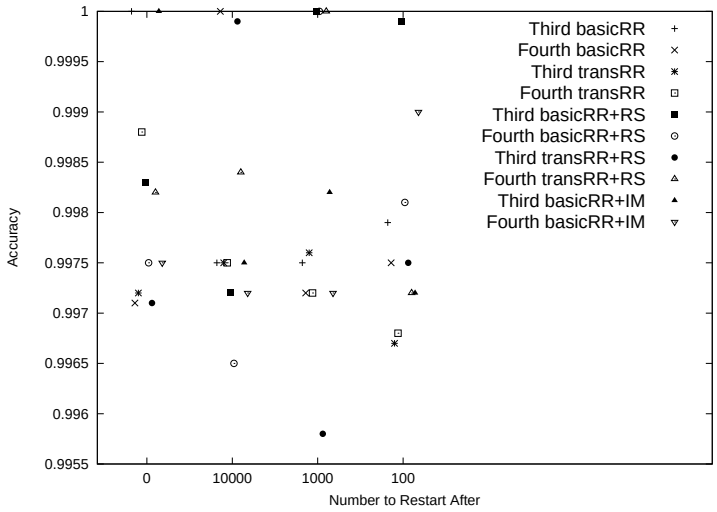



Figure B.740: Comparison of Third and Fourth Experimental Results on Problem Instance f25_500

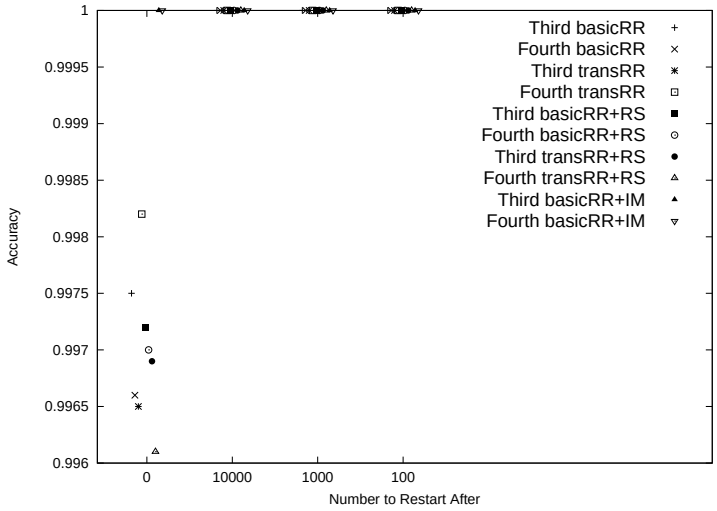



Figure B.741: Comparison of Third and Fourth Experimental Results on Problem Instance f50_315

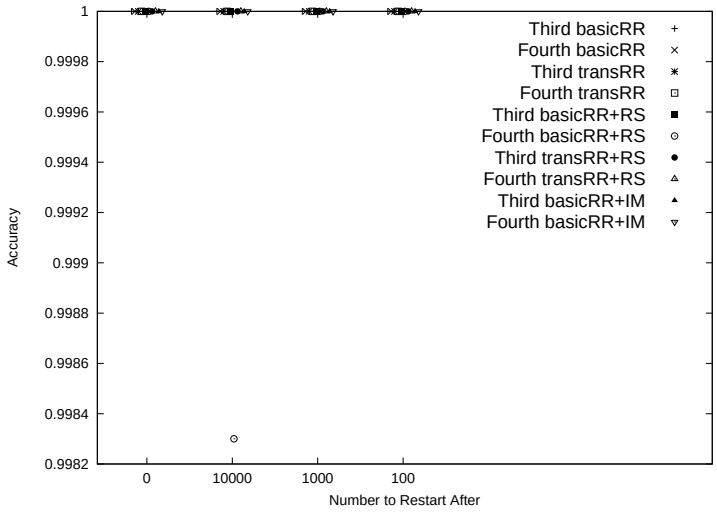



Figure B.742: Comparison of Third and Fourth Experimental Results on Problem Instance f50_412

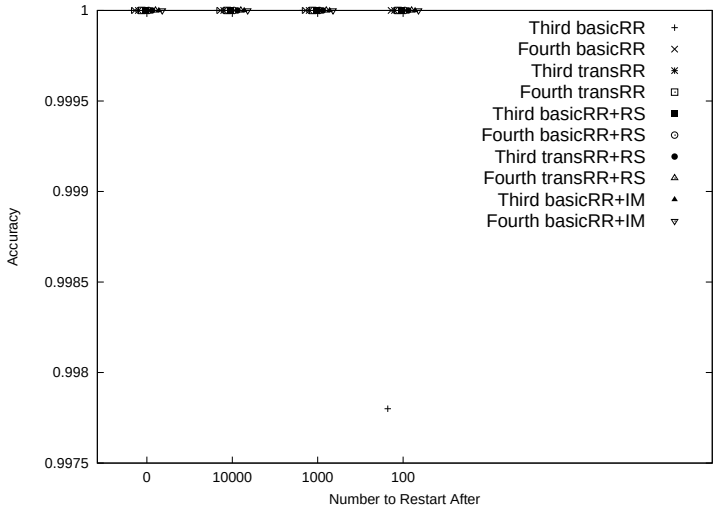



Figure B.743: Comparison of Third and Fourth Experimental Results on Problem Instance f50_498

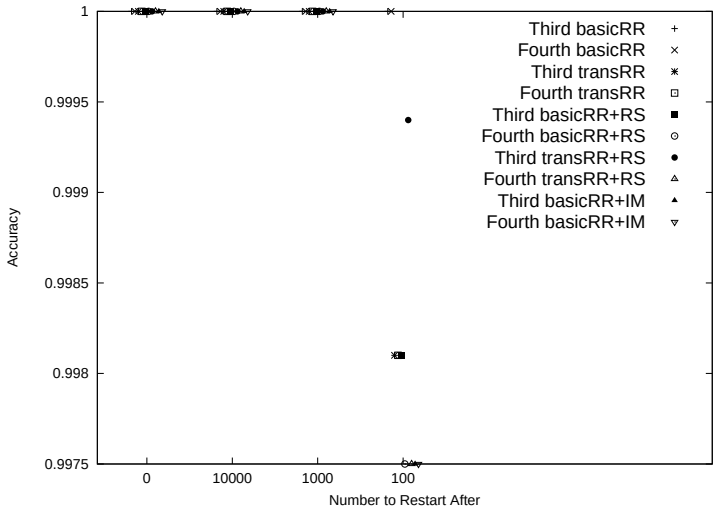



Figure B.744: Comparison of Third and Fourth Experimental Results on Problem Instance f100_307

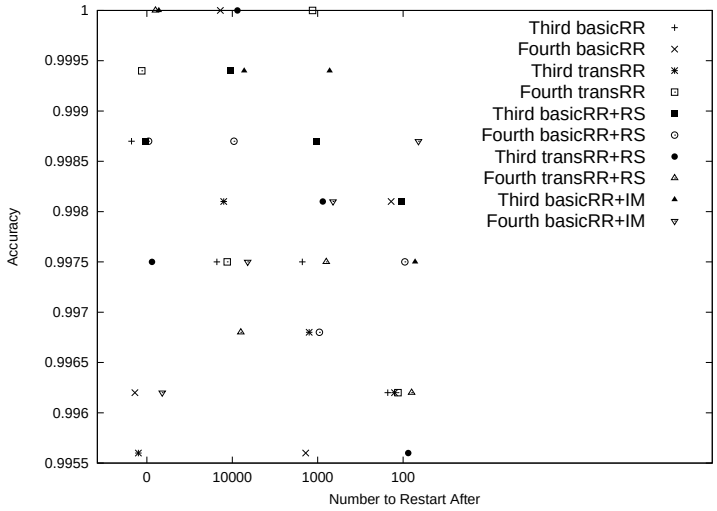



Figure B.745: Comparison of Third and Fourth Experimental Results on Problem Instance f100_415

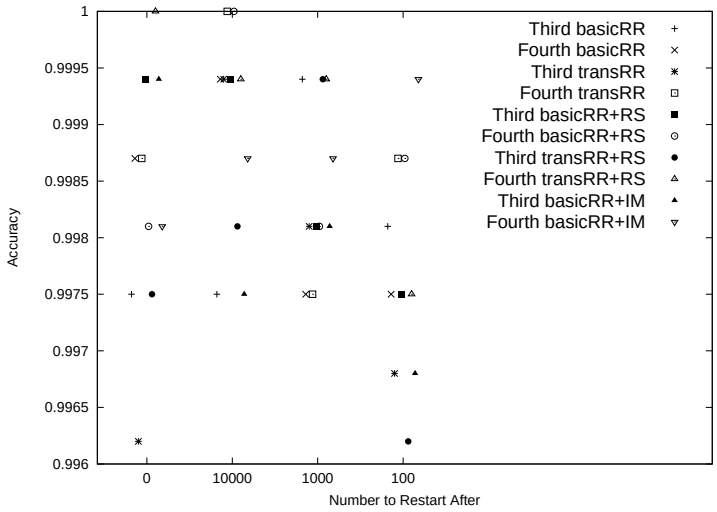



Figure B.746: Comparison of Third and Fourth Experimental Results on Problem Instance f100_512

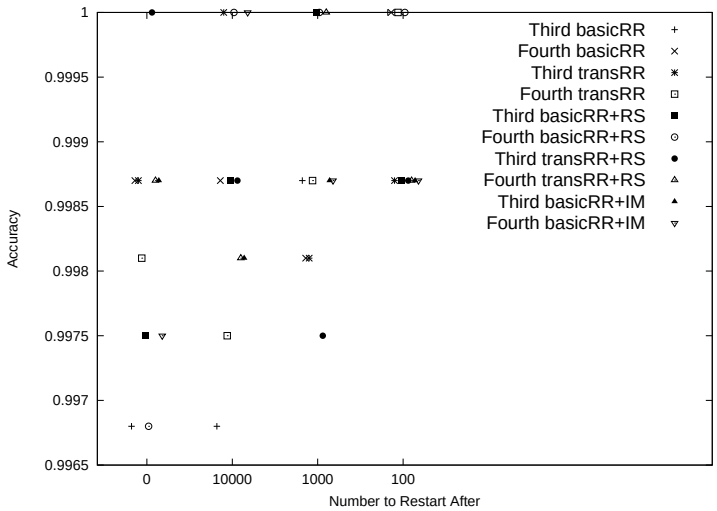



Figure B.747: Comparison of Third and Fourth Experimental Results on Problem Instance f508_354

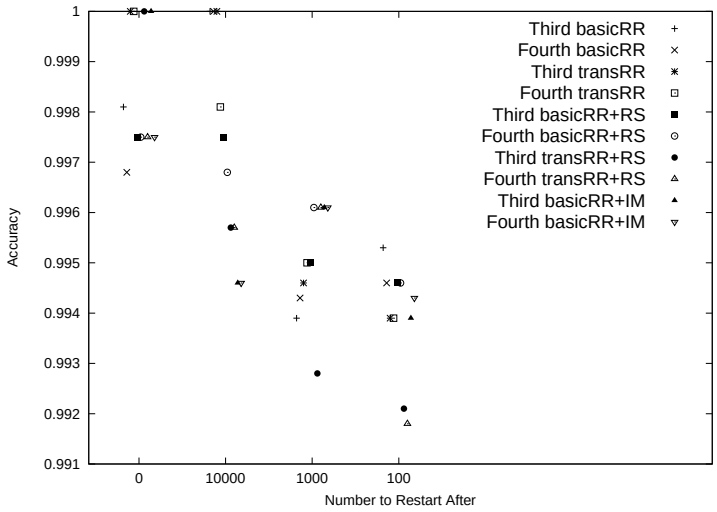



Figure B.748: Comparison of Third and Fourth Experimental Results on Problem Instance f635_350

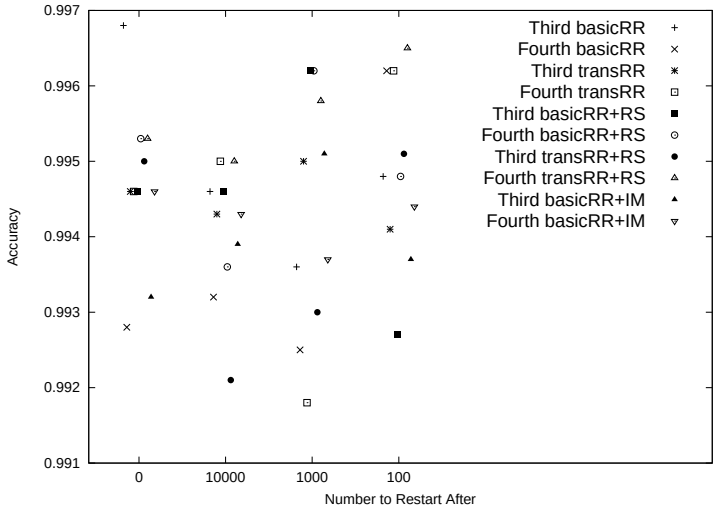



Figure B.749: Comparison of Third and Fourth Experimental Results on Problem Instance f737_355

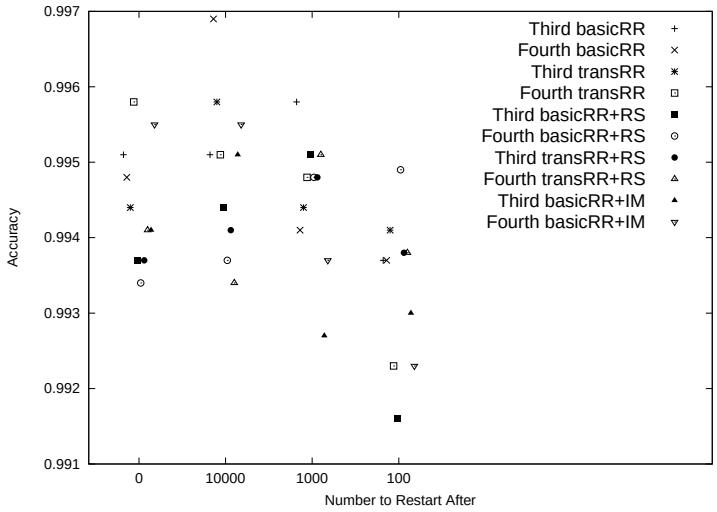



Figure B.750: Comparison of Third and Fourth Experimental Results on Problem Instance f1343_354

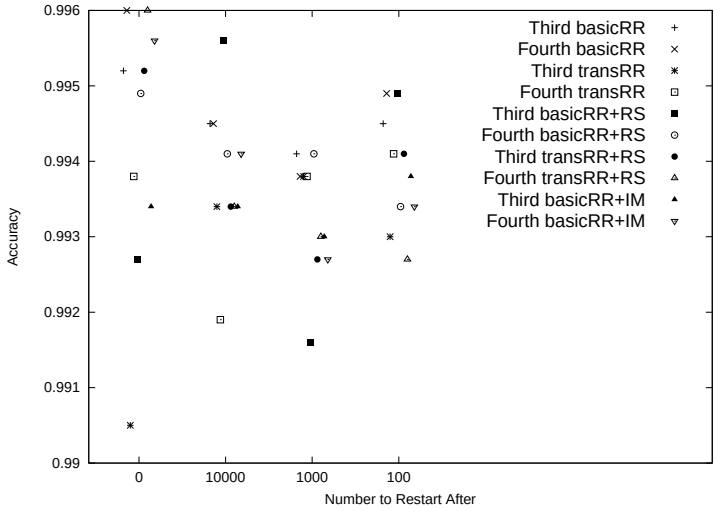



Figure B.751: Comparison of Third and Fourth Experimental Results on Problem Instance f1577_354